



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

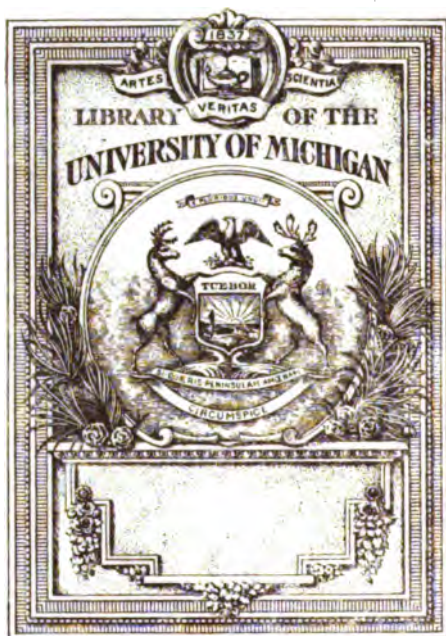
Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



U
1
.C

**COMPLETE UNITED STATES
INFANTRY GUIDE**

COMPLETE UNITED STATES INFANTRY GUIDE

**FOR
OFFICERS AND NONCOMMISSIONED OFFICERS**

REPRINTED FROM GOVERNMENT PUBLICATIONS

CONTAINING

- | | |
|--|---|
| ARMY REGULATIONS , complete to changes 55 | GENERAL ORDERS, CIRCULARS AND BULLETINS OF THE WAR DEPARTMENT , selected to General Order 35 and Bulletin 16, 1917 |
| INFANTRY DRILL REGULATIONS , complete to changes 18 | ENGINEER FIELD MANUAL, PARTS I, II, III, V AND VI , selected |
| MANUAL OF PHYSICAL TRAINING , selected | MANUAL OF COURTS-MARTIAL , complete |
| MANUAL OF INTERIOR GUARD DUTY , complete to changes 1 | FIELD SERVICE REGULATIONS , complete to changes 5 |
| PERSONAL HYGIENE AND FIRST AID , selected | RULES OF LAND WARFARE , complete except text of treaties and conventions in Appendix |
| SIGNAL BOOK , selected | INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL , complete for war strength |
| REGULATIONS FOR FIELD MANEUVERS , complete | REGULATIONS FOR THE UNIFORM OF THE U. S. ARMY , complete to changes 18 |
| ARMY RATION ISSUE AND CONVERSION TABLES , complete | INFANTRY DRILL REGULATIONS FOR AUTOMATIC MACHINE RIFLE , complete to changes 1 |
| AUTOMATIC PISTOL , complete | FIELD FIRING AND THE PROFICIENCY TEST , complete. |
| INSTRUCTION FOR CARE AND REPAIR OF SMALL ARMS AND ORDNANCE EQUIPMENT , complete | EXTRACTS FROM TABLES OF ORGANIZATION , 1917 |
| UNITED STATES RIFLE, MODEL 1903 , complete | MODEL REMARKS FOR MUSTER ROLLS , complete |
| INSTRUCTIONS FOR ASSEMBLING THE INFANTRY EQUIPMENT , complete | MANUAL OF THE BAYONET , complete |
| SMALL ARMS FIRING MANUAL , complete for Infantry, to changes 16 | |

**PHILADELPHIA AND LONDON
J. B. LIPPINCOTT COMPANY**

COMPLETE UNITED STATES INFANTRY GUIDE

**FOR
OFFICERS AND NONCOMMISSIONED OFFICERS**

REPRINTED FROM GOVERNMENT PUBLICATIONS

CONTAINING

- | | |
|--|---|
| ARMY REGULATIONS , complete to changes 55 | GENERAL ORDERS, CIRCULARS AND BULLETINS OF THE WAR DEPARTMENT , selected to General Order 85 and Bulletin 16, 1917 |
| INFANTRY DRILL REGULATIONS , complete to changes 18 | ENGINEER FIELD MANUAL, PARTS I, II, III, V AND VI , selected |
| MANUAL OF PHYSICAL TRAINING , selected | MANUAL OF COURTS-MARTIAL , complete |
| MANUAL OF INTERIOR GUARD DUTY , complete to changes 1 | FIELD SERVICE REGULATIONS , complete to changes 5 |
| PERSONAL HYGIENE AND FIRST AID , selected | RULES OF LAND WARFARE , complete except text of treaties and conventions in Appendix |
| SIGNAL BOOK , selected | INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL , complete for war strength |
| REGULATIONS FOR FIELD MANEUVERS , complete | REGULATIONS FOR THE EQUIPMENT OF THE U. S. ARMY , complete to changes 18 |
| ARMY RATION ISSUE AND CONVERSION TABLES , complete | INFANTRY DRILL REGULATIONS FOR AUTOMATIC MACHINE RIFLE , complete to changes 1 |
| AUTOMATIC PISTOL , complete | FIELD FIRING AND THE PROCEEDING TEST , complete |
| INSTRUCTION FOR CARE AND REPAIR OF SMALL ARMS AND ORDNANCE EQUIPMENT , complete | EXTRACTS FROM TUNING OF ORGANIZATION , 1917 |
| UNITED STATES RIFLE, MODEL 1903 , complete | MODEL REMARKS FOR MOUNTING , complete |
| INSTRUCTIONS FOR ASSEMBLING THE INFANTRY EQUIPMENT , complete | MANUAL OF THE RAYMOND , complete |
| SMALL ARMS FIRING MANUAL , complete for Infantry, to changes 14 | |

**PHILADELPHIA AND LONDON
J. B. LIPPINCOTT COMPANY**

COPYRIGHT, 1917, BY J. B. LIPPINCOTT COMPANY

*Electrotyped and Printed by J. B. Lippincott Company
The Washington Square Press, Philadelphia, U. S. A.*

3106 17838

FOREWORD

EVERY officer in the Army and the National Guard has at some time wished for a book containing all the War Département publications pertaining to his arm of the service. For the Infantryman this volume fulfils that wish.

Note: Due to the impossibility of reproducing some of the plates, it has been necessary to make new ones, which are, however, correct in every detail.

313524

CONTENTS

| | PAGE |
|---|------|
| REGULATIONS FOR THE ARMY OF THE UNITED STATES | 11 |
| INFANTRY DRILL REGULATIONS | 329 |
| MANUAL OF PHYSICAL TRAINING..... | 471 |
| MANUAL OF INTERIOR GUARD DUTY | 525 |
| PERSONAL HYGIENE AND FIRST AID..... | 569 |
| EXTRACTS FROM SIGNAL BOOK..... | 583 |
| REGULATIONS FOR FIELD MANEUVERS..... | 601 |
| ARMY RATION ISSUE AND CONVERSION TABLES..... | 615 |
| DESCRIPTION OF THE AUTOMATIC PISTOL, CALIBER .45, MODEL OF 1911..... | 619 |
| INSTRUCTIONS FOR THE CARE AND REPAIR OF SMALL ARMS AND ORDNANCE EQUIPMENT | 637 |
| DESCRIPTION AND RULES FOR THE MANAGEMENT OF THE UNITED STATES RIFLE, CALIBER .30, MODEL OF 1903..... | 671 |
| INSTRUCTIONS FOR ASSEMBLING THE INFANTRY EQUIPMENT | 739 |
| SMALL ARMS FIRING MANUAL | 751 |
| EXTRACTS FROM GENERAL ORDERS, CIRCULARS AND BULLETINS OF THE WAR DEPARTMENT..... | 877 |
| EXTRACTS FROM ENGINEER FIELD MANUAL..... | 1007 |
| A MANUAL FOR COURTS-MARTIAL | 1279 |
| FIELD SERVICE REGULATIONS..... | 1571 |
| RULES OF LAND WARFARE | 1741 |
| INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL..... | 1821 |
| REGULATIONS FOR THE UNIFORM OF THE UNITED STATES ARMY..... | 1857 |
| INFANTRY DRILL REGULATIONS FOR AUTOMATIC MACHINE RIFLE, CALIBER .30, MODEL OF 1909 | 1903 |
| FIELD FIRING AND THE PROFICIENCY TEST | 1939 |
| EXTRACTS FROM TABLES OF ORGANIZATION | 1969 |
| MODEL REMARKS FOR MUSTER ROLLS..... | 1996 |
| MANUAL OF THE BAYONET | 1999 |

REGULATIONS FOR THE ARMY OF THE UNITED STATES

TO INCLUDE CHANGES 55

1913

War Department,
Washington, November 15, 1913.

The President of the United States directs that the following Regulations for the Army be published for the government of all concerned, and that they be strictly observed. Nothing contrary to the tenor of these Regulations will be enjoined in any part of the forces of the United States by any commander whomsoever.

LINDLEY M. GARRISON,
Secretary of War.

REGULATIONS

FOR THE

ARMY OF THE UNITED STATES.

ARTICLE I.

MILITARY DISCIPLINE.

1. All persons in the military service are required to obey strictly and to execute promptly the lawful orders of their superiors.

2. Military authority will be exercised with firmness, kindness, and justice. Punishments must conform to law and follow offenses as promptly as circumstances will permit.

3. Superiors are forbidden to injure those under their authority by tyrannical or capricious conduct or by abusive language. While maintaining discipline and the thorough and prompt performance of military duty, all officers, in dealing with enlisted men, will bear in mind the absolute necessity of so treating them as to preserve their self-respect. Officers will keep in as close touch as possible with the men under their command and will strive to build up such relations of confidence and sympathy as will insure the free approach of their men to them for counsel and assistance. This relationship may be gained and maintained without relaxation of the bonds of discipline and with great benefit to the service as a whole. (*O. A. R., No. 35.*)

4. Courtesy among military men is indispensable to discipline; respect to superiors will not be confined to obedience on duty, but will be extended on all occasions.

5. Deliberations or discussions among military men conveying praise or censure, or any mark of approbation, toward others in the military service, and all publications relating to private or personal transactions between officers, are prohibited. Efforts to influence legislation affecting the Army, or to procure personal favor or consideration, should never be made except through regular military channels; the adoption of any other method by any officer or enlisted man will be noted in the military record of those concerned.

ARTICLE II.

PRECEDENCE OF REGIMENTS AND CORPS.

6. On occasions of ceremony, except funerals and reviews of large forces, troops will be arranged from right to left in line, and from head to rear in column, in the following order: First, Infantry; second, Field Artillery; third, Cavalry. Artillery, Engineer, and Signal Corps troops, equipped as Infantry,

are posted as Infantry; dismounted Cavalry and marines attached to the Army are on the left of the Infantry in the order named; companies or detachments of the Medical Department and mounted detachments of Engineers are assigned to places according to the nature of the ceremony; mounted companies and detachments of the Signal Corps are posted as Cavalry. When Cavalry and Field Artillery are reviewed together without other troops, the Artillery is posted on the left. Troops in column in funeral escorts will be arranged from head to rear in the following order: First, Cavalry; second, Field Artillery; third, Infantry. In the same arm, Regulars, Militia in the service of the United States, and Volunteers are posted in line from right to left, or in column from head to rear, in the order named. In reviews of large bodies of troops the different arms and classes are posted at the discretion of the commanding general, due regard being paid to their position in camp. On all other occasions troops of all classes are posted at the discretion of the general or senior commander (*C. A. R. No. 55.*)

ARTICLE III.

RANK AND PRECEDENCE OF OFFICERS AND NONCOMMISSIONED OFFICERS.

7. Military rank is that character or quality bestowed on military persons which marks their station and confers eligibility to exercise command or authority in the military service within the limits prescribed by law. It is divided into degrees or grades which mark the relative positions and powers of the different classes of persons possessing it.

8. Rank is generally held by virtue of office in an arm of the service, corps, or department, but may be conferred independently of office, as in the case of retired officers and of those holding it by brevet.

9. The following are the grades of rank of officers and noncommissioned officers:

1. Lieutenant general.
2. Major general.
3. Brigadier general.
4. Colonel.
5. Lieutenant colonel.
6. Major
7. Captain
8. First lieutenant.
9. Second lieutenant.
10. Aviator Signal Corps
11. Cadet.
12. (a) Sergeant major, regimental; sergeant major, senior grade, Coast Artillery Corps; (b) quartermaster sergeant, senior grade, Quartermaster Corps; master hospital sergeant, Medical Department; master engineer, senior grade, Corps of Engineers; master electrician, Coast Artillery Corps; master signal electrician; band leader; (c) hospital sergeant, Medical Department; master engineer, junior grade, Corps of Engineers; engineer, Coast Artillery Corps.
13. Ordnance sergeant, quartermaster sergeant, Quartermaster Corps; supply sergeant, regimental.
14. Sergeant major, squadron and battalion, sergeant major, junior grade, Coast Artillery Corps; supply sergeant, battalion, Corps of Engineers.
15. (a) First sergeant; (b) sergeant, first class, Medical Department; sergeant, first class, Quartermaster Corps; sergeant, first class, Corps of En-

gineers; sergeant, first class, Signal Corps; electrician sergeant, first class, Coast Artillery Corps; electrician sergeant, Artillery Detachment, United States Military Academy; assistant engineer, Coast Artillery Corps; (c) master gunner, Coast Artillery Corps; master gunner, Artillery Detachment, United States Military Academy; band sergeant and assistant leader, United States Military Academy band; assistant band leader; sergeant bugler; electrician sergeant, second class, Coast Artillery Corps; electrician sergeant, second class, Artillery Detachment, United States Military Academy; radio sergeant.

16. Color sergeant.

17. Sergeant; supply sergeant, company; mess sergeant; stable sergeant; fireman, Coast Artillery Corps.

18. Corporal

In each grade and subgrade date of commission, appointment, or warrant determines the order of precedence. (*C. A. R., Nos. 15, 25, and 46.*)

10. Officers of the same grade of the Regular Army, of the Organized Militia in the service of the United States, and of Volunteers take precedence in the order named. Officers of the Marine Corps, when detached for service with the Army by order of the President and while serving with the Army under that order, are upon equal footing with officers of the Regular Army and take precedence in each grade by date of commission.

11. Between officers of the same grade and date of appointment or commission, other than through promotion by seniority or appointment of enlisted men to the grade of second lieutenant under the act of July 30, 1892, relative rank is determined by length of service, continuous or otherwise, as a commissioned officer of the United States, either in the Regular Army or, since April 19, 1861, in the volunteer forces. When periods of service are equal, precedence will, except when fixed by order of merit on examination, be determined, first, by rank in service when appointed; second, by former rank in the Army or Marine Corps; third, by lot.

12. The relative rank between officers of the Army and Navy is as follows, lineal rank only being considered:

General with admiral.

Lieutenant general with vice admiral.

Major general with rear admiral.

Brigadier general with commodore.

Colonel with captain.

Lieutenant colonel with commander.

Major with lieutenant commander.

Captain with lieutenant.

First lieutenant with lieutenant (junior grade).

Second lieutenant with ensign.

ARTICLE IV

COMMAND.

13. Command is exercised by virtue of office and the special assignment of officers holding military rank who are eligible by law to exercise command. Without orders from competent authority an officer can not put himself on duty by virtue of his commission alone, except as contemplated in the twenty-fourth and one hundred and twenty-second articles of war.

14. The following are the commands appropriate to each grade:

1. For a captain, a company

2. For a major, a battalion.

3. For a colonel, a regiment.

4. For a brigadier general, a brigade.

5. For a major general, a division.

¹The grade of commodore ceased to exist as a grade of rank on the active list in the Navy of the United States on Mar. 3, 1899. By sec. 7 of the act of Mar. 3, 1899 (30 Stat. L., 1005), the nine junior rear admirals are authorized to receive the pay and allowances of brigadier generals in the Army.

15. The designation "company," as used in these regulations, applies to troops of Cavalry, batteries of Field Artillery, and to companies and bands of all arms and corps. The designation "battalion" applies in like manner to squadrons of Cavalry.

16. The functions assigned to any officer in these regulations by title of office devolve upon the officer acting in his place, except when otherwise specified. An officer in temporary command shall not, except in urgent cases, alter or annul the standing orders of the permanent commander without authority from the next higher commander.

17. An officer who succeeds to any command or duty stands in regard to his duties in the same situation as his predecessor. The officer relieved will turn over to his successor all orders in force at the time and all the public property and funds pertaining to his command or duty.

18. An officer of Engineers not on duty with Engineer troops, or of Ordnance, or of the Adjutant General's, Inspector General's, or Judge Advocate General's Department, Quartermaster, or Signal Corps, or of the line, detailed to fill a vacancy in these staff departments or corps, though eligible to command, according to his rank, shall not assume command of troops unless put on duty under orders which specially so direct, by authority of the President.

19. An officer of the Medical Department can not exercise command, except in his own department; but any staff officer, by virtue of his commission, may command all enlisted men like other commissioned officers.

20. When an officer is charged with directing an expedition or making a reconnaissance, without having command of the escort, the commander of the escort will consult him touching all arrangements necessary to secure the success of the operation.

ARTICLE V

APPOINTMENT AND PROMOTION OF COMMISSIONED OFFICERS.

21. Notices of appointments and promotions are issued by the War Department through The Adjutant General of the Army

22. Appointment to the grade of general officer is made by selection from the Army.

23. Oaths of office of officers of the Army will be taken before an officer of the Army authorized by the provisions of the one hundred and fourteenth article of war to administer oaths; or before an officer authorized by the laws of the United States or by the local municipal law to administer oaths. (*C. A. R., No. 55.*)

24. Promotions in established staff corps and departments are limited to officers holding permanent appointments therein and to include the grade of colonel will be made by seniority, subject to the examinations required by law.

25. Promotions in the line of the Army to include the grade of colonel, in each arm of the service, will be made by seniority, subject to the examinations required by law.

26. Whenever any officer is ordered before an examining or retiring board the originals or copies of all official records affecting his character or efficiency, on file in any bureau of the War Department, will be furnished to The Adjutant General of the Army and by him forwarded for the consideration of the board.

27. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

28. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

29. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

30. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

31. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

32. Rescinded.

See M. C. M., para. 41, 43, and 311.

(*C. A. R., No. 55.*)

33. Rescinded.

(*C. A. R., No. 26.*)

34. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

35. Rescinded.

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

36. Rescinded

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

37. Rescinded

See Special Regulations No. 1.

(*C. A. R., No. 55.*)

ARTICLE VI.**DETAILS.**

38. Regulations respecting details of line officers to the staff together with such rules as may be prescribed by the President in regard to examinations therefor, will be announced in orders from time to time by the War Department.

39. In making details for detached service and for duty in the several staff corps and departments in which vacancies are filled by details from the line, consideration will be given to long service with troops and to the efficiency and peculiar fitness of an officer as evidenced by his compiled efficiency record and as far as practicable to his desires as expressed in his Personal Report and Statement of Preferences. (*C. A. R., No. 20.*)

40. Except as otherwise specifically provided for in the acts of Congress approved August 24, 1912, March 2, 1913, and April 27, 1914, no officer holding a permanent commission in the line of the Army with rank below that of major, who shall not have been actually present for duty for at least two of the last preceding six years with a troop, battery, or company of that branch of the Army in which he shall hold said commission, shall in time of peace be detached or permitted to remain detached from such troop, battery, or com-

pany for duty of any kind; nor shall any officer holding a permanent commission in the line of the Army with rank of colonel, lieutenant colonel, or major, who shall not have been actually present for duty for at least two of the last preceding six years with a command composed of not less than two troops, batteries, or companies of that branch of the Army in which he shall hold said commission, be detached or permitted to remain detached in time of peace from such command for duty of any kind, except as otherwise specifically provided for in the acts cited in this paragraph. (*C. A. R., Nos. 5, 8, and 10.*)

41. Except when detailed in the General Staff Corps, general officers are authorized to have aids as follows:

The lieutenant general, two aids and a military secretary who have the rank of lieutenant colonel while so serving; a major general, three aids to be taken from the captains or lieutenants of the Army; a brigadier general, two aids to be taken from the lieutenants of the Army. An officer assigned to duty in accordance with his brevet rank as major general or brigadier general may, with the special sanction of the War Department, be allowed the aids of the grade. General officers may select their aids from officers serving in their command subject to the restrictions prescribed in paragraph 40, but appointments as aids of officers serving without such limits must receive the approval of the War Department.

42. The laws, regulations, and instructions governing the details of officers of the Army, active and retired, at educational institutions will be published from time to time by the War Department.

ARTICLE VII.

CHAPLAINS.

43. Regimental chaplains and chaplains of the Coast Artillery Corps will be assigned and transferred by the Secretary of War.

44. It will be the duty of commanders of regiments, hospitals, and posts to afford to chaplains, assigned to the same for duty, such facilities as may aid them in the performance of their duties. One enlisted man will be detailed on special duty by the commanding officer of any organization to which a chaplain is assigned for duty, for the purpose of assisting the chaplain in the performance of his official duties. At posts where school-teachers are provided from the Quartermaster Corps the school-teacher will be detailed as assistant to the chaplain in place of an enlisted man of the line.

The instruction of the enlisted men in the common English branches of education is made by law one of the duties of chaplains. They will not be employed on duties other than those required of them by law or pertaining to their profession, except when the exigencies of the service, a result of deficiency in number of officers present, require it. (*C. A. R., No. 23.*)

45. Chaplains will render monthly reports of the duties performed by them and of all births, baptisms, marriages, and deaths occurring in connection with the command with which they are serving. At a station where there are two or more chaplains on duty the commanding officer will designate the chaplain to report these occurrences that pertain to the station and not to an organization to which a chaplain is assigned. The reports will be made on the prescribed form and will be forwarded by the post commander directly to The Adjutant General of the Army. (*C. A. R., No. 23.*)

46. Chaplains will not be required to turn out with troops on occasions of ceremony, but will be inspected at chapels, schoolrooms, libraries, or such places as may be designated by commanding officers.

46j. Further duties of chaplains may include the following:

1. When directed by the post or regimental commander the chaplain may have charge of the recreations and amusements of enlisted men of his post or regiment, assisted by a committee of noncommissioned officers composed of one from each company and detachment with which he is serving.

2. To counsel as to their moral welfare and advise with all recruits on arrival at their permanent assignments and with all enlisted men under arrest or confinement and before trial, such men to be sent to the chaplain's office or such place as the commanding officer may prescribe for this purpose. Communications, verbal or written, between the chaplain and enlisted men subject to trial or discipline shall be treated as confidential and privileged.

3. To have charge of the mail in the field.

4. To assist and encourage correspondence between soldiers and their relatives and friends, especially the sick in hospital. All inquiries from relatives and friends as to the general welfare of enlisted men addressed to officers of the command may be turned over to the chaplain to answer or cause to be answered by the person inquired of, as the case may require.

5. To be custodian of the chaplain's fund. (*C. A. R. No. 23.*)

ARTICLE VIII.

TRANSFER OR EXCHANGE OF OFFICERS.

47. Officers may be transferred from one arm or corps to another, on mutual application, with rank as of the date of rank of the junior officer previous to the transfer, when the result of such transfer will not place the name of either officer on the lineal list of the arm or corps to which he is transferred above that of any other officer whose name originally occupied a place on the relative list above that of the officer so transferred; when transfers, on mutual application, can not be made without such a result, officers may be transferred with their consent, with such dates of rank as will not result in placing the name of either on the lineal list of the arm or corps to which he is transferred above that of any other officer whose name originally occupied a place on the relative list above that of the officer so transferred; but this regulation will not operate to prevent the transfer of an officer so that his name will appear above that of another officer who was originally his senior on the relative list but who has been reduced in lineal and relative rank by sentence of court-martial or who shall have lost such rank through failure to pass the required examination for promotion. An officer of the lowest grade in any arm or corps who may be transferred, on his own application, to a vacancy in his grade in any other arm or corps will take rank next after the junior officer of the arm or corps to which he is transferred, and will be nominated for reappointment, with a new date of rank if necessary to fix his proper position, and upon confirmation will be recommissioned accordingly. These new appointments and commissions will determine the rank of transferred officers in their regiments and corps as well as in the Army. (*C. A. R., No. 33.*)

48. Officers in each arm of the service will be transferred from one regiment to another therein, as the interests of the service require, by orders from the War Department, without change of rank or commission. The transfer or exchange of company officers of a regiment will be made only as the interests

of the service require by the regimental commander when change of station is not involved; in cases involving change of station, by the regimental commander, with the approval of the authority competent to direct the necessary travel.

Coast defense commanders have the same authority in transferring lieutenants of the Coast Artillery Corps within their commands as is herein given to regimental commanders.

Transfers and exchanges made under this paragraph will be immediately reported to the War Department.

In order to maintain continuity of policy in each company and avoid unnecessary changes in command thereof, regimental and coast defense commanders will endeavor to retain company officers on duty with the same companies of their commands as long as possible. Before making assignments or transfers they will consider the probability of an officer's continued service with the company to which assigned or transferred in order to avoid his assignment or transfer to the command of a company from which he may soon be detached for other duty. (*C. A. R., No. 35.*)

ARTICLE IX.

LEAVES OF ABSENCE TO OFFICERS.

49. Under such restrictions as may be imposed by higher authority, post commanders, officers commanding general depots of supply, and commanding officers of general hospitals may grant leaves of absence for one month. Brigade and district commanders may grant leaves of absence for one month to the officers of their respective staffs. (*C. A. R., No. 13.*)

50. The commander of a post may take leave of absence not to exceed one month at one time, reporting the fact to his next superior commander. The commander of a brigade or district may take leave of absence not to exceed two months at one time, reporting the fact to his next superior commander.

When a general officer commanding a territorial department, tactical division, brigade, post, or station avails himself of a leave of absence, his authorized aid or aids, if not granted leave of absence by proper authority, will report for duty to the officer falling in temporary command of such territorial department, tactical division, brigade, post, or station. When such general officer is under orders to change station without troops, and takes advantage of a leave of absence before he joins his new station, his authorized aid or aids will remain on duty at the old station, unless granted leave of absence at the same time.

In cases arising under paragraph 1294, Army Regulations, the status of an aid prior to the receipt by him of an order of assignment of the general officer to whom accredited is identical with that of the general officer concerned; the aid, under these conditions, may either proceed at once to the new station of his general or may avail himself of a leave of absence coincident with that of his general by notifying The Adjutant General of the Army to that effect. (*C. A. R., No. 33.*)

51. The commander of a territorial department, tactical division, or separate brigade may grant leaves for four months, or they may extend to such periods those already granted. Applications for leaves of more than four months' duration will be forwarded for the action of the War Department. A department commander may grant leave of absence to an officer belonging or assigned to a station in his command, who is under orders to join such station upon his relief from temporary duty, or from duty on foreign service, in a staff corps or department, at the United States Military Academy, at a service school, or from

other detached duty. Leaves so granted will not be effective until on or after the date of completion of the temporary or other duty. In such cases the application for leave should, whenever practicable, be submitted to the immediate commander and be forwarded by him through the proper channels to the department commander concerned. General officers stationed within the continental limits of the United States will not grant themselves leaves to pass beyond those limits, nor will general officers serving in the Philippine or Hawaiian Departments grant themselves leaves to go beyond the limits of those departments. Those in command of territorial departments will not grant leaves to themselves to pass beyond the limits of their own commands without first obtaining the sanction of higher authority.

52. Chiefs of bureaus may grant leaves for four months to officers of their respective corps serving under their immediate direction, or extend to that period those already granted to such officers.

53. Leaves of absence for three months, from date of graduation, will be allowed to graduates of the Military Academy, except in the cases of Filipinos admitted to the Academy under the act of Congress approved May 28, 1908, to whom four months' graduation leave will be allowed. Such leaves will not be counted against them in subsequent applications for leave, but can not be postponed to another time.

A graduate who is ordered on temporary duty at the Military Academy while on graduation leave will revert to leave status on completion of the duty and will be permitted to complete a period of three months on graduation leave exclusive of the time spent on such duty.

54. Leaves of absence will not be granted so that a company will be left without a commissioned officer, or a post without two commissioned officers and competent medical attendance; nor will leave of absence be granted to an officer during the season of active operations, except in case of urgent necessity.

55. Leave of absence exceeding 10 days, except under extraordinary circumstances particularly stated in the application, will not be granted to an officer until he has joined his regiment or corps and has served therein at least two years.

56. An application for leave must state its desired duration and be forwarded through military channels. Intermediate commanders will indorse thereon their recommendations.

57. The commanding officer will refer applications for leaves of absence on account of sickness to the surgeon. The surgeon will examine the applicant, and should he find the leave necessary to restore health he will submit to the commanding officer a medical certificate in the prescribed form, stating explicitly the nature, seat, and degree of the disease, wound, or disability, the cause thereof, if known, and the period during which the officer has suffered from it. He will also give his opinion whether the disease, wound, or disability can be satisfactorily treated within the department in which the officer is stationed, or whether a change of climate or locality is necessary to afford more rapid or perfect recovery, in which case the special place or region recommended will be designated, with reasons therefor. The surgeon will also state whether in his opinion the disease, wound, or disability requires treatment by a specialist, and, if so, the nearest place where it can be obtained; also whether the wound or disease incapacitates the officer from all duty, or whether he can perform special duty, and, if so, the kind that he may undertake without endangering his ultimate cure.

58. Leaves of absence will be granted in terms of months and days, as "one month," "one month and ten days." A leave of absence commences on the day following that on which the officer departs from his proper station. The day

of departure, whatever the hour, is counted as a day of duty; the day of return as a day of absence.

Leave for one month, commencing on the first day of a calendar month, will expire with the last day of the month, whatever its number of days. Commencing on an intermediate day, the leave will expire the day preceding the same day of the next month.

The expiration of his leave, whether granted on account of sickness or not, must find an officer at his station, except as indicated in paragraphs 60 and 1293.

59. A leave of absence granted to an officer in the field or on special duty will take effect on the termination of the campaign or on the completion of such duty, unless his services can sooner be spared. In all other cases an officer is expected to avail himself of a leave as soon as proper facilities offer, unless a specific date is stated in the order, and if unable to do so he will report the fact to the authority granting the leave.

60. Leaves of absence granted, for the purpose of visiting the United States, to officers of the Army serving in Alaska or beyond the limits of the United States, will be regarded as taking effect upon the respective dates upon which such officers reach, or might have reached, the United States. Officers performing the journey in the most direct way customary will be regarded as on detached service while en route to and from the United States.

An officer going to or returning from duty in the Philippine Islands, who desires to make the journey by a route other than the customary one and to visit foreign countries on leave of absence while en route, will be credited (in addition to the amount of time covered by the leave of absence granted to him) with a period of 30 days as on detached service to cover the average amount of time necessary to perform the journey from the Philippine Islands to the usual port of arrival in the United States, or from said port to the Philippine Islands.

61. Officers on leave of absence will not leave the United States to go beyond the sea without permission from the authority granting the leave of absence or from higher authority.

62. An officer of the Army visiting foreign countries, whether on duty or leave, will avail himself of all proper opportunities to obtain military information, especially such as pertains to his branch of the service. He will report the results of his observations to The Adjutant General of the Army on his return to duty, or sooner if practicable.

63. The Department of State issues special passports for the use of officers of the Army traveling abroad, either on duty or leave of absence, but only on the request of the War Department, and never on the direct request of the officers themselves. Applications of officers for special passports will be addressed to The Adjutant General of the Army, will set forth the use to be made of them, and must, in all cases, be accompanied by the fee of \$1, which is required by law to be collected for every citizen's passport issued.

64. An officer granted leave of absence for more than 10 days will, upon taking advantage thereof, report to his post and regimental or corps commander and to The Adjutant General of the Army the date of his departure and his new address, and thereafter he will immediately report any change in his address and the date of return to duty to the same officers. Verbal permits for less than 24 hours are not counted as leaves of absence, but every other absence, of whatever duration, with date of departure and return, will be noted on the rolls and returns.

65. Permission to hunt will not be considered as a leave of absence if the officer on his return to the station forwards to department headquarters, through

his commanding officer, a certificate that his time while absent was employed solely in hunting, and furnishes a report giving as complete a description as possible of the country traversed by him.

66. Permission to hunt may be granted by department or post commanders for periods not exceeding 10 days. Like permission may be granted by brigade and district commanders to officers of their respective staffs. (*C. A. R., No. 12.*)

67. All applications for extensions of leaves of absence or for delays, and all correspondence regarding them, will pass through military channels.

ARTICLE X.

OFFICERS TRAVELING ON DUTY.

68. When an officer is ordered without troops from one post of duty to another, he will proceed by the shortest usually traveled route, without unnecessary delay. Upon his arrival at his new post, he will immediately report to the commanding officer the date of his departure from his former station, and submit a copy of his order, noting thereon the date he received it. If he shall appear to have made unnecessary delay en route, he will be required to explain the cause thereof in writing. If the post commander deem the explanation unsatisfactory, he will forward the same, with a statement of the facts in the case, to the department commander. If the officer be superior in rank to the post commander, the required report will be made by the officer himself to the department commander.

69. Orders detaching an officer for a specific duty will direct him to return to his proper station on the completion of the duty assigned him when it is intended that he shall do so.

70. Delays in obeying orders, in reporting for duty, or in returning to duty from leave can not be authorized except by the War Department. Such delays will be regarded as leaves of absence, unless it be stated in the order granting them that they are in the interest of the public service.

71. Orders contemplating the payment of mileage must state the specific duty enjoined, and that the travel directed is necessary in the military service. They will not direct travel beyond the limits of the command of the officer who issues them, except that the commanders of the Philippine and Hawaiian Departments may order officers of their commands to return to the United States in cases of emergency, in which the travel directed is manifestly for the public interest or is necessary to save life. When a general officer is ordered on duty beyond the limits of his command, he may order an officer of his staff to accompany him; if ordered to change station, he may order the necessary change of station of his personal staff.

72. Staff officers not serving under division or department commanders will apply to the War Department for orders directing necessary travel on public business.

73. When urgent public duty has compelled travel, without authority previously obtained, the case will be immediately reported to the proper superior officer, whose approval in subsequent orders will be accepted as though previously issued.

74. Orders directing officers to visit Washington for the settlement of their accounts will be issued only by the War Department.

75. Officers and enlisted men reporting as witnesses before a civil court should receive from the civil authorities the necessary expenses incurred in travel and attendance; neither mileage nor travel allowances will be paid in such cases by the War Department. If, however, it is absolutely necessary to furnish them trans-

portation in kind to enable them to appear as witnesses for the Government before a civil court of the United States, an account of such expenditure, together with the evidence that they were properly subpoenaed and did attend the court, will be forwarded to the War Department for presentation to the Department of Justice. Officers providing such transportation will notify the marshal of the court that it was furnished, specifying points between which furnished, whether one way or round trip, and that it was furnished to enable the witnesses to perform the requisite journeys in obedience to the summons. (*C. A. R., No. 4.*)

ARTICLE XI.

RETIREMENT OF OFFICERS.

76. When an officer has become incapable, from any cause, of performing the duties of his office, his immediate commander will report the facts through military channels for the action of the Secretary of War. The report in each case will contain specific statements showing in full in what manner the incapacity has been evidenced.

77. Habitual intemperance, gambling, or other vices that tend to corrupt an officer and lower the professional standard will be regarded as proper subjects for the consideration and report of a retiring board.

78. When ample testimony establishes the fact that an officer has through vicious indulgence slighted or neglected his duties to such a degree as to make it unsafe to intrust him with a command, or with responsibility that properly belongs to his grade, and when it is shown that such habits have continued for such length of time as to render permanent reformation improbable, this fact, rather than his condition when he appears before the board, shall weigh in its finding as to his incapacity for active duty.

ARTICLE XII.

RESIGNATION OF OFFICERS.

79. A resignation tendered by an officer will be forwarded by his commanding officer, through prescribed channels, to the War Department for the decision of the President. Until duly accepted, the officer will not be considered as out of the service.

80. A resignation tendered under charges will be forwarded, accompanied by a report of the case, and, if practicable, by a copy of the charges. All correspondence with the War Department, on the part of the officer who tenders the resignation, will be conducted through prescribed channels.

81. Leave of absence will not be granted on tender of resignation unless the resignation be unconditional and immediate. When leave is requested, the officer's address will accompany the resignation.

82. An officer of the Army on the active list who accepts or exercises the functions of a civil office contrary to law thereby ceases to be an officer of the Army. An officer on the active list can not lawfully accept or hold any office created by State or municipal authority, whether in State military organizations or otherwise.

ARTICLE XIII.

DECEASED OFFICERS.

83. The death of an officer, with place, cause, day, and hour, will be reported without delay, by telegraph, by his immediate commander directly to The Adjutant General of the Army, and also to the brigade, coast artillery district,

and department commanders. If the officer was on the active list of the Army, the report will show whether or not his death was from wounds or disease contracted in line of duty, and whether or not his death was from wounds or disease the result of his own misconduct. In case of the death of a retired officer, or of an officer on the active list who has no immediate commander, the medical officer, if one be present, or any officer having cognizance of the fact, will make the report to The Adjutant General of the Army. In case the officer was on the active list and died from wounds or disease not the result of his own misconduct, The Adjutant General of the Army will notify the Quartermaster General of that fact. (*C. A. R., No. 10.*)

84. Inventories in duplicate of the effects of deceased officers, as required by the one hundred and twelfth article of war, will be transmitted to The Adjutant General of the Army. If legal representatives take possession of the effects, the fact will be stated in the inventory. (*C. A. R., No. 55.*)

85. If there be no legal representatives present to receive the effects, a list of them will be sent to the nearest relative of the deceased. If not claimed within a reasonable time, they will be sold at auction and accounted for as in the case of deceased soldiers. Swords, watches, personal papers, trinkets, and similar articles will be labeled with the name, rank, regiment, and date of death of the owner and sent directly to The Adjutant General of the Army to be forwarded to the Auditor for the War Department for the benefit of those legally entitled to them. The accounts of deceased officers will be settled as provided for in paragraph 168.

86. On the death of an officer in charge of public property or funds, his commanding officer will appoint a board of officers, three when practicable, which will inventory the same and make the customary returns therefor, stating accurately amounts and condition. These the commanding officer will forward to the chiefs of the bureaus to which the property or funds pertain, and he will designate an officer to take charge of such property or funds until orders in the case are received from the proper authority. Cash on hand may be invoiced by the board to the deceased officer's successor, but balances to his credit with the Treasurer, an assistant treasurer, a designated depository, or a fiscal agent of the United States, over and above his outstanding checks, will be deposited to the credit of the Treasurer of the United States by the chiefs of bureaus when the board has reported to the bureaus the balances over and above such checks. The action herein prescribed will also be taken in the case of an officer in charge of public funds or property who becomes insane.

87. The remains of a deceased officer on the active list may be shipped to the home of the decedent or to a national cemetery for interment. When death occurs in the United States or in Alaska, and early shipment is practicable, the remains will be prepared for shipment and the nearest relative notified by telegraph with request to reply by telegraph stating whether or not it is desired to have the remains shipped home at Government expense, and if shipment home is desired to designate the destination and the name of the person to whom the remains are to be consigned: in which case the remains will be transported to the point designated and the consignee notified by telegraph. Should the nearest relative state that it is not desired to have the remains shipped home, or if it is impossible to ascertain the relative's desire within a reasonable time, interment will be made in the nearest military post or national cemetery or, if the commanding officer deem proper, at the place of death. If the relatives direct that the remains be not shipped home and they are interred at the expense of the Government, subsequent disinterment or shipment of the remains at the request of the relatives will not be made at Government expense.

If the remains are interred in a military post or national cemetery, or at the place of death, the expenses incident to the interment will be limited to \$75, to be paid from the appropriation "Disposition of remains of officers, soldiers, civilian employees, and so forth" (designated by the Treasury Department as "Bringing home remains of officers, soldiers, and civil employees"), and will be restricted to the cost of the casket, hire of a hearse, and the reasonable and necessary expenses of preparing the remains for interment.

If the remains are to be shipped, the expenses, exclusive of the cost of transportation, will be limited to \$75 and restricted to the cost of the casket, shipping case, and the reasonable and necessary expenses of preparing the remains for shipment. In either case, any transportation involved will be paid from the appropriation hereinbefore mentioned.

When it is impracticable to ship the remains at the time of death, or if it is impossible to communicate with the relatives before interment, the remains may be subsequently disinterred and shipped home at Government expense at the request of the relatives. In such cases the cost of the disinterment and preparation of the remains for shipment will not exceed \$75, except by authority of the Secretary of War, and, including transportation, will be paid from the before-mentioned appropriation.

Transportation may be issued for one attendant to accompany the remains shipped, provided the cost to the Government of shipping the remains by express is not thereby exceeded.

The officer under whose direction the disposition of the remains is made will forward a full report thereof to The Adjutant General of the Army,

Where practicable, contract will be made with an undertaker or other competent person for services in the preparation of remains for interment or shipment during a fiscal year, as contemplated for other purposes in paragraph 551, but no such contract will be made with any undertaker or other person whom the post surgeon considers not competent. A written report of the disposition of the remains, with an itemized statement of the cost of embalming, coffin, or casket, hire of hearse, and transportation, will be forwarded by the quartermaster without delay directly to the Quartermaster General.

When death occurs at the hospital, the surgeon will promptly notify the embalmer employed under contract, if such services are required, and will see that the remains are prepared properly and in accordance with sanitary regulations. If there should be no contract embalmer, the duty of employing an undertaker will devolve upon the quartermaster; but no undertaker will be employed whom the surgeon considers not competent. The responsibility of the surgeon for the proper care and preparation of the remains will not cease until they are removed by the quartermaster for interment or shipment. (*C. A. R., No. 10.*)

ARTICLE XIV.

VETERINARIANS, CAVALRY, AND FIELD ARTILLERY.

88. Rescinded. (*C. A. R., No. 51.*)

89. Rescinded. (*C. A. R., No. 51.*)

90. It shall be the duty of the veterinarian to visit at least daily all sick or injured animals at his station, and to recommend such treatment as he may deem proper. He will have access to the stables at all times. Upon request he will attend such authorized private horses of mounted officers as may need his services.

91. The veterinarian will instruct company horseshoers and company farriers in the proper care of the horse. In this he will give especial importance to the anatomy and pathology of the foot, showing the nature and uses of all its

parts, illustrating the subject by dissections and specimens. He will also teach the principles and practice of horseshoeing. For the purpose indicated he will make such visits of instruction to companies of the regiment not at his station as may be deemed necessary by the regimental commander.

92. Wherever four or more troops of Cavalry or three or more batteries of Field Artillery are stationed, a suitable building may be set apart as a veterinary hospital.

ARTICLE XV

GENERAL NONCOMMISSIONED STAFF.

- 93. Rescinded. (*C. A. R., No. 52.*)
- 94. Rescinded. (*C. A. R., No. 52.*)
- 95. Rescinded. (*C. A. R., No. 52.*)
- 96. Rescinded. (*C. A. R., No. 52.*)
- 97. Rescinded. (*C. A. R., No. 52.*)
- 98. Rescinded. (*C. A. R., No. 52.*)
- 99. Rescinded. (*C. A. R., No. 52.*)
- 100. Rescinded. (*C. A. R., No. 52.*)
- 101. Rescinded. (*C. A. R., No. 52.*)
- 102. Rescinded. (*C. A. R., No. 52.*)

103. The general noncommissioned staff consists of noncommissioned officers of the Quartermaster Corps, Signal Corps, Medical Department, and Ordnance Department. They are appointed, promoted, reduced, and their warrants signed as follows:

In the Quartermaster Corps, as prescribed in paragraph 1009.

In the Medical Department, as prescribed in Article LXXIV.

In the Ordnance Department, as prescribed in section 2, paragraph 1512.

In the Signal Corps, by the Chief Signal Officer, as prescribed in paragraph 1557.

Their warrants may be continued in force upon discharge and reenlistment, if reenlistment be made on the day following that of discharge. Any noncommissioned officer enlisted on or after the first day of November, 1916, furloughed to the reserve upon the completion of three years in the active service with an excellent character, shall be permitted to reenlist in the organization from which furloughed with the rank and grade held by him at the time of his furlough if he reenlists within 20 days after the date of such furlough. In each case the soldier will reenlist at the place where his organization is stationed. Each reenlistment and continuance will be noted on the warrant by the company or detachment commander. (*C. A. R., No. 52.*)

ARTICLE XVI.

DETACHED SOLDIERS: SERVICE RECORDS.

104. When an enlisted man is detached from his company, his service record will be forwarded by indorsement to his new commanding officer. When it can be avoided, the service record will not be intrusted to the soldier, but to an officer or noncommissioned officer under whose charge he may be, or it may be forwarded by mail. (*C. A. R., No. 55.*)

105. All matters relating to the pay, clothing allowance, subsistence, discharge, reenlistment, death, and desertion of enlisted men detailed for duty with the National Guard under section 36 of the act of Congress approved June 3, 1916, will be administered and determined at the headquarters of the department in which such enlisted men may be serving. The service records of these men will be kept at department headquarters.

All matters relating to the muster, pay, clothing allowance, subsistence, discharge, reenlistment, furlough to the reserve, death, and desertion of enlisted men detailed for duty at institutions where one or more units of the Reserve Officers' Training Corps are maintained, or at schools and colleges pursuant to sections 46 and 56 of the act of Congress approved June 8, 1916, will be administered and determined at the headquarters of the department in which such institution, school, or college is located. Their service records will be kept at department headquarters. Their duties are prescribed in the Reserve Officers' Training Corps Regulations or the regulations governing details of officers and noncommissioned officers to schools and colleges under sections 46 and 56 of the act of Congress approved June 3, 1916. (*C. A. R., Nos. 51 and 55.*)

ARTICLE XVII.

FURLOUGHS TO SOLDIERS.

106. Furloughs in the prescribed form for periods of three months may be granted to enlisted men by post commanders, and for periods of one month by commanding officers of general hospitals, general depots of supply, mine planters, or by regimental commanders if the companies to which the men belong are under their control. Brigade and district commanders may grant furloughs for periods of three months to enlisted men under their immediate control. A furlough will not be granted to a soldier about to be discharged, nor shall the number of enlisted men furloughed from any command in the field, or at posts, exceed 5 per cent of the enlisted strength present therewith.

The granting of furloughs to enlisted men of a mobilized separate brigade, division, or higher command will be subject to such regulations as the commander of the forces may prescribe. (*C. A. R., No. 55.*)

107. The commander of a territorial department may grant furloughs to enlisted men for three months, or he may extend to such period furloughs already granted. The chief of a War Department bureau may grant furloughs for not to exceed three months to enlisted men of his corps or department serving under the exclusive control of himself or of his subordinates, or he may extend to that period furloughs already granted to such enlisted men. A furlough for a longer period than three months will be granted by the War Department only under most unusual and urgent circumstances, and under such circumstances the commander of the Philippine Department may grant furloughs for four months or he may extend to such period furloughs already granted. Permission to delay may be granted to enlisted men traveling under orders as authorized for furloughs. The conditions under which furloughs to soldiers on reenlistment are authorized will be announced from time to time in orders. (*C. A. R., No. 22.*)

108. The commanding officer of a field army, or of a separate command in the field, may suspend the granting of furloughs in any or all organizations within his command whenever, in his opinion, circumstances render it necessary, or advisable, or for the best interests of the service.

109. An enlisted man on furlough will not leave the United States to go beyond the sea unless the furlough includes permission to do so. The limits prescribed will be stated in the furlough, and if exceeded it may be revoked and the soldier arrested. A company commander in forwarding an application for furlough will state previous absences on furlough that are of record in the company. The authority under which a furlough is granted (whether under Army Regulations or in pursuance of the orders of a superior) will be cited on the face of the furlough by the officer granting it.

110. When an enlisted man who is on furlough or absent without leave and is without means to return to his proper station reports at a post, camp, or general recruiting station, the commanding officer thereof is authorized to furnish the necessary transportation and subsistence for the return of the soldier to his proper station after satisfying himself that he can be trusted therewith. In case of doubt as to the soldier's identity or status or whether he can be trusted the commanding officer will communicate by mail or telegraph with the soldier's company commander before furnishing the transportation.

If the commanding officer decides that the soldier can not be trusted with transportation, he will report the case by telegraph to the department commander or to The Adjutant General of the Army if the post, camp, or station at which the soldier reports is not under the control of a department commander.

The company commander will charge the cost of such transportation and subsistence against the soldier's pay on the next pay roll in accordance with the provisions of paragraphs 1111½ and 1236. He will also charge against the soldier's pay the cost of transportation and subsistence of the guard in case the soldier is returned to his station under guard by order of the department commander or the War Department, as well as the cost at the prescribed rate for Government messages of any telegrams received from or sent to the commanding officer of the post, camp, or station at which the soldier reported for transportation. The cost of telegrams to and from the department commander or The Adjutant General of the Army will not be charged against the soldier.

If the soldier is on furlough, the date on which he reported at the post, camp, or station for transportation will be entered on the furlough; if he is absent without leave, the date will be reported to the soldier's company commander by letter. In either case prompt report will be made to the company commander of the date the soldier departed for his proper station. (*C. A. R., Nos. 42 and 55.*)

111. Furloughs granted to enlisted men serving in Porto Rico, Hawaii, Guam, the Philippine Islands, Alaska, or at any station beyond the continental limits of the United States, for the purpose of returning thereto, will take effect on the dates they reach the United States, which will be indorsed on the furloughs by the transport quartermaster if travel is by United States transport; otherwise the certificate of the captain, purser, or other proper officer of commercial steamer upon which journey is made, as to date of arrival in home port will be indorsed thereon. The furloughs will direct the soldier to report for duty at the close of the last day thereof at the military post nearest the particular home port from which transports or commercial steamers usually sail for the islands or stations above referred to, and the commanding officers of these posts will assign such enlisted men to organizations under their command for the purpose of subsistence during the time they are detained at their posts, and they will be returned to their proper stations by the first available transport, or commercial steamer if there are no United States transports sailing to destination. Commanding officers will cause notation to be made on the furloughs showing the dates when the men report at their posts and at the proper time will issue the necessary orders directing them to rejoin their stations, reciting therein the date of their arrival in the United States, date of reporting at post, and whether or not commutation of rations has been paid. A copy of the order will be furnished to the soldier and to the commanding officer concerned. The quartermaster of the transport, or proper officer of commercial steamer on which these enlisted men return, will indorse on such orders the dates during which they were subsisted aboard the transport or commercial steamer. The

order will be retained by the enlisted man, who will deliver it to his commanding officer as evidence of his authority to be absent from his post during the time required for travel in rejoining the same.

112. When the station of an enlisted man is changed while he is on furlough, he will, on joining his new station, be entitled as reimbursement of travel allowances to the difference, if any, in cost of transportation including sleeping car accommodations, from the place of receipt of order to the new station over the cost of transportation from place of receipt of order to his old station, but not to exceed the amount it would cost the Government to transport him from his old to his new station. An enlisted man under orders to change station who takes advantage of a furlough before he joins his new station is not, upon joining his new station, deprived of the travel allowances to which he would have been entitled had he not availed himself of furlough. If the furlough be availed of while under orders to change station with his command, the reimbursement will not exceed the amount which it would have cost the Government to have transported him with his command from the old to the new station. A soldier who has returned to the station from which furloughed, his company having changed station during his absence, is entitled to transportation at the expense of the Government from the old to the new station of his company. Charges for transportation furnished to enlisted men on furlough, in pursuance of paragraph 110, will be adjusted in accordance with the requirements of this regulation. (*C. A. R. No. 41.*)

113. Soldiers on furlough will not take with them their arms or accouterments, and no payments will be made to them without authority from the War Department.

ARTICLE XVIII.

TRANSFER OF ENLISTED MEN

114. Transfers of enlisted men will be made for cogent reasons only and will be effected as follows:

1. When not involving change of station—

(a) Within a regiment, by the regimental commander

(b) Within a detached battalion serving at such a distance from regimental headquarters that more than 15 days are required for exchange of correspondence by mail, by the battalion commander.

(c) Within a coast defense command, by the coast defense commander

2. In cases involving change of station, transfers will be made by the regimental commander, the battalion commander, under the circumstances stated in the preceding section, or the coast defense commander with the approval of the authority competent to direct the necessary travel.

3. From one organization of the line of the Army to another serving—

(a) Within any post commanded by a general officer, by the post commander

(b) Within any territorial department, by the department commander.

(c) Within any tactical division, by the division commander.

(d) Within any tactical division or department by the commander thereof, any enlisted man who has been tried within such command and acquitted, or sentenced and retained in the service, and whose return to his proper organization is not deemed by such tactical division or department commander to be in the interests of the United States.

4. From the line of the Army to the Medical Department and the Quartermaster Corps, as prescribed in the articles relating to the Medical Department and the Quartermaster Corps, respectively.

5. From one staff corps or department to another and from staff corps or departments to the line of the Army within any territorial department, by the

department commander, or within any division by the division commander, provided the enlisted strength of any staff corps or department will at no time exceed that authorized by existing orders or regulations. Only such men will be transferred as are, after careful inquiry, deemed suitable for service in the staff corps or department to which transfer is contemplated. Such transfers will not be authorized when they would deplete the staff corps or department involved to such an extent as to interfere with the efficient discharge of its duties.

6. From a coast defense command to the Coast Artillery detachment of a mine planter or cable ship serving within a department, by the department commander.

7. In the Canal Zone, the authority granted to department commanders to transfer enlisted men from one organization or arm to another is extended to the commander of the United States troops, Canal Zone.

8. In all other cases, by the War Department. (*C. A. R., Nos. 6, 31, 49 and 55.*)

115. A transfer will take effect on the date of the receipt of the order at the post where the soldier is serving, and the soldier's service record showing that date will be forwarded to the commanding officer of the company or detachment to which he is transferred. (*C. A. R., No. 55.*)

115½. In case of a noncommissioned officer who is transferred without loss of rank or grade from an organization in the Philippine Department, Hawaiian Department, or the Canal Zone to an organization serving within the continental limits of the United States, or vice versa, the regimental adjutant, or the authority competent to make original appointments to the grade involved, will indorse upon the warrant of such noncommissioned officer the following: "Transferred from (organization) to (organization) by (state authority) without loss of rank or grade (date)" (*C. A. R., No. 27.*)

ARTICLE XIX.

DESERTERS.

116. When a soldier deserts, his immediate commanding officer will at once ascertain whether any public property has been lost in consequence thereof, and, if so, will proceed as in the case of property lost or destroyed, and the value of the articles lost will be charged against the deserter on the next pay rolls of his company.

A copy of the approved report of the surveying officer will accompany the return to which the property pertains.

117. The company or detachment commander will turn over the clothing abandoned by a deserter to the quartermaster, with a certificate showing its condition and the name of the deserter to whom it belonged. The quartermaster will transfer to such depot of the Quartermaster Corps, or to the United States Disciplinary Barracks or such branch thereof, as may be designated, all outer garments of distinctive uniform clothing. In no case will the money or proceeds of the sale of effects of a deserter be turned over to his relatives, nor any payment made therefrom by an officer on any account whatsoever. All other personal effects of a deserter will be disposed of as in the case of unclaimed effects of deceased soldiers—i. e., they will be sold by a council of administration and the proceeds of the sale deposited with a quartermaster.

The quartermaster's receipt for the money deposited as above should clearly specify the nature of the deposit—i. e., whether for the proceeds of sale of effects or whether for the undrawn pay of a soldier who has deserted—and the officer responsible should furnish the quartermaster with the necessary infor-

ination. Money or other valuables found upon an apprehended deserter are his personal property and will not be turned over to a quartermaster (*C. A. R., No. 23.*)

118. When a soldier deserts, or a general prisoner escapes, from a post or station, or command in the field, the commanding officer will cause copies of descriptive lists of the deserter, or escaped general prisoner, to be at once prepared on the prescribed form, and sent to such marshals, sheriffs and police officers as he may deem proper; also to the officer in charge of any recruiting station at or near the place where the deserter or escaped general prisoner was accepted for enlistment, who will distribute them to the best advantage among civil officers in that vicinity authorized by existing law to summarily arrest a deserter or escaped general prisoner from the Army (*C. A. R., No. 55.*)

119. The commanding officer of a post or station, or of troops in the field, will promptly notify The Adjutant General of the Army, on the form provided for that purpose, of every desertion and of every escape of a general prisoner from his command, giving the full name, company, and regiment of such deserter or escaped general prisoner, with date of enlistment and date and place of desertion or escape. (*C. A. R., No. 55.*)

120. When a soldier deserts from or when a deserter is received at a post other than the station of his company or detachment, the commanding officer of the post will report the fact to the commanding officer of the company or detachment, with date and place of desertion, apprehension, or surrender, and such additional data as he may possess requisite to the preparation of charges. If, however, a deserter whose company or detachment is stationed in Alaska or beyond the continental limits of the United States is received at a station within the United States, a similar report will also be made to the War Department.

121. A reward of \$50 will be paid to any civil officer or civilian for the apprehension and delivery, to the proper military authorities at a military post, of a deserter from the military service, except a deserter from the Philippine Scouts, for whose apprehension and delivery a reward of \$20 will be paid. A reward of \$50 will also be paid for the apprehension and delivery, to the proper military authorities at a military post, of an escaped military prisoner. No reward will be paid in the case of a deserter or of an escaped military prisoner who is serving in the Army, Navy, or Marine Corps, or in the case of a deserter who, subsequently to his desertion, has been dishonorably discharged from any other enlistment in the Army, or who can claim exemption from punishment under the thirty-ninth article of war. The reward will be paid by the Quartermaster Corps and will be in full satisfaction of all expenses for arresting, keeping, and delivering the deserter or escaped military prisoner. The quartermaster making the payment will report that fact to the commanding officer of the organization to which the deserter belongs or to the commanding officer of the military post or prison from which the prisoner escaped. (*C. A. R., No. 55.*)

122. When enlisted men are sent in pursuit of a deserter, the expenses necessarily incurred will be paid whether he be apprehended or not, and will be reported as in payment of rewards. Should a written order be issued for this duty and a transportation request be furnished the party in pursuit, the name, rank, company, and regiment of the deserter will be stated in the order and also noted on the request.

123. A reward will not be paid by a recruiting officer for the delivery of a deserter at a recruiting station, except upon express authority from The Adjutant General of the Army. In the event of the surrender or of the delivery

of a deserter to a recruiting officer the latter will at once telegraph to The Adjutant General of the Army, stating whether the deserter is physically fit for service and requesting instructions relative to the disposition to be made of him and the payment of the reward.

124. When a report is received of the apprehension or surrender of a deserter at a post other than the station of his company, the company commander will immediately forward his service record and the names of the witnesses and a brief statement of the evidence expected from each, together with a complete set of charges against the deserter, to the officer who makes the report. In cases reported to the War Department under the provisions of paragraph 120, the service records will be furnished by The Adjutant General of the Army, and the charges will then be preferred at the post where the prisoner is held. (*C. A. R., No. 55.*)

125. When a deserter surrenders or is delivered at a military post, the commanding officer will cause immediate inquiry to be made of him in regard to the dates of his enlistment and desertion, and if these indicate that trial is barred by law, and the deserter claims to have been within the limits of the United States during two years subsequent to the date of the expiration of the term for which he was enlisted, the commanding officer will telegraph to The Adjutant General of the Army for verification of the service claimed by the deserter. When it is determined that trial is barred by law the commanding officer will require the deserter to file an affidavit asserting his claim, will immediately set him at liberty with instructions to apply by letter to The Adjutant General of the Army for a "deserter's release," and will then report his action directly to The Adjutant General of the Army, forwarding with the report the affidavit of the deserter.

126. The commanding officer will cause an enlisted man who has been apprehended or has surrendered as a deserter, and whose trial for desertion is not barred by the statute of limitations, to be examined by a medical officer at the post where he is received. If the examination shows that the man is fit for service, the commanding officer will cause charges to be forwarded to department headquarters or to be referred to a special court, or will otherwise dispose of the case, as the interests of the Government may dictate. No deserter will be sent before trial beyond the limits of the department in which he is returned to military control without authority for sending him beyond such limits having first been obtained from the War Department. If the examination shows that the man is physically unfit for service and desertion is admitted, the department commander may discharge him without trial by reason of desertion and physical unfitness for service; if he refuses to admit desertion and it is deemed inadvisable to try him, application will be made for authority from the Secretary of War to discharge him without trial. (*C. A. R., Nos. 23 and 37.*)

126½. When a deserter or escaped general prisoner surrenders or is delivered at a military post or station, or to a command in the field, the commanding officer thereof will immediately send to The Adjutant General of the Army, on the form provided for that purpose, a report stating whether the deserter or general prisoner surrendered or was apprehended, the date and place of surrender or delivery, and, if the man was apprehended, the name and official status, if any, of the person who delivered him to the military authorities.

The reports from recruiting officers required by this paragraph will be in addition to the telegraphic reports required by paragraph 123. Army Regulations. (*C. A. R., Nos. 32, 34, and 55.*)

127. Rewards or expenses paid for apprehending a deserter, and the expenses incurred in transporting him from point of apprehension, delivery, or surrender to the station of his company or detachment, or to the place of his

trial, including the cost of transportation of the guard, will be set against his pay upon conviction of desertion by a court-martial, upon discharge by reason of desertion admitted and physical unfitness for service, or upon his restoration to duty without trial. A soldier convicted by a court-martial of absence without leave will be charged with the expenses incurred in transporting him to the station of his company or detachment, or to the place of his trial, including the cost of transportation of the guard. Except in the case of a soldier restored to duty at the United States Disciplinary Barracks or any branch thereof by the remission of his suspended sentence of dishonorable discharge or pursuant to section 1352, Revised Statutes, a soldier convicted by a court-martial of desertion or absence without leave or a deserter restored to duty without trial for desertion, who is sent from the point of apprehension, delivery, or surrender, to a place of confinement or trial other than the station of his company or detachment, and is later sent to the station of his company or detachment, will be charged with an amount equal to the cost of his own transportation and that of his guard, if any, from the point of apprehension, delivery, or surrender, to the station of his company or detachment. The cost of transportation to a station of a soldier restored to duty from suspended or executed dishonorable discharge at the United States Disciplinary Barracks or any branch thereof will be borne by the Government. The transportation and subsistence of witnesses will not be charged against a deserter. The cost of transportation and subsistence furnished under this paragraph will be reported in accordance with paragraphs 1111½ and 1236. (*C. A. R., Nos. 24, 37, and 55.*)

128. Rescinded, see M. C. M., par. 329. (*C. A. R., No. 55.*)

129. Deserters will be brought to trial with the least practicable delay. While awaiting trial they will receive no pay, nor will they be permitted to sign pay rolls, and will be required to wear the clothes worn at the time of arrest, unless it should be imperative to issue other clothing, when, as far as practicable, only deserters' or other unserviceable clothing will be issued.

130. A soldier in desertion or absent without leave who surrenders or is apprehended before his term of enlistment has expired is entitled to pay and allowances from the date of his return to military control. If he is subsequently restored to a duty status, he will serve for such period as will, with the time he may have served prior to his desertion or absence without leave, amount to the full term for which he enlisted; but the time during which he may have been in confinement awaiting trial or serving sentence imposed by a court-martial for said offenses, or if he enlists while in desertion, the term served under such unlawful enlistment will not count as making good any of the time lost. If a soldier's term of enlistment expires while he is in confinement awaiting trial or serving sentence, his pay and allowances will cease from the date of the expiration of his term of enlistment and will not again accrue until he shall have been restored to a duty status. A soldier in desertion or absent without leave whose term of enlistment has expired prior to his return to military control is not entitled to pay and allowances until his restoration to a duty status.

131. A deserter will not be restored to duty without trial except by authority competent to order his trial; such restoration, being ordered only in case the desertion is admitted, does not remove the charge of desertion or relieve the soldier from any of the forfeitures attached to that offense; he must make good the time lost by desertion, refund the reward and expenses paid for apprehension and delivery, and forfeit pay while absent. The same authority is competent to set aside a charge of desertion as having been erroneously made, and his order to this effect operates to remove the charge of desertion and all stoppages and forfeitures arising therefrom.

132. An enlisted man who absents himself from his post or company without authority will forfeit all pay and allowances thereafter accruing until the date of his return to military control, and will be required to make good the time lost by such absence. The period of such absence will not be regarded as service in the computation of continuous-service pay under the laws existing prior to the act of Congress approved May 11, 1908, or for retirement. No man will be reported a deserter unless the company commander, after a thorough investigation, has reason to believe that the absentee does not intend to return; but commanding officers will take steps to apprehend soldiers absent without leave as soon as the fact of that absence is reported. Should the soldier not return, or not be apprehended, his desertion will date from the commencement of the unauthorized absence. An absence without leave of less than one day will not be noted upon the muster rolls. (*C. A. R., Nos. 1 and 35.*)

133. A soldier not charged with crime, discovered to be a deserter from the Navy or Marine Corps, will be dropped from the rolls of the Army upon receipt of authority from the War Department. In such cases a report will be forwarded to The Adjutant General of the Army by the proper commanding officer, who will hold the man in confinement, without pay, awaiting instructions regarding his disposition. Deserters, stragglers, and others absent without proper authority from the Navy or Marine Corps will not be received at any military post or station, and no expense whatever to the United States will be incurred in their behalf by the military authorities. (*C. A. R. No 55.*)

ARTICLE XX.

RETIREMENT OF ENLISTED MEN

134. When an enlisted man of the Army shall have served as such for 30 years, either in the Army, Navy, or Marine Corps, or in all, he may apply to The Adjutant General of the Army for retirement, the application to be forwarded directly by the post commander. Upon the approval of the application an order will be issued from the War Department transferring him to the retired list and directing that transportation in kind to his home and commutation of subsistence during necessary travel be given to him.

Service as a commissioned officer of the United States Volunteers, organized in 1898 and 1899, or of the Porto Rico Provisional Regiment of Infantry, or of the Philippine Scouts, will count for the purpose of retirement as an enlisted man as though rendered as such, and length of war service with the Army in the field, or with the Navy or Marine Corps in active service (either as volunteer or regular) during the War of the Rebellion and actual service in China, Cuba, the Philippine Islands, the island of Guam, Alaska, or Panama, or prior to April 23, 1904, in Porto Rico, will, for men enlisting prior to August 24, 1912, be doubled in computing the 30 years' service necessary to entitle an enlisted man to be retired.

The actual service in any of the places named above will be considered as beginning on the date of a soldier's arrival at the first port of call, and as ending on the date of his departure from the last port of call therein the respective dates to be entered on the muster roll of the organization to which the soldier belongs.

An enlisted man traveling on a commercial vessel to or from any of these places will be instructed to request the master of the vessel, or, in his absence, the purser, to indorse on his travel order the date of arrival at the first port of call, or the date of departure from the last port of call. If the soldier neglects to obtain such indorsement the period to be counted double will begin with the date of his arrival at his station and will end with the date of his departure from his station.

The time during which a soldier may be on furlough while in any of the places named herein will not be counted double in computing his service for retirement.

135. Upon receipt of the order for retirement, the soldier's immediate commanding officer will furnish him with a final statement, closing his accounts of pay, deposits, and all allowances other than those of travel, as of the date of the receipt of the order; he will forward to The Adjutant General of the Army a descriptive list and pay account (Form No. 94, A. G. O.) in duplicate, noting thereon the fact that a final statement has been given, the continuous-service pay per month for which the soldier was last mustered, his post-office address for the next 30 days, and the place selected as his home. The descriptive list and pay account will bear the soldier's signature, or, if he can not write, a statement to that effect. The final statement and descriptive list and pay account must state the date to which subsistence has been furnished, also whether subsistence while traveling home has been furnished, and, if so, for what dates. A discharge certificate will not be given, but the soldier will be dropped from the rolls of his command with appropriate explanatory remarks. The Quartermaster Corps will be notified and furnished with the soldier's signature, as in case of discharge. (*C. A. R., No. 55.*)

136. On the last day of every calendar month each retired enlisted man will report his post-office address to The Adjutant General of the Army. Blank forms for personal reports and official penalty envelopes will be furnished to retired enlisted men on application to The Adjutant General of the Army.

137. The authorized pay and allowances of retired enlisted men will be paid to them monthly by the Quartermaster Corps. Their pay will be three-fourths of the monthly pay allowed by law for the grade held by them when retired. In addition to the monthly pay they are entitled to \$9.50 per month for commutation of clothing and rations and \$6.25 per month in lieu of quarters, fuel, and light. Service on the retired list does not entitle enlisted men to any further increase of pay for length of service beyond what accrued at date of retirement.

138. All retired enlisted men, except those residing in the Philippine Islands and Hawaii Territory, will be paid by the Depot Quartermaster, Washington, D. C., to whom one copy of all descriptive lists and pay accounts will be transmitted by The Adjutant General of the Army. The descriptive lists and pay accounts of retired enlisted men residing in the Philippine Islands and Hawaii Territory will be transmitted by the Depot Quartermaster, Washington, D. C., to the Department Quartermaster, Philippine Department, and the Depot Quartermaster, Honolulu, H. T., respectively. (*C. A. R., No. 55.*)

ARTICLE XXI.

DISCHARGES CERTIFICATES OF DISABILITY

DISCHARGES AND FINAL STATEMENTS.

139. An enlisted man will not be discharged before the expiration of his term of service except—

1. By order of the President or the Secretary of War
2. By sentence of a general court-martial or military commission.
3. By direction of the commander of a territorial department or mobilized division, by purchase, under rules governing such discharge; on account of disability; on account of a sentence to imprisonment by a civil court, whether suspended or not; or under the provisions of paragraphs 126 and 148.

4. In compliance with an order of one of the United States courts, or a justice or a judge thereof, on a writ of habeas corpus. (*C. A. R., Nos. 26 and 36.*)

140. When an enlisted man is discharged, his company commander will furnish him with a final statement, in duplicate or a full statement in writing of the reasons why such final statement is not furnished. A final statement will not be furnished to a soldier who has forfeited all pay and allowances and has no deposits due him. If he has deposits, a final statement will be issued, containing a full statement of the soldier's accounts at the date of his discharge, in order that the quartermaster may determine whether there is any balance of stoppages which should be collected from the amount due for deposits. When the discharge is made on certificate of disability the ascertained disability, as recited in the certificate, must be given in the final statement as the reason or cause for discharge.

141. When a soldier is held in service to make good time absent without leave under paragraph 132, his final statement will contain notation to that effect, and will also set forth the specific dates of the unauthorized absence or absences. The quartermaster will make deduction of pay for only such unauthorized absence as is shown to have occurred since the date to which the soldier was last paid as given in the final statement, unless the final statement contains specific notation that deduction should also be made for unauthorized absences occurring prior to such date.

Any overpayments resulting from the failure of an officer to make proper entry of unauthorized absence in stating the account of an enlisted man for pay for the period during which the absence occurred, either on pay rolls or final statement, will be charged against such officer.

142. Whenever an enlisted man is discharged from the Army prior to the expiration of his term of service, the actual cause of discharge will be stated in the order directing the discharge and fully stated on the discharge certificate and on the final statement. Where a discharge is ordered on account of the soldier's misconduct, or unfitness for the service, physical or in character, due to the soldier's misconduct a statement to that effect will be set forth in the order and will be noted on the discharge certificate and final statement. Officers signing final statements will be careful to see that these notations are made in all cases, as the cause of discharge determines the soldier's right to travel allowances, and the mere quotation of the number and date of the order upon which discharge is based is insufficient as a guide to proper payment. (*C. A. R., No. 14*)

143. When an enlisted man is discharged by expiration of service, his discharge will take effect on the last day thereof—i. e., if enlisted on the second day of the month his term will expire on the first day of the same month in the last year of his term of enlistment.

When a soldier immediately reenlists after discharge, the reenlistment will be completed on and bear the date of the day following that of discharge. His pay will then be continuous.

144. Rules governing discharge by purchase and by reason of dependent parent will be published from time to time by the War Department.

145. An enlisted man, a resident of the United States, who is discharged while serving in Alaska or outside of the continental limits of the United States, though under circumstances not entitling him to travel allowances, will, if practicable, be brought to the United States on a United States transport at the expense of the Government. Transportation will be furnished at the convenience of the Government and, in the case of men discharged by way of punishment for offenses or because of confinement by civil authorities, the privilege will be forfeited unless it is made use of at the first opportunity.

146. Transcripts from records of civil courts need not accompany applications for discharge of enlisted men sentenced to imprisonment by such courts. The official statement of the company commander to that effect is sufficient.

147. A soldier, on his discharge from the service, will be given a certificate of discharge signed by a field officer of his regiment or corps, or by the commanding officer when no field officer is present. When more than one field officer of the regiment or corps is present, the commanding officer may designate the particular field officer to perform this duty, and in any case the commanding officer may require the discharge to be submitted to him before delivery to the soldier.

147½. When the dates on a discharge certificate show that a soldier has been retained in service beyond the term of his enlistment an explanatory notation will be made on the certificate as follows:

In cases where the soldier was retained in service to make good any time in excess of one day lost by unauthorized absences, or on account of disease resulting from his own intemperate use of drugs or alcoholic liquors or other misconduct, or while in confinement awaiting trial or disposition of his case if the trial results in conviction, or while in confinement under sentence, the notations will read: "Retained in service ---- days after expiration of term of enlistment pursuant to act of April 27, 1914."

In cases where the soldier was retained in service for the convenience of the Government the notations will read: "Retained in service ---- days after expiration of term of enlistment for the convenience of the Government." (*C. A. R., No. 24.*)

148. The character given on a discharge, except when the discharge is given under the provisions of paragraph 148½, will be certified to by the company or detachment commander, and great care will be taken that no injustice is done the soldier. Where, upon expiration of term of service, the company or detachment commander is of the opinion that the soldier's reenlistment should not be recommended, he shall, if practicable, so notify the soldier at least 30 days prior to discharge, and shall at the same time notify the commanding officer, who will in every such case convene a board of officers, three if practicable, to determine whether the soldier's reenlistment should or should not be recommended and the kind of discharge that should be given to him under the provisions of paragraph 150. The soldier will in every case be given a hearing before the board.

If the company or detachment commander is also the commanding officer, he will report the facts to the next higher commander, who will convene the board. The finding of the board, when approved by the convening authority, will be final.

The proceedings of boards convened under this paragraph, showing all facts pertinent to the inquiry, will be forwarded by the reviewing authority directly to The Adjutant General of the Army for file. (*C. A. R., Nos. 25 and 47.*)

148½. When an enlisted man is incompetent, or does not possess the required degree of adaptability for the military service, or gives evidence of habits or traits of character which serve to render his retention in the service undesirable, or is disqualified for service, physically or in character, through his own misconduct, his company or detachment commander will report the facts to the commanding officer, who will convene a board of officers, three if practicable, to determine whether or not the soldier should be discharged prior to the expiration of his term of enlistment. If the company or detachment commander is also the commanding officer, he will report the facts to the next higher commander, who will convene the board. When the findings of the board indicate disqualification through physical disability, the proceedings will be accompanied by certificate of disability. If discharge be recommended, the board will also recommend the character to be given on the discharge, and the proceedings of the board, when approved by the convening authority, will be forwarded to the officer exercising general court-martial jurisdiction over the command for final

action. If the findings of the board are approved, the proceedings will then be sent to the officer who makes the discharge and will be forwarded by him to The Adjutant General of the Army for file.

The discharge to be given to soldiers discharged under the provisions of this paragraph will in all cases be that prescribed by section 3 of paragraph 150. (*C. A. R., Nos. 40 and 47.*)

149. When in the opinion of the company commander the circumstances warrant it, notation will be made under remarks, on back of discharge certificate, that the soldier is fitted for a commission in the United States Volunteers, giving his special qualifications.

150. Blank forms for discharge and final statements will be furnished by the Adjutant General's Department, and will be retained in the personal custody of company commanders. Discharge certificates will be used in the discharge of enlisted men and for no other purpose, and will be of three classes: For honorable discharge, for discharge, and for dishonorable discharge. They will be used as follows:

1. The blank for honorable discharge, when the soldier's conduct has been such as to warrant his reenlistment and his service has been honest and faithful.

2. The blank for dishonorable discharge, for dishonorable discharge by sentence of a court-martial or a military commission.

3. The blank for discharge when the soldier is discharged except as specified under sections 1 and 2 of this paragraph. (*C. A. R., Nos. 14 and 34.*)

151. Discharge certificates will not be made in duplicate. Upon satisfactory proof of the loss or destruction of a discharge certificate, without the fault of the person entitled to it, the War Department may issue to such person a certificate of service, showing date of enlistment in and discharge from the Army and character given on discharge certificate. An application for certificate in lieu of lost or destroyed discharge certificate will be forwarded by the applicant's immediate commanding officer directly to The Adjutant General of the Army. Discharge certificates must not be forwarded to the War Department in correspondence unless called for.

152. The discharge of a soldier takes effect on the date of notice to him of such discharge, either actual, by delivery of the discharge certificate, or constructive, as where such delivery can not be made owing to his absence for his own convenience or through his own fault, in which case the receipt, at the soldier's proper station, of the order directing his discharge will be deemed sufficient notice. In the latter case the date of the receipt of the order and the reason why actual notice thereof was not given to the soldier will be entered upon the muster roll which shows the separation of the soldier from the service, and will be indorsed upon the discharge certificate should one have been prepared. The date of discharge on the final statement must be the same as that on the discharge certificate. If a soldier is absent in desertion when the order for his discharge is received, the discharge will not be executed, but the soldier will be dropped from the rolls as a deserter. The dishonorable discharge of a soldier against whom general court-martial charges are pending will be deferred until the charges are finally disposed of by the officer exercising general court-martial jurisdiction.

153. Rescinded (*C. A. R., No 55.*)

154. Rescinded (*C. A. R., No 55.*)

155. Notification of discharge will be furnished only in case of an enlisted man discharged at a place at which there is no available officer provided with funds to make payment on final statement. In these cases the officer who prepares the final statement will, at least one week before the discharge takes effect, send by mail to the quartermaster who is to pay the account a notifica-

tion of discharge, stating therein in his own handwriting the date of last payment to the soldier, and his credits and debits both in words and figures, and other data essential for proper payment or identification. The officer will require the soldier to affix his signature to the notification, or if he can not write his name such fact will be stated thereon. Blank forms for this notification will be supplied by The Adjutant General of the Army. The officer issuing the final statement will inform the discharged soldier of the location of the quartermaster to whom he shall apply for payment.

It should be borne in mind that overpayment caused by an erroneous final statement will be charged against the officer who signed the statement.

In cases arising under paragraph 139 the notification, when required, will be sent to the quartermaster as soon as possible after the order for discharge reaches the officer who prepares and signs the final statement, and, in any event, before the discharge certificate and final statement are signed.

156. A dishonorable discharge from the service is a complete expulsion from the Army, and covers all unexpired enlistments.

157. When a soldier is sentenced by court-martial to confinement without dishonorable discharge, for a period extending beyond the expiration of his term of enlistment, he will be discharged on the date of the expiration of the term of enlistment, but will be held to serve out his sentence. If an honorable discharge is given to the soldier, he can be reenlisted before the expiration of the period of his confinement only upon the remission by competent military authority of the unexecuted portion of his sentence. When, however, a soldier's term of enlistment expires while he is awaiting trial or sentence, he will be discharged on the date of the receipt of an order publishing the case or otherwise disposing of it, and the discharge certificate will be dated accordingly. The discharge certificate will be delivered to the man on his release from confinement and not until then. On the date of the discharge personal notice thereof will be given to the soldier by an officer, and the fact that such notice was given will be entered on the guard report and the morning report and will be indorsed upon the discharge certificate. (*C. A. R., No. 14.*)

158. An enlisted man entitled to travel pay provided by the act of Congress approved June 3, 1916, who becomes eligible to be furloughed to the reserve while he is stationed at a place at which there is no available officer provided with funds to pay travel pay and who has applied to be, or under the law must be, furloughed to the reserve, will be sent for furlough sufficiently in advance of the date to be furloughed to a place where there is stationed an officer provided with funds to pay his travel pay. The above action will be taken, if practicable, when an enlisted man is to be discharged on certificate of disability.

The cost of transportation and subsistence in such cases will be a proper charge against public funds, and the furlough or discharge for disability will be accomplished after he reaches the place where his travel pay can be paid. An exception to this rule will be made in the case of a man who, at the time when he would otherwise be sent for furlough to the reserve to a place where his travel pay can be paid, or who is to be discharged on certificate of disability makes written statement that he waives his right to be sent at Government expense to a place where payment can be made of his final statement. (*C. A. R., No. 51.*)

CERTIFICATES OF DISABILITY

159. When an enlisted man is permanently unfitted for military service because of wounds or disease, he should, if practicable, be discharged on certificate of disability before the expiration of the term of service in which the

disability was incurred. Certificates of disability for discharge will not be made in duplicate. (*C. A. R., No. 13.*)

160. When an application for discharge is approved, the post or regimental commander will furnish to the surgeon by whom the certificate was given, or to the surgeon of the command to which the soldier was attached at the time of his discharge, a letter setting forth the full name and rank of the soldier, the company and regiment to which he belonged, the date of discharge, and the cause thereof as stated in the certificate. The surgeon, having made a true copy of the letter for the completion of his own records, will forward the original to the Surgeon General directly.

161. As disability occurring in the service is usually made the basis of a claim for pension, special care will always be taken to state in the certificate the degree of disability, to describe particularly the disability, wound, or disease, the extent to which it deprives the soldier of the use of any limb or faculty, or affects his health, strength, activity, constitution, or capacity to labor. If such disability was incurred in the line of duty, and the soldier declined treatment for the relief of such disability where treatment was directed, that fact will be set forth in the certificate for the information of the Bureau of Pensions.

In the examination of certificates of disability for discharge, it is enjoined upon department surgeons or division surgeons of mobilized divisions and others concerned, to observe that there is no conflict between the statements of company commanders, medical and other officers thereon, as to whether the disability was incurred in line of duty or not in line of duty. If any discrepancy exists in this particular, every possible means will be employed to harmonize the statements. Department commanders will use extreme caution in the exercise of the authority, conferred by paragraph 139, to order discharge on certificate of disability, and will require, in all cases, before ordering such discharge, that the soldier shall have been held under observation for a sufficient length of time to determine that the disability is permanent. In addition the soldier will be examined critically by a board of at least two medical officers.

ARTICLE XXII.

DECEASED SOLDIERS.

162. In case of the death of any person subject to military law, it will be the duty of his immediate commanding officer to secure his effects, and immediately to notify the nearest relative of the fact of death. (*C. A. R., Nos. 10 and 55.*)

162½. The following reports are required by the War Department in the case of the death of a soldier in the active service:

(a) Report of death and disposal of remains (Form No. 415, A. G. O.) to be made by the commanding officer of the post or station or of a command in the field, and forwarded directly to The Adjutant General of the Army as soon as practicable after final disposition has been made of the remains.

(b) Report of the surgeon or of the soldier's immediate commanding officer if there is no medical officer with the command, embodying (1) cause of death, (2) whether or not death occurred in line of duty, and (3) whether death was or was not the result of the soldier's own misconduct. This report will be forwarded without delay through military channels.

(c) One final statement (Form No. 370, War Department).

(d) Report of board of officers in case of death of a soldier from other than natural causes. The testimony of all witnesses will be recorded and incorpo-

rated in the proceedings of the board. If the witnesses are not available to appear before the board, certificates of officers and affidavits of enlisted men and civilians will be obtained and appended to the proceedings. The finding of the board will include a statement embodying (1) the date, place and cause of death (2) the manner or circumstances under which it occurred, (3) whether or not death was in line of duty, and (4) whether it was or was not the result of the soldier's own misconduct.

(c) Inventories of effects in duplicate (Form No 34, A. G. O.), both copies properly signed

The report (b) of the surgeon or soldier's immediate commanding officer will be accompanied with the final statement (c) and with the report of the board of officers (d) unless the latter is unduly delayed. It will also be accompanied with the inventories of effects (c), if the effects are turned over to the legal representative or widow of the deceased; otherwise the inventories will be forwarded with letter of transmittal to The Adjutant General of the Army, through military channels, as soon as the effects are converted into cash under the provisions of the one hundred and twelfth article of war.

The report of the inquest referred to in the one hundred and thirteenth article of war will be filed at the headquarters of the post or station at which death occurred. (*C. A. R., No. 55.*)

163. Officers charged with the care and custody of the effects of deceased persons subject to military law are required under the provisions of the one hundred and twelfth article of war to deliver the same, or the net proceeds thereof, to the legal representative or widow of the deceased, and to forward the receipts therefor to The Adjutant General of the Army. Should the effects of a deceased person not be claimed within a reasonable period of time, they will be converted into cash by the summary court, not earlier than 30 days after the date of death, and the proceeds, with any cash belonging to the deceased, will be deposited with a quartermaster of the Army. Duplicate receipts showing clearly the nature of the deposit will be taken, one of which will be sent to The Adjutant General of the Army and the other retained with the appropriate records. Watches, trinkets, personal papers, and keepsakes, will be delivered to the legal representative or widow with the other effects. When the effects are converted into cash, watches, trinkets, personal papers, and keepsakes will not be sold, but will be labeled with the name, grade, and organization of the owner and sent directly to The Adjutant General of the Army, to be forwarded to the Auditor for the War Department for the benefit of those legally entitled to them. Clothing effects will not be sent to The Adjutant General of the Army nor to the Auditor for the War Department. There is no authority for officers to pay the debts of deceased soldiers.

The foregoing provisions will also apply, as far as practicable, in the cases of deceased soldiers on the retired list of the Army whose effects may be under the control of the military authorities. (*C. A. R., No. 55.*)

164. In all cases of sale of effects of deceased persons as contemplated by the one hundred and twelfth article of war a detailed statement of the proceeds, duly certified by the summary court, will accompany the quartermaster's receipt forwarded by the summary court to The Adjutant General of the Army. The statement will be indorsed:

Report of the proceeds of the effects of ——— who died at ———, the ——— day of ———, (*C. A. R., No. 55.*)

165. Applications for arrears of pay and proceeds of sale of effects of deceased soldiers should be addressed to the Auditor for the War Department, Washington, D. C. (*C. A. R., No. 55.*)

166. The accounts of deceased soldiers are settled by the Auditor for the War Department, and the following is the order of distribution provided for by the act of Congress approved June 30, 1906 (34 Stat. L., 750) :

Where the amount due the decedent's estate is less than five hundred dollars and no demand is presented by a duly appointed legal representative of the estate, the accounting officers may allow the amount found due to the decedent's widow or legal heirs in the following order of precedence: First, to the widow; second, if decedent left no widow, or the widow be dead at time of settlement, then to the children or their issue, per stirpes; third, if no widow or descendants, then to the father and mother in equal parts, provided the father has not abandoned the support of his family, in which case to the mother alone; fourth, if either the father or mother be dead, then to the one surviving; fifth, if there be no widow, child, father, or mother at the date of settlement, then to the brothers and sisters and children of deceased brothers and sisters, per stirpes: *Provided*, That this act shall not be so construed as to prevent payment from the amount due the decedent's estate, of funeral expenses, provided a claim therefor is presented by the person or persons who actually paid the same before settlement by the accounting officers.

When the amount due to the decedent's estate exceeds the sum of \$500 legal administration of the estate is necessary.

Officers are advised that, in the cases of single men, it is a safe rule to dispose of the effects as prescribed in paragraph 163 and leave the responsibility of distribution to the Treasury Department.

167. The remains of a deceased enlisted man on the active list may be shipped to the home of the decedent or to a national cemetery for interment. When death occurs in the United States or in Alaska, and early shipment is practicable, the remains will be prepared for shipment and the nearest relative notified by telegraph with request to reply by telegraph, stating whether or not it is desired to have the remains shipped home at Government expense, and if shipment home is desired to designate the destination and the name of the person to whom the remains are to be consigned; in which case the remains will be transported to the point designated and the consignee notified by telegraph. Should the nearest relative state that it is not desired to have the remains shipped home, or if it is impossible to ascertain the relative's desire within a reasonable time, interment will be made in the nearest military post or national cemetery, or, if the commanding officer deem proper, at the place of death. If the relatives direct that the remains be not shipped home and they are interred at the expense of the Government, subsequent disinterment or shipment of the remains at the request of the relatives will not be made at Government expense.

If the remains are interred in a military post or national cemetery, or at the place of death, the expenses incident to the interment will be limited to \$35, to be paid from the appropriation "Disposition of remains of officers, soldiers, civilian employees, and so forth" (designated by the Treasury Department as "Bringing home remains of officers, soldiers, and civil employees"), and will be restricted to the cost of the casket, hire of a hearse, and the reasonable and necessary expenses of preparing the remains for interment.

If the remains are to be shipped, the expenses, exclusive of the cost of transportation, will be limited to \$50 and restricted to the cost of the casket, shipping case, and the reasonable and necessary expenses of preparing the remains for shipment. In either case, any transportation involved will be paid from the appropriation hereinbefore mentioned.

When it is impracticable to ship the remains at the time of death, or if it is impossible to communicate with the relatives before interment, the remains may be subsequently disinterred and shipped home at Government expense at the request of the relatives. In such cases the cost of the disinterment and preparation of the remains for shipment will not exceed \$50, except by authority

of the Secretary of War, and, including transportation, will be paid from the before-mentioned appropriation.

Transportation may be issued for one attendant to accompany the remains shipped, provided the cost to the Government of shipping the remains by express is not thereby exceeded.

The officer under whose direction the disposition of the remains is made will forward a full report thereof to The Adjutant General of the Army.

Where practical, contract will be made with an undertaker or other competent person for services in the preparation of remains for interment or shipment during a fiscal year, as contemplated for other purposes in paragraph 551, but no such contract will be made with any undertaker or other person whom the surgeon considers not competent. A written report of the disposition of the remains, with an itemized statement of the cost of embalming, coffin, or casket, hire of hearse, and transportation, will be forwarded by the quartermaster without delay directly to the Quartermaster General.

When death occurs at the hospital, the surgeon will promptly notify the embalmer employed under contract, if such services are required, and will see that the remains are prepared properly and in accordance with sanitary regulations. If there should be no contract embalmer, the duty of employing an undertaker will devolve upon the quartermaster; but no undertaker will be employed whom the surgeon considers not competent. The responsibility of the surgeon for the proper care and preparation of the remains will not cease until they are removed by the quartermaster for interment or shipment. (*C. A. R., No. 10.*)

ARTICLE XXIII.

WORKING PARTIES: EXTRA AND SPECIAL DUTY MEN.

168. Troops will not be employed in labors that interfere with their military duties except in cases of necessity.

169. Enlisted men detailed to perform specific services which remove them temporarily from the ordinary duty roster of the organization to which they belong will be reported on extra duty if receiving increased compensation therefor, otherwise on special duty. They will not be placed on extra duty without the sanction of the department commander, except at posts commanded by general officers; they will not be employed on extra duty in time of war, nor in time of peace for labor in camp or garrison which can properly be performed by fatigue parties. Allotments of funds for payment of extra-duty men will be made only with the approval of the Secretary of War, and no greater number of men will be employed on extra duty at any time than can be paid the full legal rates for the time employed from the funds provided. Payments made in violation of the foregoing rules will be charged against the officers who ordered the details. Duty of a military character must be performed without extra compensation.

170. Members of the United States Disciplinary Barracks Guard are entitled to extra-duty pay at the rates specifically provided for by law. Enlisted men detailed by name on extra duty and employed under competent authority at constant labor for not less than 10 days are entitled in time of peace to receive extra-duty pay at the following rates: For services as mess stewards and cooks at recruit depots, according to paragraph 329; as helpers to ordnance machinists in the alteration and maintenance of seacoast armament, at 50 cents a day; as clerks in the offices of the coast defense artillery engineers and coast defense ordnance officers, at 35 cents a day; as switchboard operators, at 35 cents a day; and for all other extra-duty services authorized, 35 cents a day,

Enlisted men receiving or who are entitled to the 20 per cent increased pay for foreign service as provided by law are not entitled to extra-duty pay, except when the appropriation used for the purpose authorizes extra-duty pay to enlisted men in insular possessions. (*C. A. R., Nos. 4, 10, and 51.*)

171. Except in case of emergency, a noncommissioned officer will not be detailed on extra duty without prior authority for such detail having been obtained from the department commander or the general officer commanding the post, or, in the case of places excepted from the control of department commanders by paragraph 191, from the Secretary of War, upon an application in each case for authority fully setting forth the necessity for the detail and specifying the kind of duty to be performed. The name of the noncommissioned officer to be detailed need not be stated in the application, but the orders detailing noncommissioned officers and other enlisted men for extra duty must in each case specify the men by name. A noncommissioned officer will not be detailed on any duty inconsistent with his rank and position in the military service.

172. Enlisted men of the several staff departments will not be detailed on extra duty without authority from the War Department. They are not entitled to extra-duty pay for services rendered in their respective departments. (*C. A. R., No. 52.*)

173. Company mechanics, artificers, farriers, horseshoers, saddlers, and wagoners will not be detailed on extra duty.

174. Soldiers on extra duty will be paid the extra rates of pay allowed by law for the duty performed, and for the exact number of days employed.

175. Extra and special duty men will not be excused from Saturday inspection and will attend as many drills and other formations as the commanding officer deems practicable. (*C. A. R., No. 55.*)

176. Extra-duty men will be held to such hours of labor as may be expedient and necessary; but, except in case of urgent public necessity, as in military operations, eight hours will be considered a day's work. For all hours employed beyond that number, the soldier will receive additional compensation—the extra hours being computed as fractions of a day of eight hours' duration.

177. Separate allotments for extra duty and unclassified civil labor in departments will be announced from the War Department at the beginning of each fiscal year. The department commander will determine all matters incident thereto at each post in his department. The expenditures must be within the allotments and limited to the absolutely necessary demands of the service.

ARTICLE XXIV.

SOLDIERS' HOME.

178. The Soldiers' Home, Washington, D. C., was founded by an act of Congress "for the relief and support of the invalid and disabled soldiers of the Army of the United States." The following classes of soldiers, active and discharged, are entitled to admission:

- (a) Any soldier who has served honestly and faithfully 20 years or more.
- (b) Any invalid or disabled soldier who has had service in war.
- (c) Any soldier rendered incapable of earning a livelihood by reason of disease or wounds incurred in line of duty and not the result of his own misconduct.

Persons of class (b) or class (c) are not entitled to remain in the home after their disabilities have been removed or they have become able to earn a competency by their own labor, if under 50 years of age. No person is eligible for admission who has been convicted of a felony or other disgrace-

ful or infamous crimes of a civil nature after his admission into the military service; nor shall anyone who has been a deserter, mutineer, or habitual drunkard be received without such evidence of subsequent service, good conduct, and reformation of character as is satisfactory to the commissioners of the Soldiers' Home. (*C. A. R., No. 44.*)

179. When a soldier, by reason of his service of 20 years or more, desires to enter the Soldiers' Home, his company or detachment commander will so report to The Adjutant General of the Army, giving the date of each enlistment, with organization, the report to be forwarded directly by the post commander. The papers in the case will be referred to the board of commissioners of the Soldiers' Home, and if, in its opinion, the soldier is entitled to become an inmate, authority will be given for his discharge. He may then proceed to the home and apply to the governor for admission.

When a soldier requests admission on account of disability contracted in the line of duty, a similar report will be accompanied by a surgeon's certificate of disability, and also by a certificate from the surgeon as to whether in his judgment the soldier is able to earn a living in civil life. (*C. A. R., No. 44.*)

180. When a former soldier desires admission to the home he will make application to the board of commissioners, giving the dates of his service in each organization, service in war, and, if the application is based on disability, he will also give evidence of the nature and degree of the disability. (*C. A. R., No. 44.*)

181. Rescinded. (*C. A. R., No. 44.*)

ARTICLE XXV.

MEDALS OF HONOR AND CERTIFICATES OF MERIT.

182. Medals of honor authorized by Congress are awarded to officers and enlisted men in the name of the Congress for particular deeds of most distinguished gallantry in action.

1. In order that the medal of honor may be awarded, officers or enlisted men must perform in action deeds of most distinguished personal bravery or self-sacrifice above and beyond the call of duty so conspicuous as clearly to distinguish them for gallantry and intrepidity above their comrades, involving risk of life or the performance of more than ordinarily hazardous service, and the omission of which would not justly subject the person to censure as for shortcoming or failure in the performance of his duty. The recommendations for the medal will be judged by this standard of extraordinary merit, and incontestable proof of the performance of the service will be exacted.

2. For most distinguished gallantry in action a medal of honor can be awarded to a person, regardless of whether he is in the military service or not, provided he was at the time of the gallant act or acts an officer, noncommissioned officer, or private in the Army of the United States.

3. Consideration of cases will be confined to those in which a specific recommendation for the award of a medal of honor was made or shall be made at the time of the action or within one year thereafter. The testimony in support of such recommendation must, when practicable, embrace that of at least two eyewitnesses, and must be in the form of certificates from officers and affidavits from enlisted men and others, describing specifically the act or acts of gallantry performed.

4. Commanding officers will thoroughly investigate all cases of recommendation for medals of honor arising in their commands, and indorse their opinion

upon the papers, which will be forwarded to The Adjutant General of the Army, through regular channels.

183. Announcement of the award of a medal of honor to an officer on enlisted man of the Army will be made in orders from the War Department at the time that the award is made. Upon receipt of copies of such an order commanding officers will publish the order at the first formation at which orders are published to their commands.

184. When any enlisted man of the Army shall have distinguished himself in the service, the President may grant a certificate of merit to him, on the recommendation of the commanding officer of the regiment or chief of the corps to which such man belongs.

1. A certificate of merit can be granted only upon condition that the proper recommendation therefor is made while the person to whom the grant of the certificate is recommended is in the military service of the United States.

2. Unless the commanding officer of the regiment or corps, in which the enlisted man was serving at the time he distinguished himself, specifically recommends the award of a certificate of merit to that man, such certificate can not be granted to him upon the recommendation of any superior commander or of any other officer.

3. Consideration of cases will be confined to those in which the specific recommendation referred to in the preceding section was made or shall be made at the time of the act or within one year thereafter.

4. The word "corps" as used in this article is construed to refer to any staff corps or department of the Army, or any body of troops not forming part of a regiment.

185. Recommendations for a certificate of merit must be based upon the statement of an eyewitness, preferably the immediate commander. The act or acts by which the enlisted man distinguished himself must be specifically described, and when the recommendation is made by a commissioned officer who was an eyewitness it must be so stated. When a commissioned officer was not an eyewitness, the testimony, when practicable, of at least two eyewitnesses who so describe themselves must accompany the recommendation. Each case will be submitted separately and forwarded through the regular channels, with the views or recommendations of each commander indorsed thereon, including the commanding officer of the regiment, or chief of the corps to which the enlisted man belongs.

186. Additional pay at the rate of \$2 a month from the date of the distinguished service is allowed to each enlisted man to whom a certificate of merit is granted.

187. If the soldier be out of the service when the certificate is issued, it will be retained in the office of The Adjutant General of the Army until called for, when proof of the identity of the applicant will be required. Should he die before receiving his certificate, it will be deposited in the office of the Auditor for the War Department for delivery to those legally entitled to it.

188. Neither a medal of honor nor a certificate of merit will be awarded in any case when the service of the person recommended, subsequent to the time he distinguished himself, has not been honorable.

189. Any person in the military service who comes, except by legal transfer or bequest of the owner, into possession of a medal or badge that is indicative of military service or efficiency and authorized to be worn as a part of the uniform of the Army shall immediately report the fact of such possession to his commanding officer for report to The Adjutant General of the Army, with a view to its return to the proper owner.

ARTICLE XXVI.

TERRITORIAL DEPARTMENTS.

190. Territorial departments are established and their commanders assigned by direction of the President.

191. The commander of a territorial department commands all the military forces of the Government within its limits, whether of the line or staff, except in so far as exempted from his control by the Secretary of War. The Army War College, the Army Staff College, the Engineer School, the Coast Artillery School, the Army School of the Line, the Army Signal School, the Mounted Service School, the Army Field Engineer School, the Army Field Service and Correspondence School for Medical Officers, the School of Fire for Field Artillery, the School of Musketry, the Signal Corps Aviation Schools and the United States Army Balloon School in all that pertains to the courses of instruction or their separate organization and administration as schools, the United States Military Academy, the Army Medical School at Washington, D. C., the arsenals, the general depots of supply, the general service recruiting stations, general recruit depots, the United States Disciplinary Barracks and any branch thereof, general hospitals, such permanent fortifications as may be in process of construction, officers employed on special duty under the Secretary of War, and any military force temporarily within a department when such force is commanded by an officer exercising general court-martial jurisdiction are exempted from the control of department commanders; but in the matter of trials by courts-martial and in all other matters respecting the administration of military justice all persons subject to military law stationed within a territorial department and not within the general court-martial jurisdiction of another officer remain, except as provided in paragraph 944, notwithstanding the exemptions of this regulation, under the jurisdiction of the department commander, to whom charges for trial by general court-martial will be forwarded through the usual channels for appropriate action, and who shall have authority to issue the necessary orders required under the practice of courts-martial for the attendance of witnesses, or for the taking of depositions, and in the United States to send to their proper organizations enlisted men who have been tried within the department and acquitted, or sentenced and retained in the service. No order will be issued by the commander of any territorial department in the United States for the travel of an enlisted man beyond the limits of such department, except as provided in the Army Regulations, unless such commander is specially authorized to do so by the Secretary of War.

The commander of any territorial department, unless otherwise directed by the Secretary of War, will give the necessary orders providing for the payment of troops at posts or places within the limits of his department that are excepted from his control by the Secretary of War, and will make or cause to be made at arsenals, depots of the supply departments, general hospitals, general recruit depots, or other place, with the exception of the United States Military Academy and the United States Disciplinary Barracks or any branch thereof, at which officers and enlisted men are on duty within the limits of his department, at least one inspection each year and such other inspections as he may deem necessary or advisable. These inspections will be limited to matters pertaining strictly to discipline, sanitation, shelter, supply, and equipment, and will not extend to matters pertaining strictly to recruiting, the professional administration of hospitals and the technical administration of depots of the supply departments, the details of ordnance or engineering work, prison regulations,

or the purely technical features of the administration of these establishments. Reports of these inspections will be forwarded directly to The Adjutant General of the Army for the consideration of the Secretary of War. This regulation shall not be construed as increasing the control of department commanders over such exempted places, except as is necessary for the purposes of these inspections only.

When an emergency demands, all military men and matériel within the geographical limits of their commands come under the supervision of department commanders. (*C. A. R., Nos. 31 and 49.*)

192. Except as otherwise provided for in paragraph 191, quartermasters, officers on duty at general depots of supply, and others indicated in that paragraph, whether reporting by letter to department commanders or not, are subject to their orders for court-martial or other temporary duty, in an emergency only, and such officers, together with those on duty directly connected with the schools mentioned in paragraph 191, shall not be detached without orders from the Secretary of War.

193. 1. In time of peace a department commander is charged, under direction of the War Department, with the duty of preparing for war all the troops and all the military resources of his department and with the administration of all the military affairs of his department, except as otherwise prescribed by Army Regulations or existing orders. In time of war he is charged, under direction of the War Department, with the duty of recruiting, organizing, equipping, training, and forwarding all reservists, militia, and volunteers called for within his department, and with the administration of the affairs of troops not forming part of the forces in the field or excepted from his control by orders or regulations of the War Department. He will administer his department so as to insure complete continuity of function in peace and war, and the tactical division and other tactical units so as to insure their constant readiness to take the field without material change of administrative machinery.

2. He will annually concentrate his tactical division, or portions thereof, and secure for himself and his division staff as much practice as possible in the actual handling and supply of troops in the field. During this concentration he will personally conduct tactical inspections of brigades or larger portions of his command, utilizing the services of the officers of his staff or of his command and such other officers as may be ordered by higher authority to report to him for that duty. The object of such inspections is to determine the preparedness of organizations for war service, and the capacity of brigade commanders and all other officers for the exercise in the field of command appropriate to their rank. With this object constantly in view the character of the inspection may be varied by the department commander, and any exercise may be required which may be necessary to arrive at definite conclusions and to justify positive recommendations, but tactical inspections will ordinarily embrace the following subjects:

(a) Fitness and sufficiency of uniform and equipment of organizations for field service.

(b) Camping, camp economy, observance of proper camp sanitation, and care of the sick.

(c) Physical condition of officers and men, and the use of prophylactic treatment for the prevention of diseases.

(d) Marching capacity of organizations, as indicated by the rate of march, the observance of correct principles of marching, the distance covered, the resulting physical condition of men and animals, and the number, if any, disabled as a result of marching during the entire period of the inspection.

(c) Care of the feet of men; the supply and fit of footwear; the care of backs, necks, and feet of animals; proper biting of animals and fitting of saddles and harness; and care of matériel.

(f) The preparation and service of food.

(g) The efficiency of the service of supply.

(h) The transmission of information (Field Service Regulations).

(i) Drill Regulations; combat exercises appropriate to the size of the command.

(j) Field fortification, including the reconnaissance, selection, and occupation of defensive positions, the actual construction of appropriate intrenchments, when practicable, and the rendition of reports, including the necessary sketches, based on standard publications and service manuals treating of the subject of field fortification.

(k) The annual proficiency test for infantry and cavalry and a field firing test for field artillery. The proficiency test for infantry and cavalry will be, where practicable, that required by the Small Arms Firing Regulations. For the field artillery an additional allowance of ammunition of 36 rounds per battery is authorized; if it is not practicable to hold the test at the place of this particular inspection, it will be held at the place where service practice is held and as a part of the tactical inspection. When practicable the Inspector General of the Army will designate a field artillery officer of his department to report to the department commander as his assistant in making the tactical inspections of field artillery herein prescribed. The itinerary for such field artillery inspections will be arranged by the Inspector General after correspondence with the department commander. A department commander may designate one of his brigade commanders to represent him at field artillery inspections. The reports of such inspections will be prepared by the field artillery inspector under the supervision of the department or brigade commander, by whom they will be transmitted for action, as provided in section 7 of this paragraph, for reports of other tactical inspections.

(l) Tactics: Terrain exercises; the service of information (Field Service Regulations); field exercises appropriate to the size of the command acting alone or as a part of a larger force, based on Field Service Regulations, standard publications on tactics, and the combat principles of the drill regulations of the various arms of the service.

(m) The annual physical examination and riding or walking test to be conducted at this time if practicable.

3. Whenever practicable the tactical inspection shall include a progressive field exercise extending over a period of several days and terminating in an action of all three arms combined.

4. In all cases requiring the promulgation of field orders the responsible commanding officer will, personally and without assistance, write or dictate his orders, of which a copy will be submitted at the time to the officer conducting the inspection. The use of books or other sources of information will not be permitted in preparing the orders or instructions required.

5. In these tactical inspections every effort will be made by department commanders, by application to the War Department, if necessary, to secure as assistants inspectors general or acting inspectors general of the arm to be inspected. When an inspector general or acting inspector general is not available the department commander will be accompanied by an officer of the arm to be inspected.

6. The program of inspection and the problems required in connection therewith will be prepared under the direction of the department commander.

7. The department commander will prepare the report of inspection of brigades or larger portions of his command and forward the same to The Adjutant General of the Army. The Adjutant General will transmit the report to the Inspector General of the Army. The report will set forth the designations of the organizations, the strength present and absent and how absentees are accounted for, and the results of the inspection, dealing only with important defects and deficiencies, recommendations with a view to corrective action which can not be taken by the department commander, and commendations. A written statement of important defects and deficiencies which were not remedied by the department commander at the time of the inspection, and of other matters which require further comment will be furnished by him to the commanding officer of the troops inspected. Minor defects will be corrected at the time of inspection, and when so corrected will not be reported.

8. The latter officer will submit through the next higher commander to the department commander a copy of this statement, with a report stating what remedies he has applied or will apply to correct each of the irregularities or defects found, and will recommend the proper action with regard to those that he has not the power or authority to remedy. This statement and report by the commanding officer of troops will be forwarded by the department commander with his report.

9. If for any reason the department commander can not concentrate his division or portions thereof, he will promptly inform the War Department. He will also promptly inform his brigade commanders in order to give them time and opportunity to make the inspections prescribed in paragraph 194.

10. Errors of judgment committed in the solution of tactical problems should not be considered as defects and irregularities which require answers or explanation, except where the execution of the problem shows such lack of training as indicates neglect or violation of orders or instructions of the War Department. It is only in the latter case that such errors will be submitted as a part of the list of irregularities furnished the commanding officer of troops. Tactical errors should, except as above noted, be disposed of at conferences or critiques conducted by the department commander after the execution of the problems.

11. Upon conclusion of this inspection, and at any other time, the department commander will report by name any and all officers whose organizations are not properly prepared for war service, who have not exhibited proper capacity for the exercise in the field of command appropriate to their rank, or who are believed to be incapable, from any cause, of performing the duties of their several grades either in garrison or actual service in the field. Such reports will be accompanied by the evidence covering the cases. The officers so reported will be given an opportunity to reply, such replies to be appended to the report.

12. The department commander will make or require to be made such other inspections as he may deem necessary.

13. He will report any errors, irregularities, or abuses requiring the action of higher authority.

14. He will have charge of such matters pertaining to the instruction, camps of instruction, maneuvers, mobilization, and concentration of the Organized Militia within his department as may be assigned to him by the War Department. From the date on which mobilization of the Organized Militia is ordered all officers of the Regular Army on militia and college duty in a State, Territory, or the District of Columbia affected by the call will be under the immediate orders of the commander of the department in which they are serving, if not already subject to his authority.

15. He will have immediate charge of the inspections necessary to carry out, for all the Organized Militia belonging within the limits of his department, the provisions of section 3 and section 14 of the militia act approved January 21, 1903, and to assist in this duty all officers of the Army, active and retired, on duty with the Organized Militia within the limits of his department will report to him and will send through him their reports of inspections under said sections 3 and 14. Reports and returns of the Organized Militia which may be required under the provisions of section 12 of the act of January 21, 1903, will be referred by the War Department to the department commanders for their information, and will be returned to the War Department for file.

16. He will enter into cordial relations with the military authorities of the States embraced in his department, will ascertain as far as practicable the degree of care exercised by the State authorities in storing and preserving United States property, and will advise them as to the proper methods to be followed in regard thereto.

17. He will keep himself informed as to the efficiency for field service of the State forces, and in his annual report will express an opinion as to the fitness for field service of the tactical divisions within his department. He will include in his annual report a statement of the duties performed in connection with the Organized Militia.

18. He will exercise general supervision over garrison schools and will coordinate post-graduate work with a view to securing uniformity of instruction and progressive tactical training throughout his command. He will exercise immediate supervision over the training and instruction of units of his command not attached or belonging to brigades.

19. He will announce annually the seasons for garrison and field training and will allot a portion of each year for the training of the combined arms.

20. Upon the recommendation of brigade and other subordinate commanders he will designate the practice season for small-arms target practice; will examine reports of target and service practice of all arms of the service, and will issue the necessary orders for holding small-arms target competitions within his department.

21. He will report to The Adjutant General of the Army all matters relating to the general welfare of the command, including such changes of stations of troops as he may deem desirable, but will obtain the approval of the War Department before ordering the movement, except that the commanders of the Philippine and Hawaiian Departments originate, direct, or approve military operations within their departments, and may transfer troops from one point to another requiring reinforcements.

22. Whenever the stations of troops are changed, either permanently or temporarily, in a department within the United States the department commander will immediately report by telegraph to The Adjutant General of the Army the destination of each organization moved and the names, with arm of service, of officers accompanying it who do not belong thereto.

23. He will make a similar report when the troops arrive at the new station. If it is necessary to move troops to meet emergencies, such movements and all the circumstances will be reported at the earliest possible moment. Correspondence with the War Department will be through the department commander unless otherwise directed in Army Regulations and War Department orders.

24. The department commander will examine and report from time to time upon the physical condition of all permanent works of fortification that are under his command and within the territorial limits of his department, and will,

through his department engineer and the district engineer officers, cause such necessary repairs to be made, not involving structural changes, as may be practicable with the means and funds available. Structural changes deemed necessary by him will be reported to the War Department. (*C. A. R., Nos. 9 and 44.*)

193. For the information of the Secretary of War in the preparation of his annual report, officers in command of territorial departments and independent commands in the field and chiefs of bureaus of the War Department will submit a report of military operations during the year, fully setting forth the conditions generally in their commands or bureaus. These reports will be as brief and succinct as possible, avoiding duplication and prolixity of statement. Reports of military commanders while reviewing the operations of their subordinate commands will not include copies of such reports. Reports will be limited to the affairs and needs of the particular command. Rosters of staff officers and troops serving in the command and changes of stations of troops are not desired, as information upon these subjects is furnished elsewhere. General recommendations affecting the service as a whole or regarding lines of general policy will not be included in the annual reports, but will be made the subject of special reports.

All annual reports will cover the fiscal year ending June 30 and, as a rule, will terminate on that date. Should military conditions after June 30 require later information, supplemental reports will be promptly forwarded to the War Department. All reports, including those required by the act of March 3, 1893, and the act of August 18, 1894, of various boards and commissioners and of the superintendent of the Military Academy, will be prepared as soon after June 30 each year as possible.

All reports will be submitted in manuscript and will not be printed nor distributed until notification is received of the approval of the Secretary of War. When printing is authorized, the reports of commanding officers of territorial departments and independent commands in the field will be in the form and measure of general orders. Twenty printed copies will be sent to The Adjutant General of the Army. Reports of subordinate commanders will not be printed.

194. 1. A brigade commander is charged with the duty of preparing for war all troops and all the materiel pertaining to his brigade and with the duty of assisting the department commander in the performance of his functions in connection with the Organized Militia. He will command his brigade and will be responsible for its instruction, tactical efficiency, and preparedness for war service.

2. He will supervise garrison schools, giving especial attention to the post-graduate course of instruction for officers of his brigade with a view to insuring uniformity of instruction and progressive tactical training throughout his command.

3. He will visit each post garrisoned by troops of his brigade at least once each year during the period of garrison training, and during such visits will examine into the results obtained in garrison schools and will personally supervise the postgraduate course of instruction; in addition thereto he will personally conduct or supervise such field exercises, war games, terrain exercises, tactical or staff walks or rides, and require the solution of such map problems or the performance of such other duty as may be necessary to determine the amount of progress made and the fitness of officers for the exercise of command appropriate to their rank, theoretical instruction being substituted for practical training only when climatic conditions make outdoor work undesirable.

4. At the time of the annual tactical inspection by the department commander, prescribed in paragraph 193, the brigade commander, under the supervision of the department commander, will make such inspections of his brigade and other troops under his command as will enable him to make a report to the department

commander as to the tactical efficiency of such troops. The results of this inspection by the brigade commander, with comments thereon, will be embodied in the report of the department commander to The Adjutant General of the Army.

5. He will take the necessary steps to inform himself whether or not the division or portions thereof are to be concentrated and inspected by the department commander. In case the brigade is not to be concentrated, the brigade commander will then make the annual tactical inspections of the parts of his brigade and of other troops under his command in a manner similar to that prescribed for the department commander in section 2, paragraph 193. He will forward the completed reports of all such inspections, with the reports of remedial action, through the department commander to The Adjutant General of the Army. He will apply to the department commander for, and be assisted by, such inspectors general or acting inspectors general and other officers as the department commander may detail for that duty.

6. At the conclusion of such inspections, and at such other times as he may deem advisable, he will report by name to The Adjutant General of the Army any and all officers who are believed to be incapable, from any cause, of performing the duties of their several grades, either in garrison or actual service in the field. Such reports will be accompanied by the evidence covering each case. The officers so reported will be given an opportunity to reply, such replies to be appended to the report. From time to time he will report any errors, irregularities, abuses, or offenses requiring the action of higher authority and will at all times take the necessary corrective action when efficiency is found below a proper standard.

7. During his visits to posts herein prescribed the brigade commander will be accompanied by one staff officer; in the field he will be accompanied by his entire staff.

8. He will exercise general supervision over the target practice of the troops of his brigade and will witness combat firing, field firing, and proficiency tests whenever practicable.

9. He will be regarded as an intermediate commander under paragraph 783 in all matters pertaining to target practice, the appointment, promotion, assignment, transfer, detail, leave of absence, resignation, dismissal, retirement, efficiency and discipline of officers, the instruction and tactical efficiency of his brigade, and in such other matters as are necessary for his information or require his action or control, but his headquarters will not be made an office of record and administrative work will not be permitted to interfere with his duties as a tactical commander.

10. He will perform such other duties as may be assigned him by superior authority.

11. The commander of a Coast Artillery district in the United States stands in the same general relation toward his command and toward higher authority as does a brigade commander and has the functions and duties herein prescribed for brigade commanders, with such obvious modifications as the special nature of his command makes necessary.

12. In order to carry out the duties imposed upon brigade commanders and Coast Artillery district commanders by this paragraph, these commanders are authorized to issue the necessary orders for themselves for such journeys as are needed for the inspection and instruction of their respective brigades, districts, or portions thereof, under the limitations imposed by section 7 of this paragraph.

The authority to issue travel orders conferred upon a brigade commander by this paragraph will not apply when the brigade is serving as a component part of a mobilized division. In such a case the necessary travel orders will be issued by the division commander. (C. A. R. No. 9.)

195. Department, division, and brigade commanders are expected to determine controversies arising within the limits of their jurisdiction and decide questions referred to them on appeal.

196. In the event of the death or disability of the permanent commander of a territorial department, or his temporary absence from the limits of his command, the senior line officer present and on duty therein will exercise the command of the department, unless otherwise ordered, until relieved by proper authority. Although a department commander may continue to discharge the more important functions of his command while absent from its territorial limits, his exercise of command and his absence therefrom require the sanction of higher authority. If intending to leave his headquarters for an absence within his department, he will report to the next higher commander his intention, his address during his absence, and the proposed duration thereof.

197. In time of peace a territorial department commander's staff will consist of his authorized personal aids, an officer in charge of militia affairs, and one officer from each of the following corps and departments: General Staff Corps, Adjutant General's Department, Inspector General's Department, Judge Advocate General's Department, Quartermaster Corps, Medical Department, Corps of Engineers, Ordnance Department, and Signal Corps, and such additional staff officers as may be assigned by the War Department, including a medical officer, who shall be the sanitary inspector of the department.

To permit the department commander to perform satisfactorily the territorial and tactical functions imposed upon him by paragraph 193, his staff will be organized into two sections, as follows:

The territorial department staff: Consisting of those officers whose functions pertain to the department as a territorial command.

The division staff: Consisting of those officers whose functions pertain to the division as a tactical unit and who accompany the division wherever it may go.

The division staff officers will be required to assume no money or property accountability except that which may pertain to the division.

The duties prescribed for the inspector of small-arms practice will be performed by an aid or other officer of the department commander's staff.

198. The staff of a general officer commanding a brigade, district, or post will consist of the authorized personal aids and an adjutant. The Coast Artillery district staff consists of the adjutant (personnel officer) and the materiel officer, and of the authorized personal aids when the district is commanded by a general officer.

199. The official designation of the senior officers of the corps and department on the staff of department commanders will be as follows:

Of the General Staff Corps, chief of staff; of the Adjutant General's Department, department adjutant; of the Inspector General's Department, department inspector; of the Judge Advocate General's Department, department judge advocate; of the Quartermaster Corps, department quartermaster; of the Medical Department, department surgeon; of the Engineer Corps, department engineer; of the Ordnance Department, department ordnance officer; of the Signal Corps, department signal officer.

When one of the required staff officers is not assigned, or a staff officer is temporarily absent or disabled, the duties of his position will be performed by the assistant, if any, or by other members of the staff.

200. Funds for contingent expenses at department headquarters are allotted by the Secretary of War and placed to the credit of the department adjutants. The amount allotted will be apportioned by the department commander to the officers of the staff corps serving at his headquarters as the interests of the service dictate, and the department adjutant will make purchases and expendi-

tures as those officers request, subject to the written approval of the department commander. Articles that are expendable in the supply departments will be transferred by the department adjutant to the staff officers concerned and expended by the latter without any further accounting, being continued in use until consumed or worn out. Articles that are not expendable in the supply departments will be carried on the return of the department adjutant, the staff officers receiving such articles to give therefor memorandum receipts only. On June 30 of each year the department adjutant will make return for such property to The Adjutant General of the Army, to whose satisfaction expenditures, losses, etc., will be explained.

ARTICLE XXVII.

MILITARY POSTS AND RESERVATIONS.

POSTS.

201. Permanent military posts within the States composing the Union and the Territories contiguous thereto, including Alaska, will only be established with the express authority of Congress. Posts in the insular possessions of the United States will be established under the direction of the Secretary of War. All military posts will be named by the Secretary of War.

202. Permanent posts will be styled "forts," and points occupied temporarily by troops "camps."

203. The commander of a post is charged with the duty of preparing for war all the troops and all the materiel pertaining to the tactical unit to which he belongs. He will command the post and will administer all the military affairs thereof. He is responsible for the safety, defense, and discipline of the post, but for the instruction, tactical efficiency, and preparedness for war service of the troops pertaining only to the tactical unit to which he belongs. When troops of different brigades are serving at the same post he will see that the approved programs prescribed by proper authority in accordance with instruction orders of the War Department are faithfully complied with, and will see that commanders of units not pertaining to his tactical command are given every possible facility for preparing their commands for service. Should such programs involve conflicting requirements which can not be adjusted at the post, he will refer the matter through military channels to the department commander, whose decision will be final.

He will be responsible for the preservation and proper application of public property, for the strict enforcement of laws and regulations, and for the proper condition of quarters and defenses. He will make an inspection of his command on the last day of every month, will satisfy himself by frequent personal examination that the disbursements of all officers in charge of funds are in accordance with law and regulations and their accounts correctly stated, and will make such reports of these inspections and examinations as the department commander may direct.

General officers commanding posts will leave the details of administration to subordinate commanders as far as practicable. Thus the visits prescribed in paragraph 204 to be made by the post commander, and the action prescribed for the commanding officer in case of deserters in Article XIX, may be delegated to regimental or detached battalion commanders; regimental commanders should appoint summary courts for the trial of cases arising in their respective regiments; under paragraph 711 regimental and separate battalion commanders should appoint surveying officers for cases arising in their respective commands.

A general officer commanding a post may authorize regimental or separate battalion commanders to approve requisitions for clothing, for allowances amounts of which are fixed, and for such amounts of stationery as the commander may prescribe. All military personnel and employees within limits of a post, doing duty pertaining wholly to that post, will be under direct command of the post commander.

The post commander is also charged with the responsibility of seeing all enlisted men of his command, at all times while in the active service in the United States in the Army, do not leave their posts to engage in any suit, business, or performance in civil life, for emolument, hire, or other when the same shall interfere with the customary employment and reengagement of local civilians in the respective arts, trades, or professions.

Within the meaning and purpose of this paragraph a coast defense command is to be regarded as a military post. If it should be impracticable for the defense commander to complete the monthly inspection of his command on the last day of the month, the inspection will be completed as soon thereafter possible. (*C. A. R., No. 43.*)

204. The post commander and surgeon will make frequent visits during the month to the hospital, guardhouse, mess hall, mess rooms, and other buildings and rooms used by enlisted men.

205. An orderly observance of the Sabbath by the officers and men in military service is enjoined. Military duty and labor on Sunday will be restricted to the measure of strict necessity.

206. The staff of a post commander will consist of such staff officers as may be on duty at the post, and such line officers as may be required for staff duty. Their official designations will be as follows: Adjutant, quartermaster, surgeon, engineer officer, ordnance officer, and signal officer. The official address of the senior medical officer at a post will be—

THE SURGEON,
FORT ———.

and in like manner the official addresses of the other staff officers of a post will be, respectively: The Adjutant, The Quartermaster, The Engineer Officer, The Ordnance Officer, and The Signal Officer, Fort ———.

207. Expenditures of labor, money, or material upon posts will be strictly limited to the amounts allowed by law and regulations.

208. When practicable, temporary buildings for the use of the Army will be erected by its enlisted force, and necessary repairs of public buildings at garrisoned posts not appropriated for or specially authorized will be made by the troops.

209. Post commanders are authorized to assist mail contractors with necessary transportation, provided it can be spared without detriment to the service, when, through accident or unavoidable casualty, they are deprived of the means necessary to fulfill their contracts. Such assistance must cease as soon as the contractor can, by exercise of proper diligence, resupply himself with transportation. Receipts for the property loaned will be taken, and in the event of its loss or damage, will be forwarded, with a report of facts, to The Adjutant General of the Army, that the amount involved may be collected from the contractor through the Post Office Department.

210. At posts supplied with ordnance and with ammunition for the purpose, a morning and evening gun will be fired daily at reveille and retreat.

POST RECORDS.

211. The following-named books of record, reports, and papers will be kept at each post: A correspondence book, a consolidated morning report and a guard report, furnished by the Adjutant General's Department; a post exchange council book, furnished by the post exchange. A document file, copies of all returns and reports rendered (if not contained in document file), all orders received, in fine, all official papers that relate to post administration will be filed and preserved as a part of the post records. The records of post noncommissioned staff officers and of other enlisted men at posts not belonging to organizations serving thereat will be kept as provided for companies. The records will not be removed from the post except on its discontinuance. Commanding officers will see that the records are accurately kept and are properly transferred to their successors.

RESERVATIONS.

212. Department commanders will supervise all military reservations within the limits of their commands. If necessary, post commanders will use force to remove trespassers.

No license or permission to any civilian to use or occupy any part of a reservation will be given, except by the Secretary of War, unless he be in the employ of the Government, or in the family or service of persons there employed. (*C. A. R., No. 42.*)

213. Except in rare instances where the privilege desired is of but slight importance, permission to erect or construct buildings other than public on military reservations will be granted only by the Secretary of War under a revocable license executed by him, in which the conditions for occupancy will be clearly set forth. (*C. A. R. No. 23.*)

214. Military posts and the buildings and grounds pertaining thereto will be kept in a clean and attractive condition. Reasonable adornment and beautification of the grounds in the neighborhood of public buildings is to be sought, but troops are not to be employed for such purposes to such an extent as to interfere with their training and instruction.

Live trees in the vicinity of the inhabited parts of a military reservation will not be cut down, except on the recommendation of a board of officers consisting of the three officers on duty at the post next in rank to the commander, or of as many as are available if less than three, and when such recommendation is approved by the post and department commanders.

215. Military posts temporarily evacuated by troops, and lands reserved for military use, will be under charge of the Quartermaster Corps. Permanent works of defense, however, and the lands appurtenant thereto, are under the supervision of the Engineer Department.

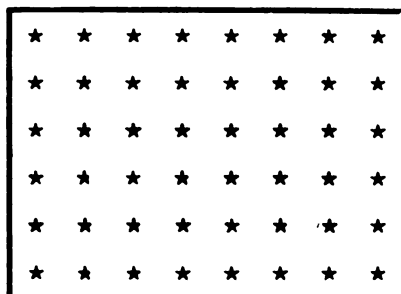
ARTICLE XXVIII.

FLAGS, COLORS, STANDARDS, AND GUIDONS.

216. The flag of the United States has 13 horizontal stripes, 7 red and 6 white, the red and white stripes alternating, and the union of the flag consists of white stars in a blue field placed in the upper quarter next the staff and extending to the lower edge of the fourth red stripe from the top. The number of stars is the same as the number of States in the Union. On the admission

of a State into the Union, one star will be added to the union of the flag, and such addition will take effect on the 4th day of July next succeeding such admission.

216. The field or union of the national flag in use in the Army will consist from and after July 4, 1912, of 48 stars, in six rows, 8 stars in each row, in a blue field, arranged as follows:



217. The flag of the President will be of blue bunting, of two sizes, the larger measuring 10.2 feet hoist and 16 feet fly, and the smaller measuring 3.6 feet hoist and 5.13 feet fly. In each of the four corners of the flag will be a five-pointed white star with one point upward, and the flag itself will bear the coat of arms conforming to the plan accompanying the Executive order of the President of the United States of May 29, 1916. In case other sizes are needed, they will be manufactured in the same proportions as shown in the plan accompanying the Executive order on the subject. (*C. A. R., No. 49.*)

218. The colors of the President shall be of blue silk, measuring 3.6 feet hoist and 5.13 feet fly, attached to a staff, single screw jointed, which shall be 10 feet 3 inches long, including the ferrule and a gold-plated head. The head shall consist of a globe 2 inches in diameter, surmounted by an American eagle, alert, 5½ inches high. In each of the four corners shall be a five-pointed white star with one point upward, the points of each star to lie in the circumference of an imaginary circle of 0.468 foot diameter. The centers of these circles are 0.77 foot from both the long and the short sides of the colors. In the center of the colors shall be placed a coat of arms, as prescribed and illustrated in the plan accompanying the Executive order of the President of the United States of May 29, 1916. The device, letters, and stars to be embroidered in silk, the same on both sides of the colors; the colors to be trimmed on three sides with knotted fringe of silver and gold 3 inches wide; the cord, 8 feet 6 inches long, having two tassels, to be composed of red, white, and blue silk strands. (*C. A. R., No. 54.*)

219. The flag of the Secretary of War shall be of scarlet bunting, measuring 12 feet fly and 6 feet 8 inches hoist. In each of the four corners shall be a 5-pointed white star with one point upward, the points of each star to lie in the circumference of an imaginary circle of 5 inches radius; the centers of these circles to be 17 inches from the short sides and 12 inches from the long sides of the flag. In the center of the flag shall be the official coat of arms of the United States, of suitable size.

220. The flag of the Assistant Secretary of War shall be of white bunting, measuring 12 feet fly and 6 feet 8 inches hoist. In each of the four corners shall be a 5-pointed scarlet star with one point upward, the points of each star to lie in the circumference of an imaginary circle of 5 inches radius; the

centers of these stars to be 17 inches from the short sides and 12 inches from the long sides of the flag. In the center of the flag shall be the official coat of arms of the United States, of suitable size.

221. The colors of the Secretary of War shall be of scarlet silk, 5 feet 6 inches fly, 4 feet 4 inches on the pike, which shall be 9 feet long, including ferrule and spearhead. In each of the four corners shall be a 5-pointed white star with one point upward, the points of each star to lie in the circumference of an imaginary circle of $2\frac{1}{2}$ inches radius; the centers of these circles to be 13 inches from the short sides and $7\frac{1}{2}$ inches from the long sides of the color. In the center shall be placed in colors the official coat of arms of the United States, the device, letters, and stars to be embroidered in silk on both sides of the color; the edges to be trimmed with knotted fringe of white silk 3 inches wide; the cord 8 feet 6 inches long, having two tassels, and composed of white and scarlet strands.

222. The colors of the Assistant Secretary of War shall be of white silk, 5 feet 6 inches fly, 4 feet 4 inches on the pike, which shall be 9 feet long, including spearhead and ferrule. In each of the four corners shall be a 5-pointed scarlet star, one point upward, the points of each star to lie in the circumference of an imaginary circle of $2\frac{1}{2}$ inches radius; the centers of these circles to be 13 inches from the short sides and $7\frac{1}{2}$ inches from the long sides of the color. In the center shall be placed in colors the official coat of arms of the United States, of suitable size; the device, letters, and stars to be embroidered in silk on both sides of the color; the edges to be trimmed with knotted fringe of scarlet silk 3 inches wide; a cord 8 feet 6 inches long, having two tassels, and composed of white and scarlet silk strands to be placed on the pike.

223. The garrison, post, and storm flags are national flags and shall be of hunting. The union of each is as described in paragraph 216 and shall be of the following proportions: Width, seven-thirteenths of the hoist of the flag; length, seventy-six one hundredths of the hoist of the flag.

The garrison flag will have 38 feet fly and 20 feet hoist. It will be furnished only to posts designated in orders from time to time from the War Department, and will be hoisted only on holidays and important occasions.

The post flag will have 19 feet fly and 10 feet hoist. It will be furnished for all garrison posts and will be hoisted in pleasant weather.

The storm flag will have 9 feet 6 inches fly and 5 feet hoist. It will be furnished for all occupied posts for use in stormy and windy weather, and also to semipermanent camps to be displayed in any weather during such hours as may be designated by the commanding officers of such camps. It will also be furnished to national cemeteries.

The garrison and post flag will be hoisted on a flagstaff of metal or wood, 75 feet to 100 feet high; the camp or station flag, where the regularly prescribed staff is not available, will be hoisted on a wooden staff approximately 50 feet high, the staff to be supplied with a galvanized pulley at the top and with a galvanized cleat at the bottom, and also with the necessary halyards. (*C. A. R., No. 45.*)

224. A recruiting flag and an advertising flag will be furnished for general recruiting stations.

These flags will be of two sizes, known as large and small. The large flag will be 9 feet 6 inches fly and 5 feet hoist, and the small flag 4 feet 6 inches fly and 2.37 feet hoist. They will be provided with an incased lath to keep the flag from tangling while displayed with staff horizontal.

The recruiting flag will be of the same description as the storm flag.

The advertising flag will be of blue bunting and bear on both sides following inscription in bleached muslin letters:

MEN WANTED
FOR THE
UNITED STATES
ARMY.

(*C. A. R., No. 55.*)

224½. FLAGS FOR CHAPLAINS.—A flag of blue bunting, rectangular in shape, 2 feet hoist and 3 feet fly, bearing in the center a Latin cross 18 inches high of suitable width, in white, will be furnished to each chaplain by the Quartermaster Corps.

These flags will be used for field service only and will be dropped by the issuing officer from his property account upon the receipts of the chaplain to whom they are supplied.

225. The flag of the Geneva Convention, to be used in connection with the national flag in time of war with a signatory of the convention, will be as follows:

For general hospitals, white bunting, 9 by 5 feet, with a red cross of 4 feet high and 4 feet wide in the center; arms of cross to be 16 inches wide.

For field hospitals, white bunting, 6 by 4 feet, with a red cross of 3 feet high and 3 feet wide in the center; arms of cross to be 12 inches wide.

For ambulances and guidons to mark the way to field hospitals, white bunting, 28 by 16 inches, with a red cross of bunting 12 inches high and 12 inches wide in the center; arms of cross to be 4 inches wide.

226. REGIMENTS OF ENGINEERS.—The national color shall be of silk, 6 inches fly, 4 feet 4 inches on the pike, which shall be 9 feet long, including spearhead and ferrule; the union to be 2 feet 6 inches long, with stars embroidered in white silk on both sides of the union; the edges to be trimmed with knotted fringe of yellow silk 2½ inches wide; the cord 8 feet 6 inches long, including two tassels, and composed of red, white, and blue silk strands. The designation of the regiment will be engraved on a silver band placed on the pike. The regimental color shall be of scarlet silk of the same dimensions as the national color, having embroidered upon it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms in the middle shall be embroidered, in white silk, the insignia of the Corps of Engineers and an outlined scroll bearing the inscription "— U. S. Engineers"; the edges to be trimmed with knotted fringe of white silk 2½ inches wide; cord and tassels of same size as national color, to be of white and scarlet silk strands; both colors of color to be embroidered alike. (*C. A. R., No. 47.*)

227. MOUNTED ENGINEERS.—The national standard shall be the national color of silk, 4 feet fly and 3 feet on the lance, which shall be 9 feet 6 inches long, including spearhead and ferrule; the union to be 22 inches long, with stars embroidered in white silk on both sides of the union; the edges to be trimmed with knotted fringe of yellow silk 2½ inches wide; the official designation of the battalion to be engraved on a silver band placed on the lance.

The battalion standard, of same dimensions as the national standard, shall be of scarlet silk, having embroidered upon it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms in the middle shall be embroidered in white silk the insignia of the Corps of Engineers, and also an outlined scroll bearing the inscription "— B U. S. Mounted Engineers"; the edges to be trimmed with knotted fringe of white silk 2½ inches wide. (*C. A. R., No. 47.*)

228. COAST ARTILLERY CORPS.—The national color shall be as prescribed in paragraph 226, the official designation of the coast defense command to be placed on the silver band.

The corps color, of the same dimensions as national color, shall be of scarlet silk, having embroidered upon it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms in the middle will be embroidered in yellow silk two cannons, crossed; also a scroll embroidered in yellow silk and bearing the inscription "U. S. Coast Artillery Corps," embroidered in red silk; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide; cord and tassels same size as those of national color, to be of red and yellow silk strands. One set of national and corps colors shall be issued to the headquarters of each coast defense command.

229. INFANTRY REGIMENTS.—The national color shall be as prescribed in paragraph 226, the official designation of the regiment to be placed on the silver band.

The regimental color, of same dimensions as national color, shall be of blue silk, having embroidered upon it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms shall be placed a scroll embroidered in red silk, bearing the inscription "— U. S. Infantry," embroidered in white silk; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide; cord and tassels same size as those of national color, to be of blue and white silk strands.

230. STANDARDS FOR CAVALRY REGIMENTS.—The national standard shall be the national flag of silk, 4 feet fly and 3 feet on the lance, which shall be 9 feet 6 inches long, including spearhead and ferrule; the union to be 22 inches long, with stars embroidered in white silk on both sides of the union; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide; the official designation of the regiment to be engraved on a silver band placed on the lance.

The regimental standard, of same dimensions as the national standard, shall be of yellow silk, having embroidered upon it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms shall be placed a scroll embroidered in red silk and bearing the inscription "— U. S. Cavalry," embroidered in yellow; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide.

231. STANDARDS FOR FIELD ARTILLERY REGIMENTS.—The national standard shall be as described in paragraph 230.

The regimental standard, of the same dimensions as the national standard, shall be of scarlet silk, having embroidered on it in colors the official coat of arms of the United States, of suitable size. Below the coat of arms shall be placed a scroll embroidered in yellow silk and bearing the inscription "— U. S. Field Artillery," embroidered in scarlet; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide.

231½. STANDARDS FOR BATTALIONS OF SIGNAL CORPS.—The national standard shall be the national flag of silk, 4 feet fly and 3 feet on the lance, which shall be 9 feet 6 inches long, including spearhead and ferrule; the union to be 22 inches long, with stars embroidered in white silk on both sides of the union; the edges to be trimmed with knotted fringe of yellow silk $2\frac{1}{2}$ inches wide; the official designation of the battalion to be engraved on a silver band placed on the lance.

The battalion standard, of the same dimensions as the national standard, shall be of orange silk, having embroidered upon it in colors the official coat of arms of the United States of suitable size. Below the coat of arms in the middle shall be embroidered, on both sides of the standard, the device of the Signal Corps, and also an outlined scroll bearing the inscription "— Battalion,

Signal Corps, U. S. A."; the edges to be trimmed with knotted fringe of white silk 2½ inches wide. (*C. A. R., Nos. 47 and 54.*)

232. COLORS AND STANDARDS.—The silken national and regimental colors or standards shall be carried in battle, campaign, and on all occasions of ceremony at regimental headquarters in which two or more companies of the regiment participate.

A similar rule applies to the use of the silken colors of the battalion of Engineers and of the coast defense commands.

When not in use as prescribed in this paragraph, colors and standards will be kept in their waterproof cases.

233. SERVICE COLORS AND STANDARDS.—A national color or standard made of bunting or other suitable material, but in all other respects similar to the silken national color or standard, shall be furnished as follows: To each regiment of Engineers, one color for each battalion; to each regiment of Infantry, one color for each battalion; to each coast defense command, one color for each post where two or more companies are stationed; to each battalion of mounted Engineers, one standard; to each regiment of Cavalry, one standard for each squadron; to each regiment of Field Artillery, one standard for each battalion; to each battalion of the Signal Corps, one standard. The official designation of the regiment or mounted battalion of Engineers, regiment of Infantry, Cavalry, or Field Artillery, of the battalion of the Signal Corps, or of the coast defense command, will be engraved on a silver band placed on the pike or lance.

These colors and standards are for use at drills and on marches, and on all service other than battles, campaigns, and occasions of ceremony; but battalions and squadrons detached from regimental headquarters, and garrisons of Coast Artillery posts, other than coast defense headquarters, may use them upon all occasions. Not more than one national color or standard will be carried when the regiment or any part of it is assembled. (*C. A. R., No. 47.*)

234. COLORS FOR BATTALIONS OF PHILIPPINE SCOUTS.—The national service color prescribed in paragraph 233 will be used on all occasions. The official designation of the battalion will be engraved on a silver band placed on the pike or lance.

235. GUIDONS FOR CAVALRY.—Each troop of Cavalry will have a silken guidon, cut swallow-tailed, 15 inches to the fork, 3 feet 5 inches fly from lance to end of swallowtail, and 2 feet 3 inches on the lance, having two horizontal stripes each one-half the width of the flag, the upper red and lower white, the red stripe having on both sides in the center the number of the regiment in white silk, and the white stripe the letter of the troop in red silk, the letter and number block shaped, 4½ inches high, the lance 1½ inches in diameter and 9 feet long, including spear and ferrule. Each troop will also have a service guidon, made of bunting or other suitable material, in shape and design the same as the silken guidon; the latter will be used only in battle, campaign, or on occasions of ceremony.

236. GUIDONS FOR FIELD ARTILLERY.—Each battery of Field Artillery will have a guidon of scarlet silk, dimensions and shape same as described for Cavalry guidons; in the center on both sides of the guidon two crossed field guns, about 14½ inches in length, with number of regiment in the upper and letter of battery in the lower angle; field guns, number, and letter to be of yellow silk, number and letter block shaped, 4½ inches high; lance same as for Cavalry guidon. This silken guidon will be used only in battle, campaign, or on occasions of ceremony. Each battery will also have a service guidon of bunting or other suitable material, in shape and design the same as the silken guidon.

237. GUIDONS FOR ENGINEERS.—Each company of mounted Engineers and each mounted section of an Engineer company will have a guidon of scarlet silk,

dimensions and shape the same as described for Cavalry guidons; in the center on both sides of the guidon a castle about $10\frac{1}{2}$ inches high and 14 inches in length; the guidon for a company of mounted Engineers to have an outlined panel 2 inches wide and 10 inches in length, containing the word "Mounted" in plain capital letters, above the castle, the lower line of the panel to be 3 inches above a line drawn between the tops of the outer turrets of the castle. The number of the battalion will be superimposed on the panel above the center turret of the castle, the base of the number to be $1\frac{1}{2}$ inches above a line drawn between the tops of the outer turrets of the castle. The letter of the company will be below the center turret of the castle, the top of the letter being $1\frac{1}{2}$ inches below the base of the castle; the number and letter to be block shaped and $4\frac{1}{2}$ inches in height. Guidons for mounted sections of Engineer companies will be the same except that the bar or panel and the word "Mounted" will be omitted, the castle, panel, letters, and number all to be embroidered in silver; lance same as for Cavalry guidon. This silken guidon will be used only in battle, campaign, or on occasions of ceremony. Each company of mounted Engineers and each mounted section of an Engineer company will also have a service guidon, made of bunting or other suitable material, in shape and design the same as the silken guidon. (*C. A. R., No. 47.*)

228. GUIDONS FOR SIGNAL CORPS.—Each mounted company of the Signal Corps will have a guidon of orange silk, dimensions and shape same as described for Cavalry guidons; in the center on both sides of the guidon two crossed flags 6 inches square of white silk, with centers 2 inches square of scarlet silk, having staffs 15 inches in length of yellow silk; the letter of the company, of white silk, block shaped, $4\frac{1}{2}$ inches high, to be placed above the crossed flags; lance same as for Cavalry guidon.

Each aero squadron of the Signal Corps will have a guidon of orange silk, dimensions and shape same as described for Cavalry guidons; in the center on both sides of the guidon the device of the Signal Corps; the flags to be 6 inches square, made of white silk, having in the center of each a 2-inch square of scarlet silk; the crossed staffs to be 17 inches long by seven-eighths inch wide, made of yellow silk; the squadron number, block shaped, $4\frac{1}{2}$ inches high, to be placed in center above flags, $3\frac{1}{2}$ inches from the top, and an eagle, 16 inches spread, to be placed in center below flags, $3\frac{1}{2}$ inches from the bottom; the number and eagle to be of white silk; lance same as for Cavalry guidon.

Each telegraph company of the Signal Corps will have a guidon of orange silk, dimensions and shape same as described for Cavalry guidons; in the center on both sides of the guidon the device of the Signal Corps; the flags to be 6 inches square, made of white silk, having in the center of each a 2-inch square of scarlet silk; the crossed staffs to be 17 inches long by seven-eighths inch wide, made of yellow silk; the company letter, block shaped, $4\frac{1}{2}$ inches high, to be placed in center above flags, $3\frac{1}{2}$ inches from the top, and the forked lightning, $7\frac{1}{2}$ inches high, to be placed in center below flags, $3\frac{1}{2}$ inches from the bottom; the letter and forked lightning to be of white silk; lance same as for Cavalry guidon.

The silken guidons prescribed for mounted and telegraph companies and aero squadrons will be used only in battle, campaign, or on occasions of ceremony. Each of these organizations will also have a service guidon made of bunting or other suitable material, in shape and design the same as the silken guidon. (*C. A. R., No. 39.*)

229. GUIDONS FOR FIELD HOSPITALS AND AMBULANCE COMPANIES.—Each field hospital and each ambulance company of the Medical Department will have a guidon of maroon silk, dimensions and shape same as described for Cavalry guidons; in the center, on both sides of the guidon, the device of the Hospital

Corps, a caduceus made of white silk, 12½ inches high; the field hospital or ambulance company number to be placed above the caduceus, 1½ inches from the top, and the letters "F. H." for field hospital and "A. C." for ambulance company to be placed below the caduceus, 1½ inches from the bottom; figures and letters to be of white silk, block shaped, 4½ inches high; lance same as for Cavalry guidon. The silken guidons will be used only in battle, campaign, or on occasions of ceremony. Each field hospital and each ambulance company will also have a service guidon, made of bunting or other suitable material, in shape and design the same as the silken guidon. (*C. A. R., No. 39.*)

238½. GUIDONS FOR MOTOR TRUCK COMPANIES.—Guidons with suitable staffs are authorized for each motor truck company of the Quartermaster Corps, and will be carried on the leading and rear trucks. They will consist of red, white, and blue bunting, triangular in shape; the piece of white bunting, diamond shaped, measuring 41 inches in length and 13½ inches at its widest part, to bear in center the insignia of the Quartermaster Corps of blue percale, to measure about 8½ inches in diameter from head of eagle to base of wheel; center of hub of wheel to be of red percale; the number of the company to be of blue percale, 5 inches high, placed between casing and insignia; the insignia and number to be securely stitched on both sides of the guidon; the upper corner next to the casing to be of red bunting, triangular in shape, 13½ inches wide, leading to a point at widest part of diamond, a distance of 20½ inches; the lower corner next to casing to be of blue bunting, triangular in shape, 13½ inches wide, leading to a point at widest part of diamond, a distance of 20½ inches. (*C. A. R., No. 47.*)

239. Whenever in the opinion of a commanding officer the condition of any silken color, standard, or guidon in the possession of his command has become unserviceable, the same will be forwarded to the depot quartermaster, Philadelphia, Pa., for repair if practicable. Should it be found that its condition will not warrant the expenditure of funds that may be involved, the depot quartermaster will return it to the officer from whom received and will furnish a new color, standard, or guidon in lieu thereof. Upon receipt of new silken colors, standards, or guidons commanding officers will cause those replaced to be numbered and retained by the organization to which they belong as mementos of service, a synopsis of which, bearing the same number, will be filed with the records of the organization. Service colors and guidons will be submitted for the action of an Inspector when unfit for further use. (*C. A. R., No. 12.*)

240. Boat flags and pennants for the use of officers of the Army when making official visits by water are authorized as follows:

FOR GENERAL OFFICERS.—A flag of scarlet bunting, rectangular in shape, 3 feet hoist and 4 feet 9 inches fly; the rank to be indicated by white stars of suitable size placed in the center line of the length of the flag; for a brigadier general, one star; for a major general, two stars, and for the lieutenant general, three stars.

The Chief of Coast Artillery and the chiefs of bureaus of the War Department will use the general officer's flag with the appropriate number of stars.

FOR COAST DEFENSE COMMANDERS.—A flag of scarlet bunting, rectangular in shape, 1 foot 6 inches hoist and 2 feet fly for small boats and launches and 2 feet 3 inches hoist and 3 feet fly for larger boats. In the center, on both sides, crossed cannon in yellow, with a medallion at their intersection, in scarlet, having an oblong projectile in yellow.

FOR POST COMMANDERS.—A pennant of bunting, triangular in shape, 1 foot hoist and 3 feet fly; the third nearest the staff to be a blue field bearing thirteen white stars and the remaining two-thirds to be scarlet.

The truck of the staff for general officers, artillery district commanders, and post commanders above the rank of captain to be a gilt ball, and for post commanders of lower grade to be flat.

240j. There will be issued by the Quartermaster Corps, when the necessity therefor is certified by the respective department commanders, the following flags for automobiles, to be used by the officers designated when engaged in official duties, viz:

1. GENERAL OFFICERS, INCLUDING CHIEFS OF BUREAUS OF THE WAR DEPARTMENT.—Major general: Two stars of white muslin $6\frac{1}{2}$ inches from point to point, resting upon two points on the field of red bunting. Brigadier general: Same as for major general, having one star placed in center of flag.

2. ARTILLERY DISTRICT COMMANDERS.—Of red bunting, bearing two crossed cannon with a medallion at intersection containing a projectile, all of yellow muslin, $16\frac{1}{2}$ inches long, placed in center of flag.

3. CHIEF UMPIRE AT MANEUVERS.—Of white bunting with two scarlet stripes 3 inches wide crossed diagonally from corner to corner.

These flags will be rectangular in shape, measuring 2 feet 2 inches fly and 1 foot 6 inches hoist, to be attached to suitable staffs. (*C. A. R., No. 47.*)

241. Camp colors will be as described for flags, printed upon bunting 18 by 20 inches, on a pole of ash 8 feet long and $1\frac{1}{2}$ inches in diameter, the butt end armed with a pointed ferrule.

242. Whenever provisional divisions and brigades are organized for purposes of instruction, the headquarters of opposing forces are marked by blue and red banners, respectively. Headquarters of organizations may be marked, according to the force to which they belong, by blue or red flags or pennants with appropriate insignia in white.

Dimensions:

Division flag: 4 feet hoist, 6 feet fly.

Brigade pennant: Swallow-tailed, 4 feet hoist, 5 feet fly.

The chief umpire's flag will be made of white bunting, crossed diagonally from corner to corner with two stripes of red bunting, 8 inches wide; same size as division flag.

Flags and pennants for headquarters of opposing forces and organizations will be furnished by the Quartermaster Corps.

243. No ensign, pennon, streamer, or other banner of any kind other than the flags, colors, standards, pennants, and guidons prescribed by the Army Regulations or otherwise authorized by the War Department will be used by the Army or by any regiment or other organization thereof.

244. The names and dates of battles in which regiments or separate battalions have participated will be engraved on silver bands and placed on the pike of the colors or lance of the standard of the regiment or separate battalion, as the case may be. For this purpose only the names of those battles which conform to the following definition will be considered, viz: Battles are important engagements between independent armies in their own theaters of war, in contradistinction to conflicts in which but a small portion of the opposing forces are actually engaged, the latter being called, according to their nature, affairs, combats, skirmishes, and the like. A battle has for its object the determination of important questions of policy or strategy; an engagement may be partial, yet if it tend to these ends, it is also entitled to the dignity of being termed a battle.

The names and dates of battles which it is proposed to have engraved on the silver bands will be submitted to the War Department, which will decide each case on its merits.

At least two companies, troops, or batteries of a regiment or separate battalion must have participated in a battle in order that the name of the battle may be placed on the colors or standards thereof.

A company, troop, or battery shall not receive credit for having participated in a battle unless at least one-half of the actual strength thereof was engaged.

The Adjutant General of the Army will furnish each company, troop, and battery with a suitably engrossed certificate setting forth the names of all battles in which said company, troop, or battery participated, with the dates thereof, and showing, as nearly as may be, the organizations of the United States troops engaged therein, and against what enemy. This certificate will state that the names and dates of these battles are engraved on silver bands on the pike of the colors of the regiment or battalion, or the lance of the standard of the regiment or battalion, as the case may be; excepting in the case of companies which have no regimental or battalion organization.

This certificate will be suitably framed and kept posted in the barracks of the company, troop, or battery.

The Adjutant General of the Army will furnish each company, troop, and battery with a suitably engrossed certificate setting forth the names and dates of other engagements and minor affairs in which such organizations have been engaged, showing, as nearly as may be, the organizations engaged, the numbers of the troop, battery, or company engaged, and against what enemy.

This certificate will be suitably framed and kept posted in the barracks of the company, troop, or battery.

Consideration will be given to all battles and engagements whether fought within or prior to the period of existing organizations.

A former organization that participated in any battles or engagements will be traced to an existing organization and such existing organization will be credited with the battles or engagements in the case.

Where it can not be determined with accuracy to what organization a certain battle or engagement is to be credited, the matter will be decided by the War Department on its merits.

As soon as practicable after the termination of any campaign in which battles, engagements, or minor affairs have occurred The Adjutant General of the Army will furnish the companies, troops, and batteries which have been engaged with certificates as above indicated. (*C. A. R., Nos. 1 and 31.*)

ARTICLE XXIX.

REGIMENTS AND BATTALIONS.

245. In the Cavalry, Field Artillery, and Infantry arms the regiment is the administrative unit. The headquarters of the regiment are at the station of the permanent regimental commander; in his absence the command of the regiment devolves upon the senior officer on duty with it wherever he may be stationed. The regiment is composed of two or more battalions which, in turn, are composed of two or more companies. The battalion, in a regiment, is not an administrative unit and has no separate records; it is purely a tactical unit conveniently organized for instruction or maneuver, and particularly for combat, either as an integral part of the regiment to which it belongs or separated from it. It is appropriately commanded by a field officer, normally a major, regularly assigned in orders. In the absence of its regular commander the command devolves upon the senior officer of the battalion on duty with it, unless a field officer has been assigned as contemplated in paragraph 247. Whenever incomplete battalions of the same or different regiments are serving together, the commanding officer may designate provisional battalions, and simi-

larly, in the case of incomplete regiments, he may designate provisional regiments. The regulations relating to regiments apply to battalions not organized into regiments unless otherwise specially provided.

A battalion commander is responsible for the instruction, tactical efficiency, and preparedness for war service of the troops of his battalion under his immediate command. Correspondence relating to the personnel, instruction, discipline, or equipment of a company, battery, or troop in battalion or squadron, will pass through the battalion or squadron commander. No official record, however, of such correspondence will be kept by the battalion or squadron commander. (*C. A. R., No. 23.*)

246. A regimental commander and coast-defense commander are responsible for the instruction, tactical efficiency, and preparedness for war service of the troops under his immediate command. They will encourage among their officers harmonious relations and a friendly spirit of emulation in the performance of duty. Their timely interference to prevent disputes, their advice to the inexperienced, and immediate censure of any conduct liable to produce dissension in the command or to reflect discredit upon it, are of great importance in securing and maintaining its efficiency. In such efforts they will receive the loyal support of their subordinates.

247. Field officers of the mobile Army are assigned by the department commander to stations or commands where their services are most required, and are there assigned to appropriate duties by the commanding officer, preferably with troops of the units to which they belong. A lieutenant colonel may be appropriately assigned to the command of any part of a regiment larger than a battalion, or to the command of a battalion in the absence of its major.

248. The regimental staff officers are appointed from the captains, and consist of the regimental adjutant and the regimental supply officer, and they will be so designated, respectively. They are appointed by the regimental commander, who will at once report his action to The Adjutant General of the Army. The battalion staff consists of the adjutant, who will be designated as the battalion (or squadron) adjutant and, except in the battalions of Engineers, is appointed by the regimental commander after consultation with the battalion commander. When a battalion is detached and serving at such a distance from regimental headquarters that more than 15 days are required for exchange of correspondence by mail, the battalion adjutant is appointed by the battalion commander, who will immediately notify the regimental commander and The Adjutant General of the Army. In the battalions of mounted Engineers the adjutants are appointed by the battalion commanders. Appointments of staff officers will not be antedated and will take effect on the day on which actually made. A regimental staff officer will be entitled to the pay pertaining to his appointment from the date on which he reports for duty at regimental headquarters, a battalion staff officer from the date on which he reports for duty at the station of a company of his battalion, whether such company be stationed at the post of the battalion commander or not. This date will be noted on the post return for the month in which the officer reports, and on his pay voucher for the same month. (*C. A. R., No. 55.*)

249. The tour of duty of a staff officer of a regiment, coast defense command, or battalion not forming part of a regiment, is limited to four years, and having completed a tour, an officer will not be eligible for a second tour until he shall have served two years as a company officer. The tour of duty of a staff officer

of a battalion forming part of a regiment is limited to two years, and having completed a tour, an officer will not be eligible for a second tour until he has served two years as a company officer.

250. All staff appointments in a regiment are restricted to the officers on duty with it and who are not serving at a school of instruction. Should the regimental commander desire to appoint an absent officer to the regimental staff, he may apply for orders for the absent officer to join, but the officer must be on duty before the appointment can be made.

251. The adjutant, under the direction of the commanding officer, will be in charge of the various rosters of service; he will make, publish, and verify the details, keep the records of the regiment, and perform such military duties with troops as are required by regulations. Through him the commanding officer communicates with the officers and men of his command.

252. The adjutant should be courteous to and on friendly terms with the officers of the command he represents, and will avoid all discussions of orders or military conduct of his superiors. He should inform himself upon all points of military usage and etiquette, and on proper occasions aid with his advice and experience the subalterns of the regiment, especially those entering the service. He will endeavor at all times to exert the influence belonging to his station in sustaining the reputation, discipline, and honor of the command.

253. The adjutant and supply officer, under the regimental commander, are responsible for the discipline and efficiency of the noncommissioned staff and for the proper supply of the regiment in the field. (*C. A. R., No. 55.*)

254. Regimental supply officers and regimental supply sergeants will be on duty as assistants and will be required to assist the officers of the Quartermaster Corps at the various posts and stations. They shall not be called upon to receipt for money or property which does not pertain to their respective regiments, nor shall they be separated from the organization to which they belong.

They will be available at all times for field service and such other extra duty as their organizations as the regimental commander may deem necessary. (*C. A. R., No. 55.*)

Questions arising as to the number of assistants necessary will be decided by the department commanders, who will see that the number so detailed is kept at the lowest point consistent with an efficient performance of these duties, attention being given to the avoidance of assigning to officers duties which can be properly performed by civilian employees. (*C. A. R., No. 55.*)

255. Regimental and battalion staff officers may be assigned to duty with a company or to any staff duty which their regimental commander may in his discretion subject to the provisions of paragraph 254.

256. The regimental noncommissioned staff officers consist of the regimental sergeant major, the regimental supply sergeants, the color sergeant, and in regiments of Engineers, the master engineers, senior grade, and the battalion noncommissioned staff officers are the battalion sergeants major, and in Engineers the senior engineers, junior grade, and the battalion supply sergeants. They are appointed by the regimental commander after consultation with the battalion commander. When a battalion is detached from regimental headquarters, the battalion noncommissioned staff officers are appointed temporarily by the battalion commander, who will immediately notify the regimental commander.

and such temporary appointment will be in full force and effect from the date it is made and will continue in full force and effect from that date if it be approved by the regimental commander. If the regimental commander disapproves the appointment, then the increased rank and pay will cease upon receipt by the battalion commander of notice of such disapproval. Each noncommissioned staff officer will be furnished with a warrant signed by the regimental commander. The appointment takes effect on the day upon which it is made and the warrant may be continued in force upon discharge and reenlistment, if reenlistment be made on the day following that of discharge; each reenlistment and continuance will be noted on the warrant. Any noncommissioned staff officer may be reduced to the ranks by the sentence of a court-martial, or by order of the commander having final authority to appoint such noncommissioned officer. Noncommissioned staff officers will preferably be selected from the noncommissioned officers of the regiment who are most distinguished for efficiency, gallantry, and soldierly bearing. (*C. A. R., No. 55.*)

257. The public property pertaining to the headquarters of the regiment will be marked "H. Q." with arm and number of regiment. Haversacks, canteens, and similar articles of equipment in possession of the noncommissioned staff and band will be marked as follows: Cavalry equipments, crossed sabers, with number of the regiment above and "N. C. S." or "Band" below the intersection; Field Artillery equipments, crossed field guns, with the number of the regiment above and "N. C. S." or "Band" below the intersection; Infantry equipments, crossed rifles, with the number of the regiment above and "N. C. S." or "Band" below the intersection; Coast Artillery Corps equipments, crossed cannons, with "N. C. S." or "Band" below the intersection, and in the latter case the number of the band below the intersection and above the word "Band"; and equipments of the special corps of the Army, according to their respective devices. The design will be stenciled in black, the letters and numbers in full-faced characters. The design will be placed above the letters "U. S." on equipments and the soldier's number in characters one-half inch high below the letters "U. S." (*C. A. R., No. 1.*)

258. The following-named books of record, reports, and papers will be kept in each regiment: A correspondence book and a morning report of the field, staff, and band, furnished by the Adjutant General's Department; a regimental fund book (ordinary blank book without special ruling), furnished by the Quartermaster Corps; a document file, a file of the regimental orders, all orders, circulars, and instructions from higher authority, copies of the monthly returns, muster rolls of the field, staff, and band, and other regimental returns and reports.

Of the books, reports, and papers herein referred to, the correspondence book, the document file, the muster rolls, the regimental monthly returns and all other returns of the personnel of the regiment, the general orders and circulars of the War Department, and regimental general orders will be permanently preserved. Division and department orders, except extracts of special orders, will, when the regiment is relieved from duty in the division or department, be disposed of under instructions of the division or department commander. All other books, reports, and papers will be kept five years, reckoned from the close of the period of their use in case of books and reports and from their dates in case of papers, when they will be destroyed under the direction of the regimental commander.

259. All orders and circulars from the War Department, or from the headquarters of an army, field army, division, brigade, or territorial department in which the regiment may be serving, will be filed in book form, and general orders and circulars indexed as soon as received.

BANDS.

260. The noncommissioned officers of regimental bands will be appointed the regimental commanders, upon the recommendation of regimental adjutants under the same conditions prescribed in paragraph 256 for the noncommissioned staff of the regiment. The noncommissioned officers of the Engineer band be appointed by the commanding officer of the battalion with which the band is serving. The noncommissioned officers of the Coast Artillery Corps bands be appointed by coast defense commanders.

261. When a regiment occupies several stations the band will be kept at headquarters, provided one or more companies be serving there. The field musicians of companies will not be separated therefrom. The Coast Artillery Corps and Engineer bands will be assigned to stations by the War Department upon the recommendation of the chiefs of Coast Artillery and Engineers respectively. Army bands, or members thereof, are prohibited by law from receiving remuneration for furnishing music outside the limits of military posts when the furnishing of such music places them in competition with local civil musicians.

262. Musical instruments mentioned in paragraph 1179, extra parts therefor, and equipments for bands, including the issue quarterly of one-half ream of music writing paper, upright, 14 staves, size of paper 10½ by 13½ inches, one-half ream of music writing paper, oblong, 16 staves, size of paper 13 by 10½ inches, will be furnished by the Quartermaster Corps. Musical instruments other than those above referred to may be purchased from available regimental funds. The commanding officer of the band will be responsible for instruments furnished by the Quartermaster Corps and both responsible and accountable for those purchased from the regimental funds. (C. A. R., No. 50.)

263. Regimental commanders will notify The Adjutant General of the Army direct when field or band musicians are required.

264. 1. The composition consisting of the words and music known as "The Star-Spangled Banner" is designated the national anthem of the United States of America.

2. Provisions in these regulations or in orders issued under the authority of the War Department requiring the playing of the national anthem at any place shall be taken to mean "The Star-Spangled Banner" to the exclusion of other tunes or musical compositions popularly known as national airs.

3. Commanding officers will require bands to play national and patriotic music on appropriate occasions. The playing of the national anthem of any country as part of a medley is prohibited. (C. A. R., No. 50.)

ARTICLE XXX.

TROOPS, BATTERIES, AND COMPANIES.

265. The details of captains on detached service away from their regular the service will be limited, as far as practicable, to those required by law.

266. The commanding officer of a company is responsible for the instructional efficiency, and preparedness for war service of his company; for its appearance and discipline; for the care and preservation of its equipment for the proper performance of duties connected with its subsistence, clothing, accounts, reports, and returns.

267. In the absence of its captain, the command of a company devolves upon the subaltern next in rank who is serving with it, unless otherwise specifically directed.

268. In the absence of all the officers of a company, the post commander will assign an officer, preferably of the same regiment, to its command. If there be no officer available, the fact will be reported to the department commander.

269. Captains will require their lieutenants to assist in the performance of all company duties, including the keeping of records and the preparation of the necessary reports and returns.

270. Noncommissioned officers will be carefully selected and instructed, and always supported by company commanders in the proper performance of their duties. They will not be detailed for any duty nor permitted to engage in any occupation inconsistent with their rank and position. Officers will be cautious in reproving them in the presence or hearing of private soldiers.

271. Company noncommissioned officers are appointed by regimental commanders, or temporarily appointed by battalion commanders, under the conditions stated in paragraph 256, on the recommendation of their company commanders; but in no case will any company organization have an excess of noncommissioned officers above that allowed by law. The noncommissioned officers of Coast Artillery Corps companies, upon the recommendation of the company commanders, will be appointed by coast defense commanders.

When a company is serving in a different department from its regimental headquarters and at such a distance therefrom that more than 15 days are required for an exchange of correspondence by mail, company noncommissioned officers and wagoners for the transportation pertaining to the company may be appointed, on recommendation of the company commander, by the order of the battalion commander, if such commander be in the same department as the company. When a company is serving in a different department from its regimental and battalion headquarters and at such a distance from its regimental headquarters that more than 15 days are required for an exchange of correspondence by mail, company noncommissioned officers and wagoners for the transportation pertaining to the company may be appointed, on recommendation of the company commander, by the order of the senior officer of the regiment on duty in the department in which the company is serving.

Coast Artillery noncommissioned officers of a mine planter or cable ship detachment, upon the recommendation of the commanding officer of the mine planter or cable ship, will be appointed and reduced by the coast defense commander if the vessel is serving in a coast defense command; otherwise by the department commander. (*C. A. R., Nos. 46 and 54.*)

272. To test the capacity of privates for the duties of noncommissioned officers company commanders may appoint lance corporals, who will be obeyed and respected as corporals, but no company shall have more than one lance corporal at a time, unless there are noncommissioned officers absent by authority, during which absences there may be one for each absentee.

273. The captain will select the first sergeant, quartermaster sergeant, and stable sergeant from the sergeants of his company, and may return them to the grade of sergeant without reference to higher authority.

274. Each noncommissioned officer will be furnished with a certificate or warrant of his rank, signed by the regimental commander; but a separate warrant as first sergeant, quartermaster sergeant, or stable sergeant will not be given. A warrant issued to a noncommissioned officer is his personal property. Warrants need not be renewed in cases of reenlistment in the same company, if reenlistment is made the day following the day of discharge, but, unless otherwise ordered by the regimental or coast defense commander, on the recommendation of the company commander will remain in force until vacated by promotion or reduction, each reenlistment and continuance to be noted on the warrant by

the company commander. The warrants for noncommissioned officers of the Coast Artillery Corps companies will be signed by the coast defense commander. (*C. A. R., Nos. 36 and 55.*)

275. Appointments of company noncommissioned officers and cooks of the Medical Department will take effect on the day of appointment by the authorized commander, and of first sergeants, quartermaster sergeants, stable sergeants, chief mechanics, cooks, artificers, farriers, horseshoers, mechanics, saddlers, wagoners, musicians, trumpeters, and first-class privates on the day of appointment by the company commander; but in case of vacancy in a company absent from regimental and battalion headquarters a company commander may make a temporary appointment of a noncommissioned officer, which will carry rank and pay from the date of such appointment. Information of the appointment will be promptly sent to the regimental commander, and if he disapproves it the increased rank and pay will cease upon receipt by the company commander of such disapproval. (*C. A. R., No. 55.*)

276. A noncommissioned officer may be reduced to the ranks by sentence of a court-martial, or, on the recommendation of the company commander, by the order of the commander having final authority to appoint such noncommissioned officer, but a noncommissioned officer will not be reduced because of absence on account of sickness or injury contracted in the line of duty. If reduced to the ranks by sentence of court-martial at a post not the headquarters of his regiment, the company commander will forward a transcript of the order to the regimental commander. The transfer of a noncommissioned officer from one organization to another carries with it reduction to the ranks, unless otherwise specified in the order by authority competent to issue a new warrant.

When a company is serving in a different department from its regimental headquarters and at such a distance therefrom that more than 15 days are required for exchange of correspondence by mail, a noncommissioned officer may be reduced to the ranks, on recommendation of the company commander, by the order of the battalion commander, if such commander be in the same department as the company. When a company is serving in a different department from its regimental and battalion headquarters, and at such a distance from its regimental headquarters that more than 15 days are required for exchange of correspondence by mail, a noncommissioned officer may be reduced to the ranks, on the recommendation of the company commander, by the order of the senior officer of the regiment on duty in the department in which the company is serving. (*C. A. R., No. 45.*)

277. When a noncommissioned officer, while in arrest or confinement, is reduced by sentence of a court-martial, the date of the order publishing the sentence is the date of reduction. In all other cases reduction takes effect on the date of receipt of the order at the soldier's station. (*C. A. R., No. 15.*)

278. Chief mechanics, cooks, buglers, horseshoers, mechanics, saddlers, wagoners, and privates, first class, are enlisted as privates, and after joining their organizations are appointed by their respective organization commanders. For inefficiency or misconduct they are subject to reduction by the same authority, and in case of desertion their appointments are vacated from the date of their unauthorized absence. (*C. A. R., Nos. 9 and 55.*)

279. A soldier may, when necessary, be relieved from ordinary military duty to make, repair, or alter uniforms. The post exchange council will fix the rates to be charged, which will not exceed the cost of doing such work at the clothing depot, and company commanders will cause to be deducted from the pay of enlisted men and turned over to the proper person the amount properly due therefor. The provisions of this paragraph will be construed to apply to civilian

tailors, who conform to prices fixed by post exchange council, as well as to enlisted men detailed for that duty by proper authority.

280. The following-named books of record, reports, and papers will be kept in each company: A correspondence book, a sick report, a morning report, and, in companies supplied with public animals, a file of descriptive cards of public animals, all to be furnished by the Adjutant General's Department; also a company council book, a record of individual property responsibility of enlisted men, and a record of punishments awarded by the company commander under the provisions of paragraph 953, to be furnished by the Quartermaster Corps.

There will also be kept, on blanks supplied by the Adjutant General's Department, a complete record, description, and accounts of all men who belong to or who have belonged to the company. A record of vaccinations will be kept on these blanks.

There will also be kept a document file, orders and instructions received from higher authority, and retained copies of the various rolls, reports, and returns required by regulations and orders.

Where copies of orders affecting the company are not supplied, the orders will be copied, if practicable, attested by the adjutant, and placed on the order file.

281. There will also be kept in each company or detachment retained copies of all returns of property pertaining to the company and full information respecting all quartermaster and all other supplies held on memorandum receipt, showing list of articles, date of receipt, from whom received, and the name of the officer who signed the memorandum receipt therefor; also an account of all articles turned in, expended, stolen, lost, or destroyed; and the company or detachment commander will have a settlement with the staff officers concerned quarterly and when relinquishing his command.

Of the books, reports, and papers referred to in this and in the preceding paragraph, the correspondence book, the document file, the records of enlisted men as kept in descriptive and deposit books or on loose leaves, the muster rolls, the monthly returns, and all other returns of the personnel, and the general orders and circulars of the War Department will be permanently preserved. Division and department orders, except extracts of special orders, will be disposed of under instructions of the division or department commander when the company is relieved from duty in the division or department.

The other books, reports, and papers will be kept five years, reckoned from the close of the period of their use in case of books and reports and from their dates in case of papers, when they will be destroyed under direction of the commanding officer.

The disposition of retained papers relating to an officer's accountability for public property is vested in the accountable officer.

282. A duty roster will be kept in each company on blank forms furnished by the Adjutant General's Department; used blank forms will be held one year and will then be destroyed.

INTERIOR ECONOMY OF COMPANIES.

283. Company and detachment commanders will inspect their organizations every Saturday as provided in drill regulations. No one will be excused from Saturday inspection except the guard and the sick in hospital.

Company and detachment commanders will be held responsible that—

(a) The barracks, stables, gun sheds, storerooms, etc., occupied by their organization or detachment are properly ventilated, heated, lighted, kept clean, and in sanitary condition at all times.

(b) The men's food is properly prepared, cooked and served, and that articles of food kept on hand are stored and cared for in a sanitary manner.

(c) The grounds surrounding the barracks, gun sheds, stables, etc., occupied by their company or detachment are properly policed and cared for. (*C. A. R., No. 55.*)

284. The company commander will cause the enlisted men of the company to be numbered and divided into squads, each under the charge of a noncommissioned officer. As far as practicable the men of each squad will be quartered together.

285. In quarters the name of each soldier will be attached to his bunk, arms will be kept in racks, and accouterments and sabers will be hung up by the belts.

286. Strict attention will be paid by company commanders to the cleanliness of the men and to the police of barracks or tents. The men will be required to bathe frequently. In garrison, and whenever practicable in the field, they will be required to wash their hands thoroughly after going to the latrines and before each meal, in order to prevent the transmission of typhoid fever and other diseases by germs taken into the mouth with food from unclean hands. The hair will be kept short and the beard neatly trimmed. Soiled clothing will be kept in the barrack bag.

287. A thorough police of barracks will precede the Saturday inspection. The chiefs of squads will see that bunks and bedding are overhauled, floor tables, and benches scoured, arms and accouterments cleaned, and all leather articles polished.

288. Chiefs of squads will be held responsible for the cleanliness of the men. They will see that those who are to go on duty put their arms, accouterments, and clothing in the best order, and that such as have passes leave the post in proper dress.

289. Soldiers will wear uniform in camp and garrison. When on fatigue they will wear suitable fatigue dress.

290. Company commanders will see that all public property in the possession of enlisted men is kept in good order, and that missing or damaged articles duly accounted for.

291. Company commanders are responsible for textbooks and other official publications issued for the use of their companies.

292. Enlisted men will not take their arms apart except by permission of a commissioned officer under proper supervision, and only in the manner prescribed in the descriptive pamphlet of the arm issued by the Ordnance Department. The polishing of blued or browned parts of small arms, rebluing, rebrowning, putting any portion of an arm in a fire, or removing a ring from a barrel, is prohibited. The mutilation of any part by filing or otherwise, and attempts to beautify or change the finish, are prohibited. Arms will be unloaded before being taken to quarters or tents, and as soon as men using them are relieved from duty, unless otherwise ordered. The use of tompons in small arms is forbidden. The prohibition in this paragraph of attempts to beautify or change the finish of arms in the hands of enlisted men is not construed as forbidding the application of raw linseed oil to wood parts of the arms. This oil is considered necessary for the preservation of the wood, and it may be used for such polishing as can be given by rubbing in one or more coats when necessary. The use of raw linseed oil or wax for the purpose of being allowed for redressing, and the application for such purpose of any wax or varnish, including heelball, is strictly prohibited.

293. It is forbidden to use any dressing or polishing material on the accouterments or equipments of the soldier, the horse equipments for Cavalry or the Artillery harness, except the preparations supplied by the Ordnance Department for that purpose.

294. Equipments will be fitted to the men under the direction of an officer; all other changes are prohibited.

295. Articles of public property issued to a company for its exclusive use will be marked, when practicable, with the number or letter of the company and number and arm of the regiment. Such articles issued to an enlisted man (arms and clothing excepted) will be marked, when practicable, with the number of the man, letter or number of the company, and number of the regiment. Haversacks, canteens, and similar articles of equipment will be uniformly marked on the outside as follows: Cavalry equipments, crossed sabers, with the number of the regiment above and the letter of the troop below the intersection; Field Artillery equipments, crossed field guns, with the number of the regiment above and the letter of the battery below the intersection; Infantry equipments, crossed rifles, with the number of the regiment above and the letter of the company below the intersection; Coast Artillery Corps equipments, crossed cannons, with the number of the company below the intersection of the cannons; and equipments of the special corps of the Army, according to their respective devices. The design will be stenciled in black, the letters and numbers in full-faced characters. The design will be placed above the letters "U. S." on equipments, and the soldier's number in characters one-half inch high below the letters "U. S." Articles will not be marked with the number of the man in the Medical Department and Signal Corps except the articles issued to men assigned to field companies of the Signal Corps and to men assigned to field hospitals and ambulance companies of the Medical Department. (*C. A. R., Nos. 1 and 55.*)

MESSING AND COOKING.

296. In camp or barracks where companies are not joined in a general mess the company commander will supervise the cooking and messing of his men. He will see that his company is provided with at least two copies of the *Manual for Army Cooks*, and that suitable men in sufficient numbers are fully instructed in managing and cooking the ration in the field; also that necessary utensils and implements in serviceable condition, for cooking both in garrison and field, are always on hand, together with the field mess furniture for each man. At a post where all the companies are joined in a general mess the post commander will see that the instruction above mentioned is given. At such a post a company commander will confine his supervision of the mess of his company to observation and to notifying the officer in charge in writing of anything requiring remedy. Should this officer fail to apply proper remedy report may then be made to the post commander. A department commander will see that each company of his command has the necessary field practice each year. The use in garrison of field ranges or utensils pertaining thereto is forbidden.

297. Kitchens will be placed under the immediate charge of noncommissioned officers, who will be held responsible for their condition and for the proper use of rations. No one will be allowed to visit or remain in the kitchen except those who go there on duty or are employed therein. The greatest care will be observed in cleaning and scouring cooking utensils.

298. Special regulations for soldiers' fare can not be made to suit each locality and circumstance. Personal care and judgment on the part of company officers are relied on to prevent waste or misuse. By due economy the ration allowance will provide sufficient variety of diet.

299. The *Manual for Army Cooks* contains comprehensive instructions in cooking, which will be observed as far as practicable.

800. The food of prisoners will be sent to their places of confinement when practicable, but post commanders may arrange to send prisoners, under proper guard, to their messes.

801. Kitchen and table ware and mess furniture will be supplied by the Quartermaster Corps. Allowances will be announced in orders. Post commanders will enforce rigid economy in regard to such property. Articles broken, lost, or damaged will be charged to individuals at fault. Such proportions of company allowances of brooms and scrubbing brushes as may be necessary for the service of a general mess will be allotted by the post commander. (*C. A. R., No. 41.*)

802. In the field the mess furniture of a soldier will be limited to one tin cup, knife, fork, and spoon, and such device for individual cooking as may be furnished by the Ordnance Department.

ARTICLE XXXI.

THE COAST ARTILLERY CORPS.

THE CHIEF OF COAST ARTILLERY.

803. 1. It shall be the duty of the Chief of Coast Artillery to keep the Chief of Staff advised and informed with respect to the business under his charge including the efficiency of the personnel and materiel of the Coast Artillery and he shall, as circumstances require, make such recommendations in reference thereto as shall in his judgment tend to promote efficiency.

2. He shall from time to time, and as frequently as conditions require, confer directly with the chiefs of bureaus of the War Department and advise them of all matters relating to Coast Artillery materiel or personnel that pertain to their respective branches of the service, which the experience and observation of the Coast Artillery arm of the service show to be of practical importance. In like manner he may correspond directly with the commandant of the Coast Artillery School, and with the president of the Coast Artillery Board, on Coast Artillery questions of a purely technical character which do not involve matters of command, discipline, or administration, and do not relate to the status or interests of individuals.

3. He shall make recommendations as to the instruction of Coast Artillery officers and men, and as to examinations for appointment and transfer of officers to the Coast Artillery arm and for promotion therein, and shall recommend such examinations and such courses and methods of instruction in the Coast Artillery School and elsewhere as he shall deem requisite to secure a thoroughly trained and educated force. To this end he is authorized to issue directly to Coast Artillery officers bulletins and circulars of information on current Coast Artillery matters of a purely technical character which do not involve matters of command, discipline, or administration, and do not relate to status or interests of individuals.

4. He is charged with the recommending of officers of Coast Artillery special duty and assignment to Coast Artillery organizations and stations.

5. He shall be a member of the Board of Ordnance and Fortification and by law a member of the General Staff Corps.

6. The office of the Chief of Coast Artillery will not be an office of record except of correspondence authorized by section 2 of this paragraph. All records pertaining to the performance of the duties of the Chief of Coast Artillery will be kept in the office of The Adjutant-General of the Army to whom all communications from the Coast Artillery Corps intended for the

Department, except such communications as may be addressed directly to the Chief of Coast Artillery under section 2 of this paragraph, shall be addressed as required by paragraph 782.

7. Nothing in these regulations shall be deemed to relieve the department and Coast Artillery district commanders of the duties of inspection and command, or of the responsibility for the condition and efficiency of the materiel and personnel of the Coast Artillery in the several departments and districts. (*C. A. R., No. 43.*)

THE COAST ARTILLERY DISTRICT

303. Routine papers connected with a Coast Artillery district will not be forwarded to the War Department except in cases of questions of a technical nature involving a modification of technical requirements that have been established by War Department orders, such as questions involving policy, modifications of instruction, systems and methods of fire control, and decisions relative to equipment and to methods of instruction.

Questions of a routine character that pertain strictly to a single Coast Artillery district should, subject to the general control of the department commander, be decided by the Coast Artillery district commander; questions involving more than one district of a department, by the department commander.

All questions involving administration in the expenditure of funds, all matters pertaining to barracks and quarters, the providing and issuing of supplies, and all questions of discipline involving commissioned officers will be handled by department commanders.

The assignment of officers for duty on the staffs of Coast Artillery district commanders will be made by the Secretary of War (*C. A. R., No. 1.*)

THE COAST DEFENSE COMMAND.

304. The coast defense command, as an administrative unit, consists of one or more forts with their accompanying mine fields and land defenses. Coast defense commands are established, their limits defined, and their headquarters designated in orders from the War Department.

The command of coast defenses devolves upon the senior Coast Artillery Corps officer therein, who is responsible for its efficiency to department and district commanders and subject to their authority, and has control within the limits of the command of all matters relating to Coast Artillery instruction, drill, practice, and the procurement of Coast Artillery supplies and accessories. He will prescribe the hours of drill and instruction throughout the command.

The commanding officer of coast defenses may, with the sanction of the department commander, continue to exercise the more important functions of his command when temporarily absent therefrom on artillery duty within the department. (*C. A. R., No. 1.*)

305. All correspondence and reports relating to the Coast Artillery Corps personnel or materiel will pass through coast defense command headquarters.

306. The commander of coast defenses should continually labor for the instruction and efficiency of his command. He should encourage among his officers harmonious relations and a friendly spirit of emulation in the performance of duty. His timely interference to prevent disputes, his advice to the inexperienced, and immediate censure of any conduct liable to produce dissension in his command, or to reflect discredit upon it, are of great importance in securing and maintaining its efficiency. In such efforts he will receive the loyal support of his subordinates.

307. The coast defense command staff consists of the coast defense adjutant, coast defense quartermaster, coast defense ordnance officer, and the coast defense artillery engineer. They are appointed from the officers serving in command by the coast defense commander, who will confine his selection to the allowance published from time to time in orders from the War Department. Should the officers selected be assigned to companies, application will be made for their transfer to the unassigned list. The names of the officers selected and any change in the officers on these duties will be promptly reported to Adjutant General of the Army.

308. The coast defense adjutant is, under the coast defense commander, responsible for the discipline and efficiency of the Coast Artillery Corps commissioned staff and band assigned to coast defense headquarters.

Master electricians, engineers, electrician sergeants first class, electrician sergeants, second class, master gunners, and firemen are under the supervision of the artillery engineer of the coast defense command or post to which they are assigned.

A coast defense command staff officer may be attached to a company for duty or assigned to any staff duty by the coast defense commander.

309. The coast defense command records consist of an order file, a correspondence book and document file, all orders, circulars, and instructions from higher authority, and all returns and reports concerning the command affecting its personnel.

NONCOMMISSIONED STAFF OFFICERS.

310. The Coast Artillery Corps noncommissioned staff officers consist of sergeants major, senior grade; master electricians; engineers; sergeants first class; junior grade; electrician sergeants, first class; assistant engineers; electrician sergeants, second class; radio sergeants; and firemen. They are appointed upon the recommendation of the Chief of Coast Artillery after due examination under rules announced from time to time by the War Department. They will be furnished with warrants signed by the Chief of Coast Artillery. The appointment takes effect on the day upon which it is made and the warrant may be continued in force upon discharge or reenlistment if reenlistment be made on the day following that of discharge. Any noncommissioned officer enlisted on or after the first day of November nineteen hundred and sixteen, furloughed to the reserve upon the completion of three years in the active service with an excellent character, shall be permitted to reenlist in the organization from which furloughed with the same rank and grade held by him at the time of his furlough if he reenlists within thirty days after the date of such furlough. In each case the soldier will be reenlisted at the place where his organization is stationed. Each reenlistment and continuance will be noted on the warrant by the coast defense command. The Adjutant General of the Army will be informed of the fact. The noncommissioned staff officers, though liable to discharge for inefficiency or misconduct, will not be reduced except by sentence of a court-martial.

Each noncommissioned staff officer of the Coast Artillery Corps, when transferred to a new station under proper orders, upon arrival at his new station will report to the Adjutant General of the Army the date on which he left his old station and the date on which he reported for duty at his new station. The report to be forwarded directly by the coast defense commander. The report will be made both upon departure for and return from any duty, furlough, or other absence, except that when detached duty or absence of a temporary character is directed by a coast defense commander and involves duty within his command, the report will not be made.

report of departure on furlough will state the length thereof and the authority under which it is granted.

When a noncommissioned staff officer of the Coast Artillery Corps is discharged or reduced the officer under whose command he is serving will notify The Adjutant General of the Army as early as practicable of the date, place, and cause of discharge or reduction; in case of discharge the report will state whether or not the soldier reenlisted on the day following that of discharge. (*C. A. R., Nos. 51 and 54.*)

311. The appropriate duties of Coast Artillery Corps noncommissioned staff officers are announced from time to time in orders. (*C. A. R., No. 51.*)

312. A Coast Artillery Corps noncommissioned staff officer may be reenlisted provided he shall have conducted himself properly and performed his duties in a satisfactory manner. If, however, his commanding officer should not deem the reenlistment to be for the best interests of the service, he will communicate his reasons to The Adjutant General of the Army in time to receive the decision of the War Department before the soldier is discharged.

COST ARTILLERY PRACTICE.

313. The details of the methods of conducting technical instruction, target practice, and competitions of the Coast Artillery Corps will be prescribed in orders and instructions from the War Department.

314. The allowance of ammunition for the instruction and practice of the Coast Artillery will be determined each year and announced in general orders from the War Department.

315. Targets and target material for Coast Artillery practice will be provided by the Ordnance Department. The Quartermaster Corps will furnish all necessary assistance in placing, removing, and storing targets.

ARTICLE XXXII.

COUNCILS OF ADMINISTRATION.

316. Post exchange, aero squadron, company, and mess councils of administration are assembled to audit the exchange, aero squadron, company, and mess funds, respectively, to ascertain and examine the sources from which and methods by which they have accrued, and to recommend expenditures therefrom. The post exchange officer, aero squadron, and company commanders are, respectively, the custodians of the exchange and company funds. (*C. A. R., No. 33.*)

317. On the last day of each quarter, and when necessary, the general mess council will be convened by the post commander. The post exchange, aero squadron, and company councils will meet at the end of each month and when necessary. The mess, exchange, aero squadron, and company councils will also meet at the call of their presidents. The post exchange council will consist of the officer in charge of the exchange and the commanding officer of each organization participating in the exchange. It may delegate to an executive committee of its own members the performance of such portion of the duties prescribed for the council as the council may decide. The aero squadron council will consist of the squadron commander, the second ranking officer in the squadron, and the squadron mess officer. The company council will consist of all officers present for duty with the company, and the mess council of the commanders of the several companies participating in the general mess. The council to audit the hospital fund will consist of the three senior officers on duty at the hospital,

or as many as are available if less than three. A formal order convening the areo squadron, company, or post exchange council is not necessary (C. A. R., No. 33.)

§18. The junior member of each council will record its proceedings in an appropriate book, to include a written certificate of the responsible officer that the funds are on deposit in a reputable banking institution named in the certificate, or a statement that they have been exhibited to the council, which proceedings will be signed by the president and recorder. The post or other commander will require the proceedings to be kept as this regulation prescribes and will decide disagreements in those of company councils. Those of the exchange and mess councils will be submitted to the post or other commander, who will sign his approval or objection in the council book. Should the post or other commander disapprove the proceedings, and the council, after reconsideration, adhere to its conclusions, a copy of the proceedings will be sent by the commanding officer to the department commander, whose decision thereon will be final. The final orders in each case will be entered in the council book.

§19. The post exchange council will fix laundry charges and prices charged by tradesmen for making and repairing uniforms of enlisted men.

§20. The commanding officer who approves the appropriations of a council, and in the matter of the company fund the company commander, will be held responsible for all expenditures not made in accordance with regulations.

§21. In case of loss of regimental, exchange, company or mess funds, the circumstances will be carefully investigated and reported by a board of three officers, with recommendation as to responsibility, for the decision of the department commander.

ARTICLE XXXIII.

REGIMENTAL, COMPANY, AND MESS FUNDS.

GENERAL PROVISIONS.

§22. The purchase from regimental, company, or mess funds of any article which can be obtained on requisition from a supply department is forbidden except that, with the approval of the post commander, such articles may be purchased if necessity exists for their immediate use and they are not on hand issue at the post.

§23. No projects by which money will accrue will be entered upon the color of military control without specific authority from the War Department.

§24. Under no circumstances will regimental, company, mess, hospital, exchange, or band funds be taken away from the post where the organization which they pertain is stationed, except as may be necessary to pay indebtedness or for deposit in a bank.

Should the officer who is custodian of any of these funds be absent from post, on leave or otherwise, for any period beyond three and less than 10 he will leave the funds with the officer acting in his place, taking memorandum receipt therefor. If an officer is to be absent for more than 10 days he regularly transfer the funds of which he is custodian to his successor.

In transferring funds to the successor, the accountable officer will make the following certificate, including list of outstanding debts and obligations, fund or council book and on the statement of the hospital fund:

I certify that, to the best of my knowledge and belief, the following is a complete and accurate statement of all outstanding debts and obligations to date, payable from fund.

In case there are no outstanding debts or obligations he will certify accordingly.

Company, post exchange, and other funds referred to in paragraph 816 will, if deposited in a bank, be placed under their official designation, as, for example, "Company Fund, Company B, Twenty-first Infantry," and not to the credit of the officer who is custodian. (*C. A. R., No. 6.*)

REGIMENTAL FUND.

825. This fund consists of the gross amounts received on account of the band, from post exchange profits, voluntary contributions, amounts retained for regimental use from proceeds of private engagements of the band, from sale of articles purchased, or from any other source. The adjutant will be the treasurer of the fund, and will disburse it under the direction of the regimental commander for the promotion of the efficiency of the band and for such objects as facilitate the transaction of regimental business. A record of all receipts and expenditures and a complete list of property purchased will be kept in the regimental fund book.

826. In the case of the Engineer band and in Coast Artillery Corps commands to which bands are assigned the corresponding fund will be designated "The band fund," and will in all particulars be governed by the same rules as regimental funds, except that all funds, property, and records pertaining to this fund are transferred with the bands. The senior Engineer or Coast Artillery Corps officer of the command and his adjutant perform the duties prescribed for regimental commander and adjutant, respectively, in case of regimental funds. This fund will be kept distinct from the company fund of the band, authorized by paragraph 827. (*C. A. R., No. 47.*)

826½. At recruit depots, where one of the recruit companies is organized as a band, the corresponding fund will be designated "The recruit depot headquarters fund," and will in all particulars be governed by the same rules as regimental funds. The commanding officer of the recruit depot and his adjutant perform the duties prescribed for regimental commander and adjutant, respectively, in the case of the recruit depot headquarters fund. This fund will be kept distinct from any company fund of the recruit-depot band. (*C. A. R., No. 18.*)

COMPANY AND MESS FUNDS.

827. The company fund, which will consist of the gross amounts of money received from all sources, is received by the company commander and, with the concurrence of the company council, is disbursed by him solely for the benefit of the company. The fund of the hospital, or of a detachment or band having a separate mess, is regarded as a company fund. Moneys accruing to the fund of a detachment of the Medical Department, together with the proceeds from the ration and savings account of the sick in hospital, and the commutation of rations paid to the surgeon conformably to paragraph 1212, belong to the hospital fund.

The establishment of company tailor shops, barber shops, and of company billiard and pool tables, and, subject to the approval of the post exchange council, of company shoe repair shops and company laundries from which revenues may be derived, is authorized. The post exchange council will fix the rates of salaries to be allowed attendants for company-owned equipment of these functions, and the rates of percentages to accrue to the company fund for the collection of soldiers' accounts due to individuals for privately-owned equipment

of these functions. All funds accruing therefrom will be accounted for as part of the company fund. (*C. A. R., No. 55.*)

328. The company commander will keep an account of the company fund and also a complete list of property, with cost thereof, purchased from said fund. The company fund account will be inspected by the post, regimental, battalion, or squadron commander at least once each quarter.

329. The chaplain's fund will consist of the gross amount of money received from all sources for such fund. The chaplain will keep an account of this fund and also a complete list of all property purchased from this fund or donated for the use of the command or station. The chaplain's fund account will be inspected by the post, regimental, battalion, or squadron commander at least once each quarter. The chaplain's fund will pertain to that particular post or organization for which it was originally intended and remain with such post or organization when a chaplain is transferred.

At a station where there are two or more chaplains on duty the commanding officer will designate the chaplain to account for the fund and property pertaining to the station separate from the fund and property pertaining to any organization at that station. (*C. A. R., No. 23.*)

329. Extra compensation may be paid to enlisted men from company or general mess funds as follows: From a company fund, 25 cents a day to one private detailed on special duty as assistant cook for a company whose authorized strength is fixed at 100 or more enlisted men and only two cooks authorized by law, and 25 cents a day to one private detailed as cook for a headquarters company or troop (provisional) or a machine-gun company or troops (provisional) whose authorized strength does not exceed 50 men, and to one additional private for each additional 50 men or major fraction thereof, from a general mess fund, not exceeding \$2 a day, or from the general mess fund of a recruit depot, not exceeding \$3 a day, to be apportioned by the mess council among the necessary regular attendants; but no extra compensation from company or general mess funds shall be paid to any soldier holding the statutory grade of cook or mess sergeant. Of this \$2 (or \$3 at recruit depots) the mess council may allot to the mess steward (who may be a noncommissioned officer) a per diem of 50 cents, and in addition thereto a share of the remaining \$1.50 (or \$2.50 at recruit depots). One cook of a company and such of the regular attendants of a general mess as the commanding officer may designate will be inspected and mustered in the kitchen or mess hall. Cooks may be excused from the ordinary post duties and from target practice, but the attendants may be excused from the ordinary post duties only.

In case the mess stewards and cooks at recruit depots are graduates of the schools for bakers and cooks, extra-duty pay will be paid to them by the Quartermaster Corps at the following rates, approved by the Secretary of War: To mess stewards, \$1 a day, and to cooks, 50 cents a day, and they will receive no further extra commensation. (*C. A. R., Nos. 32 and 49.*)

330. An officer appointed by the post commander will, under his direction, conduct the general mess affairs, make necessary purchases, and have charge of the mess fund. Quarterly and when relieved he will submit to the mess council a statement of all business dealings and money transactions, with proper vouchers. Upon the call of the mess council he will furnish information regarding the condition and management of the mess. A company on taking the field or withdrawing from a general mess will be entitled to a just share of the fund thereof, to be determined by the mess council, approved by the post commander.

ARTICLE XXXIV.

LIBRARIES, READING ROOMS, POST LAUNDRIES.

331. At each permanent post suitable rooms will be set apart for use as library, reading room, chapel, and school. The Quartermaster General will procure and forward to post libraries such newspapers and periodicals, and to post schools such schoolbooks, stationery, and school material for the use of enlisted men as are authorized by the Secretary of War. Newspapers and periodicals will not be taken from the library; schoolbooks will not be taken from the schoolroom except for the proper use of those attending the post school. These books and periodicals are intended especially for the use of enlisted men. Books for post chapel services are not furnished by the Government. The library and reading rooms may be used by officers in such manner as not to interfere with their use by enlisted men. The post commander will detail an officer as post librarian, who will have charge of the post library. (*C. A. R., No. 10.*)

332. On December 31 of every year each officer in charge of a post or regimental library will render to The Adjutant General of the Army a return of all books on hand in or pertaining thereto, the return to be forwarded directly by the post or regimental commander. Such books as are required by regulations to be accounted for on property returns shall not be included in the library returns. Post and regimental commanders will examine the returns and certify thereon that the books in the library are accounted for as required by orders and regulations.

333. Department adjutants will, on December 31 of each year, render to The Adjutant General of the Army returns of all library books on hand in their charge. These returns will be in addition to the property returns required to be made by them under paragraph 200. The necessary blank forms for returns of books will be furnished by The Adjutant General of the Army, and the returns will be made in accordance with the directions printed upon the blanks.

334. When library books are damaged or lost, the fact will be reported to the commanding officer by the librarian, and the person responsible for the loss or damage will be required to replace the book by a new copy, or to pay its value in money to the librarian to enable him to procure one.

335. Valuable books pertaining to a post library which have become unserviceable by fair wear and tear will, when practicable, be repaired, and the cost of repair will be a proper charge against the funds of the post exchange.

336. Books received from the War Department will be promptly acknowledged and, together with all library books received from other sources, will be taken up on the return.

337. Inspectors general will, at the annual inspection of posts, examine the methods adopted for the care and preservation of the library, condemn and destroy such books as may be unserviceable and worthless, and note action in their reports of the inspections of the posts.

338. The necessary orders for the disposition of the books on hand when a post is abandoned or discontinued will be given by the War Department.

339. At any post where building material can be obtained without expense to the Government, and it is desired to erect buildings by labor of the troops for use as post exchanges, gymnasiums, bowling alleys, and other places of amusement, the post commander is authorized to use the necessary teams and such tools, window sash, doors, and other material as may be on hand and can be spared.

340. The Quartermaster Corps is authorized to transport gymnastic and athletic appliances, purchased with regimental or company funds, for the use of troops, from the nearest market to the post or station of the troops. In all cases of necessary removal the articles supplied for use in bakeries, libraries, reading rooms, schools, and gymnasiums will also be transported by the Quartermaster Corps.

341. Post laundries are established and maintained under special regulations by the War Department.

The amount of indebtedness of a soldier to a post laundry contracted in accordance with such regulations will be noted on the pay rolls for the current month and will be deducted, if practicable, from his pay by the quartermaster making the payment and turned over to the officer in charge of the laundry, who will duly receipt to the quartermaster and the soldier for the amount so received. Where the soldier is detached the amount due the laundry will be noted on the detachment pay roll or descriptive list, and will be deducted by the quartermaster at the next payment and forwarded to the officer in charge of the laundry in which the indebtedness was incurred. In case of the discharge of a soldier the amount of any such indebtedness will be noted on the final statement and will be similarly deducted from payment made thereon and transmitted to the officer in charge of the laundry.

ARTICLE XXXV.

POST GARDENS.

342. Commanding officers of posts at or near which suitable public lands are available will set aside for post gardens such ground as may be necessary for the production of vegetables for the command, and will cause it to be cultivated by the garrison; or if the commanding officer so elects, he may apportion it among the organizations for cultivation by them.

343. Seeds for post gardens may be procured from post exchange funds, or from company funds.

344. Department commanders will give such instructions as may be necessary for carrying these regulations into effect and for the proper distribution of products of gardens among those entitled to them. Surplus products may be sold and the proceeds divided among the company funds of the garrison according to strength of companies.

ARTICLE XXXVI.

POST EXCHANGES.

345. Post exchanges are established and maintained under special regulations issued by the War Department.

The amount of indebtedness of a soldier to a post exchange contracted in accordance with such regulations will be noted on the pay roll for the next succeeding month and be deducted, if practicable, from his pay by the quartermaster making the payment and turned over to the post exchange officer, who will duly receipt to the quartermaster and the soldier for the amount so received. In case of discharge of a soldier the amount of any such indebtedness will be noted on the final statement, and in like manner be deducted from payment made thereon.

346. The sale of, or dealing in, beer, wine, or any intoxicating liquors by any person in any post exchange or canteen or Army transport, or upon any

premises used for military purposes by the United States, is prohibited. Commanding officers will carry the provisions of this paragraph into full force and effect, and will be held strictly responsible that no exceptions or evasions are permitted within their respective jurisdictions.

ARTICLE XXXVII.

VISITS TO LAKE AND SEACOAST DEFENSES.

347. Commanding officers of posts at which are located lake or coast defenses are charged with the responsibility of preventing, as far as practicable, visitors from obtaining information relative to such defenses which would probably be communicated to a foreign power, and to this end may prescribe and enforce appropriate regulations governing visitors to their posts.

American citizens whose loyalty to their Government is unquestioned may be permitted to visit such portions of the defenses as the commanding officer deems proper.

348. The taking of photographic or other views of permanent works of defense will not be permitted. Neither written nor pictorial descriptions of these works will be made for publication without the authority of the Secretary of War, nor will any information be given concerning them which is not contained in the printed reports and documents of the War Department.

ARTICLE XXXVIII.

FIELD ARTILLERY, MACHINE GUN, AND SMALL-ARMS PRACTICE.

349. Small-arms practice will be conducted and reports thereof made in accordance with the authorized firing manual and orders from the War Department.

350. The aggregate allowance of small-arms ammunition for any company will be expended at such times during the year as the department commander may direct, or, in the absence of specific directions, as the post and company commanders may determine. When not used in target practice, small-arms ammunition may, in the discretion of the post and company commanders, be expended in hunting.

351. In all classes of authorized target practice the Ordnance Department will provide the requisite targets, streamers, and flags. The quartermaster will set up the targets, prepare the range, and construct shelters for the markers. Flour for making paste for use in target practice will be issued by the quartermaster.

352. The details of the methods of conducting the technical instruction and target practice of Field Artillery troops and the target practice of troops charged with the service of machine guns will be announced in orders and instructions from the War Department.

353. The allowance of ammunition for small-arms practice, for the instruction of the Field Artillery, and for target practice with machine guns will be fixed in orders from the War Department.

354. Where hunting for game is practicable the men will be encouraged to hunt, and for this purpose company commanders may permit their men to purchase cartridges, if the supply warrants it, such sales to be accounted for on the returns of ordnance. (C. A. R., No. 38.)

ARTICLE XXXIX.

ROSTER, DETACHMENTS, AND DAILY SERVICE.

THE ROSTER.

355. A roster is a list of officers or men for duty, with a record of the duty performed by each. Generally details for duty are so made that the one longest off is the first for detail. Details so made are said to be made by roster.

356. All details for service in garrison and in the field, except the authorized special and extra duty details, will be by roster; but officers or enlisted men when detailed must serve whether a roster be kept or not.

357. The duties performed by roster are of two classes. The first comprises (1) outposts; (2) interior guards, including stable guards; (3) detachments to protect laborers on military works; (4) armed working parties on such works. Soldiers march armed and, if necessary, fully equipped on all duties of this class. The second class comprises all other duties and fatigue, in or out of the garrison or camp. The rosters are distinct for each class.

358. Lieutenant colonels and majors are on one roster, and may be detailed when the importance of the duty requires it. In the field their roster is kept at division and brigade headquarters. Captains form one roster, and are exempt from ordinary fatigue duties. Lieutenants form one roster, but when conditions make it advisable captains and lieutenants may be placed on one roster, or one or more of the senior lieutenants may be placed on the captains' roster. Sergeants, corporals, musicians, and privates form distinct rosters.

359. Unless otherwise ordered by the commanding officer, officers, noncommissioned officers, and privates take duties of the first class in the order stated in paragraph 357, viz, the first for detail takes the outposts, the next the interior guards, and so on. In those of the second class the senior officer takes the largest party. The party first for detail takes the service out of camp.

360. In making details by roster, an officer or enlisted man is each charged with the number of days that he has remained present and available since the beginning of his last tour. Departures from this rule may be authorized by the commanding officer whenever a strict application would be an improper advantage or work hardship.

361. When an officer has been detailed and is not present or available at the hour of marching, the next after him takes the duty. When an outpost is passed the chain of sentinels, or an interior guard has reached its position, an officer whose tour it was cannot take it unless so ordered by the commanding officer.

362. Duties of the first class are credited on the roster when the guard detachments have passed the chain of sentinels or an interior guard has reached its post; other duties, when the parties have entered upon their performance.

363. An officer or enlisted man on duty of the first class, or who is not in detail for such duty, is available, when relieved, for duty of the second class that has fallen to him during that time. Except in emergencies, no duty is required of the old officer of the day or the old guard until four hours after they have been relieved.

364. Detachments of the Signal Corps shall be exempt from detail for other duty, except when in the judgment of the commanding officer the importance of the duty will not permit exemption.

DETACHMENTS.

365. As far as the exigencies of the service will permit, detachment service will be formed by taking battalions, companies, platoons, or other divisions in turn, according to the roster.

366. Officers or enlisted men detailed for detached service while on other duty will be relieved from that duty, if practicable, in time to march with the detachment.

367. When a detachment is to be formed from the different organizations of a command, the adjutant or adjutant general forms its contingent, verifies the details, and sends it to the place of assembly, or turns it over to the detachment commander.

368. When detachments meet, the command is regulated while they serve together as if they formed one command, but the senior officer can not prevent the commander of any detachment from moving when he thinks proper to execute the orders he has received.

369. On the return of a detachment its commander reports to the headquarters from which he received his orders.

DAILY SERVICE.

370. There will be daily, Sundays and holidays excepted, at least two roll calls, viz, at reveille and retreat. Commanding officers may also order roll calls in special cases at such times as they deem necessary. The roll will be called on the company parade by the first sergeant, superintended by a commissioned officer. If companies are quartered together or in contiguous barracks, one officer may superintend the roll call of two or more of them, provided he can do so efficiently, commanding officers regulating the practice in this regard. Ordinarily there will not be any formation for roll call at tattoo, but the prescribed signal will be sounded, and 15 minutes thereafter lights in squad rooms will be extinguished and all noises and loud talking will cease. Call to quarters will be sounded at 10.45 p. m. and taps at 11. At taps all lights not authorized by the commanding officer will be extinguished. Reveille roll call in garrison will not ordinarily take place earlier than 5.30 a. m. in summer, or 6.30 a. m. in winter. On Sundays and holidays reveille roll call may be dispensed with in the discretion of the commanding officer. (*C. A. R., No. 25.*)

371. Mess call in garrison will be sounded daily as follows: For breakfast, 30 minutes after reveille roll call; for dinner, not earlier than 12 m. nor later than 12.15 p. m.; for supper, not earlier than 5 nor later than 6.30 p. m. Meals for enlisted men will be served promptly at the hours appointed, and the duties of the post, as far as compatible with the requirements of the service, will be so arranged that all the men may be present. The men will be allowed at least 20 minutes for breakfast and supper and 30 minutes for dinner.

372. Except at the ceremony of parade, the result of a roll call will be reported after the companies have been dismissed to the officer superintending the call, who will report the result to the commanding officer.

373. In camp and garrison the commanding officer fixes the hours for reports, issues, and roll calls, and for the performance of stated duties and fatigues. In garrison, retreat will be not later than sunset. The signals will be sounded by the field musicians in accordance with authorized drill regulations.

374. After breakfast, and after stable duty in the mounted service, the tents or quarters and adjacent ground will be policed by the men of the companies and the guardhouse or guard tent by the prisoners, or by members of the guard if there be no prisoners.

ARTICLE XL.

HONORS, COURTESIES, AND CEREMONIES.

HONORS.

375. 1. The President of the United States will be received with regimental standards or colors, officers and troops saluting, the drums giving four ruffles and the bugles sounding four flourishes. The ruffles and flourishes will be followed by the national anthem, or, in the absence of a band, the field music or bugles will sound "To the Color."

2. An ex-President and the Vice President of the United States will be received with the same honors as prescribed for the President, except that the flourishes will be followed by a march in lieu of the national anthem.

3. The President of a foreign republic, a foreign sovereign, or a member of a royal family will be received with the same honors as prescribed in subparagraph 1, except that the national anthem of his country will be played.

4. Officers of the following grades of rank will be received with regimental standards or colors, officers and troops saluting, and field music playing as follows: General, four ruffles and flourishes; lieutenant general, three ruffles and flourishes; major general, two ruffles and flourishes; brigadier general, one ruffle and flourish.

In tendering honors to a general officer or official of like rank, the Generals' March will be played immediately after the flourishes. (*C. A. R., No. 50.*)

376. To the members of the Cabinet, the Chief Justice, the President pro tempore of the Senate, the Speaker of the House of Representatives, American or foreign ambassadors, and governors within their respective States and Territories the same honors are paid as to the general, except that a foreign ambassador will be received with the national anthem of his country, and that the number of guns fired as personal salute will be as prescribed in paragraph 400; to the Assistant Secretary of War and to American or foreign envoys (ministers the same honors as to the lieutenant general; to officers of the Navy the honors due to their relative rank; to officers of marines and volunteers, as militia when in the service of the United States, the honors due to like grade in the regular service; to officers of a foreign service the honors due to the rank.

In rendering personal honors, when the command presents arms, officers and men in uniform who are not in formation and are in view and within saluting distance shall salute and shall remain in the position of salute until the end of ruffles and flourishes, or, if none, until "order arms" (*C. A. R., No. 50.*)

377. The national or regimental color or standard, uncased, passing a guard or other armed body will be saluted, the field music sounding "To the Color" "To the Standard." Officers or enlisted men passing the uncased color will render the prescribed salute; with no arms in hand, the salute will be the first salute, using the right hand, the headdress not to be removed.

378. Whenever the national anthem is played at any place when persons belonging to the military service are present, all officers and enlisted men in formation shall stand at attention facing toward the music (except at rehearsal when they shall face toward the flag). If in uniform, covered or uncovered, in civilian clothes, uncovered, they shall salute at the first note of the anthem, retaining the position of salute until the last note of the anthem. If in uniform and covered, they shall uncover at the first note of the anthem, he

the headdress opposite the left shoulder and so remain until its close, except that in inclement weather the headdress may be held slightly raised.

The same rules apply when "To the Color" or "To the Standard" is sounded as when the national anthem is played.

When played by an Army band, the national anthem shall be played through without repetition of any part not required to be repeated to make it complete.

The same marks of respect prescribed for observance during the playing of the national anthem of the United States shall be shown toward the national anthem of any other country when played upon official occasions. (*C. A. R., Nos. 5 and 50.*)

379. No honors are paid by troops when on the march or in trenches, except that they may be called to attention, and no salute is rendered when marching in double time or at the trot or gallop.

380. The commanding officer is saluted by all commissioned officers in command of troops or detachments. Troops under arms will salute as prescribed in drill regulations.

381. When making or receiving official reports or on meeting out of doors all officers will salute. Military courtesy requires the junior to salute first, but when the salute is introductory to a report made at a military ceremony or formation to the representative of a common superior—as, for example, to the adjutant, officer of the day, etc.—the officer making the report, whatever his rank, will salute first; the officer to whom the report is made will acknowledge, by saluting, that he has received and understood the report. (*C. A. R., No. 50.*)

382. 1. Salutes shall be exchanged between officers and enlisted men not in a military formation, nor at drill, work, games, or mess, on every occasion of their meeting, passing near, or being addressed, the officer junior in rank or the enlisted man saluting first.

2. When an officer enters a room where there are several enlisted men, the word "attention" is given by some one who perceives him. when all rise, uncover, and remain standing at attention until the officer leaves the room or directs otherwise. Enlisted men at meals stop eating and remain seated at attention.

3. An enlisted man, if seated, rises on the approach of an officer, faces toward him, stands at attention, and salutes. Standing, he faces an officer for the same purpose. If the parties remain in the same place or on the same ground, such compliments need not be repeated. Soldiers actually at work do not cease work to salute an officer unless addressed by him.

4. Before addressing an officer, an enlisted man makes the prescribed salute with the weapon with which he is armed, or, if unarmed, with the right hand. He also makes the same salute after receiving a reply. (*C. A. R., No. 50.*)

383. 1. In uniform covered or uncovered, but not in formation, officers and enlisted men salute military persons as follows: With arms in hand, the salute prescribed for that arm (sentinels on interior guard duty excepted); without arms, the right-hand salute.

2. In civilian dress covered or uncovered, officers and enlisted men salute military persons with the right-hand salute.

3. Officers and enlisted men will render the prescribed salutes in a military manner, the officer junior in rank or the enlisted man saluting first. When several officers in company are saluted, all entitled to the salute shall return it.

4. Except in the field under campaign or simulated campaign conditions, a mounted officer (or soldier) dismounts before addressing a superior officer not mounted.

5. A man in formation shall not salute when directly addressed, but shall come to attention if at rest or at ease. (*C. A. R., No. 50.*)

384. 1. Saluting distance is that within which recognition is easy. In general, it does not exceed 30 paces.

2. When an officer entitled to the salute passes in rear of a body of troops it is brought to attention while he is opposite the post of the commander.

3. In public conveyances, such as railway trains and street cars, and in public places, such as theaters, honors and personal salutes may be omitted when palpably inappropriate or apt to disturb or annoy civilians present. (*C. A. R., Nos. 33 and 50.*)

385. 1. Salutes to the national anthem or when "To the Color" (or "Standard") is sounded during ceremonies will be as prescribed in regulations, as herein amended.

2. Officers and enlisted men passing the uncased color will render honors as follows: If in uniform they will salute as required in subparagraph 1 of paragraph 383; if in civilian dress and covered they will uncover, holding the headdress opposite the left shoulder with the right hand, if uncovered they will salute with the right-hand salute. (*C. A. R., No. 50.*)

386. Sentinels on post doing interior guard duty conform to the foregoing principles, but salute by presenting arms when armed with the rifle. They will not salute if it interferes with the proper performance of their duties. Troops under arms will salute as prescribed in drill regulations. (*C. A. R., No. 50.*)

387. 1. Commanders of detachments or other commands will salute officers of grades higher than the person commanding the unit by first bringing the unit to attention and then saluting as required in subparagraph 1 of paragraph 383. If the person saluted is of a junior or equal grade the unit need not be at attention in the exchange of salutes.

2. If two detachments or other commands meet, their commanders will exchange salutes, both commands being at attention. (*C. A. R., No. 50.*)

388. Salutes and honors as a rule are not paid by troops actually engaged in drill, on the march, or in the field under campaign or simulated campaign conditions. Troops on the service of security pay no compliments whatever (*C. A. R., No. 50.*)

389. If the command is in line at a halt (not in the field) and armed with the rifle, or with sabers drawn, it shall be brought to "present arms" or "present sabers" before its commander salutes in the following cases: When the national anthem is played, or when "To the Color" or "To the Standard" is sounded during ceremonies, or when a person is saluted who is its immediate or higher commander or a general officer, or when the national or regimental color is saluted. (*C. A. R., No. 50.*)

390. At parades and other ceremonies, under arms, the command shall render the prescribed salute and shall remain in the position of salute while the national anthem is being played; also at retreat and during ceremonies when "To the Color" is played if no band is present. If not under arms, the organizations shall be brought to attention at the first note of the national anthem, "To the Color," or "To the Standard," and the salute rendered by the officer or noncommissioned officer in command as prescribed in regulations, as amended herein. (*C. A. R., No. 50.*)

391. No officer in civilian clothes or present informally in uniform shall be saluted with guns or have a guard paraded in his honor. (*C. A. R., No. 50.*)

392. Guards shall not turn out on Sundays as a matter of compliment for officers of the United States Army, Navy, or Marine Corps. (*C. A. R., No. 50.*)

392. Soldiers at all times and in all situations pay the same compliments to officers of the Army, Navy, Marine Corps, and Volunteers, and to officers of the National Guard in uniform as to officers of their own regiment, corps, or arm of service. (*C. A. R., No. 50.*)

SALUTES WITH CANNON

393. Salutes with cannon will be fired under charge of commissioned officers, who shall be present at the firing and direct it.

Guns using metallic-case ammunition will be used whenever practicable; in their absence other breech-loading guns should preferably be used. Muzzle-loaders will be used only when breechloaders are not available. When using muzzle-loading guns a sufficient number should be employed, if practicable, to avoid the necessity of firing the same gun a second time.

For muzzle-loading guns, or breechloaders using cartridge bags, the bags will be made of silk, measuring in length at least one and one-half times their diameter, and care will be taken that the sponges are not worn and that they thoroughly fill the chamber or bore of the gun, and when the same gun is fired more than once, that the intervals between the discharges are sufficient to allow the chamber or bore to be thoroughly sponged and chamber of breechloaders examined. Unless all of these conditions be fulfilled salutes will not be fired with these classes of guns.

The minimum number of pieces with which salutes may be fired is 1 for rapid-fire and field guns using metallic-case ammunition, 2 for breechloaders using cartridge bags, 4 for siege, and 6 for seacoast guns. When practicable, rapid-fire guns will be used for saluting purposes.

394. The rapidity with which pieces are discharged during a salute depends upon their caliber. Subject to the restrictions of the preceding paragraph, guns of 4-inch caliber or less should have intervals of 5 seconds between discharges; guns of over 4-inch caliber, 10 seconds.

When a single field gun is used to fire a salute the interval between discharges should be 10 seconds.

395. When muzzle-loading guns are used, the pieces for a salute should, if possible, be of the same or equivalent caliber. If the number of guns in the saluting battery admits of it, the entire number required and two or three over should be loaded and made ready previous to commencing the salute; the detachments are then dispensed with, and a single cannoneer at each piece discharges it at the proper time. When the number of pieces is insufficient for the entire salute, as many as possible should be used so as to avoid frequent reloadings.

The pieces are numbered from right to left—1, 2, 3, and so on—and each detachment or the cannoneer, as the case may be, is made clearly to understand the number of the piece.

At the proper moment the officer in charge commands: "Number 1, fire!" and observing the proper interval, "Number 2, fire!" and so on to the left piece, when he returns to the first and repeats the same commands until the entire number required for the salute is discharged. In order to preserve regularity in the fires he will not concern himself with the running number, but will have a capable person to keep count and notify him when the required number of discharges is made. In giving the command "Fire!" he looks toward the piece to be fired, and gives it in such a pronounced manner, accompanied by a signal with his sword, as to be unmistakable. The cannoneer discharging a piece when its number is called casts his eye to the officer and, observing the signal as well as the command, fires the piece promptly. Should a piece mis-

fire, the officer immediately commands the next to fire and allows the piece that has missed to remain undischarged until its proper turn comes again. Immediately after each piece is discharged it is reloaded and made ready if there is probability of its being fired again.

When troops are drawn up for the reception of a dignitary, and it is practicable to have a battery of field guns on the ground, a salute from it should form part of the ceremony; otherwise guns in position are used. When field guns are used, it is most appropriate to fire the salute at the place of review, and at the time just previous to the review when the personage arrives on the ground.

396. Salvos are simultaneous discharges from several cannon; they correspond to volleys of musketry and are fired by way of salute only over the graves of officers at the time of burial. The order designating a funeral escort prescribes whether the fire shall be three volleys of musketry or three salvos of artillery.

397. Salutes will not be fired between sunset and sunrise, and not on Sunday unless required by international courtesy. As a general rule, salutes will be fired between 8 a. m. and sunset. The national flag will always be displayed at the time of firing a salute.

NATIONAL SALUTES.

398. The national salute is 21 guns. It is also the salute to a national flag.

The salute to the Union, commemorative of the Declaration of Independence and consisting of 1 gun for each State, is fired at noon on July 4 at every post provided with suitable artillery.

399. It is the custom of foreign ships of war, on entering a harbor or passing near a fortification, to display at the main the flag of the country in whose waters they are, and to salute it. It is the rule, however, in our own and foreign navies to fire salutes only between 8 a. m. and sunset. On the completion of the salute to the flag, a salute of the same number of guns will be promptly returned by the designated saluting station. United States vessels return salutes to the flag in United States waters only when there is no fort or battery designated to do so. United States vessels do not salute United States forts or posts, and the converse.

Saluting stations for the purpose of returning the salutes of foreign men-of-war in the ports and territorial waters of the United States will be designated in orders from time to time by the War Department.

The salute to the flag is the only salute that is returned, and this is invariably done as soon as possible. The time intervening should never exceed 24 hours. The failure to return such salutes is regarded as a discourtesy or lack of friendship justifying the other party in asking an explanation.

Notice of an intention to salute the flag is sometimes given by the vessel direct to the fort, but as giving notice involves delay, vessels generally salute without it. Surveying vessels, storeships, and transports do not salute. If notice of intention to salute the flag be received by a fort not the saluting station, such fort immediately notifies the saluting station and informs the vessel of the fact.

PERSONAL SALUTES.

400. The President, both on his arrival at and departure from a military post, or when in its vicinity, receives a salute of 21 guns. No other personal salute is fired in his presence.

The sovereign or chief magistrate of a foreign country receives the salute prescribed for the President; and members of a royal family receive the salute due their sovereign. No salute to a personage of lesser degree shall be fired in their official presence.

An ex-President of the United States receives a salute of 21 guns.

The Vice President receives a salute of 19 guns.

When officials other than those named visit military posts, they receive salutes as follows:

| | Guns. |
|--|-------|
| Ambassadors, members of the Cabinet, and the president pro tempore of the Senate..... | 19 |
| The Chief Justice, the Speaker of the House of Representatives, a committee of Congress officially visiting a military post, governors within their respective States or Territories, or a governor general, and the civil governor of the Philippine Islands..... | 17 |
| The Assistant Secretary of War or the Assistant Secretary of the Navy, when officially visiting a military post; the vice governor of the Philippine Islands, and American or foreign envoys or ministers..... | 15 |
| Ministers resident accredited to the United States..... | 13 |
| Charges d'affaires..... | 11 |
| Consuls general accredited to the United States..... | 11 |
| The General..... | 17 |
| The Lieutenant General..... | 15 |
| Major general..... | 13 |
| Brigadier general..... | 11 |

The term "governor general" shall be taken to mean an administrative officer under whom officers with the title of governor are acting.

401. As a rule, a personal salute is to be fired when the personage entitled to it enters a post.

When several persons, each of whom is entitled to a salute, arrive together at a post, the highest in rank or position is alone saluted. If they arrive successively, each is saluted in turn.

An officer assigned to duty according to his brevet rank is entitled to the salute prescribed for the grade to which he is assigned.

A retired general officer making an official visit is saluted according to his rank.

An officer, whether civil, military, or naval, holding two or more positions, either of which entitles him to a salute, receives only the salute due to the highest grade. In no event is the same person to be saluted in more than one capacity.

Personal salutes at the same place and in compliment to the same person, whether civil, diplomatic, military, or naval, are never to be fired oftener than once a year, unless such person shall have been in the meantime advanced in rank.

402. Officers of the Navy are saluted according to their relative rank; officers of marines and of the volunteer forces or militia in the service of the United States, and officers of foreign services, are saluted according to rank.

403. When a civil functionary entitled to a salute arrives at a military post, the commanding officer meets or calls upon him as soon as practicable, and will tender him a review if the garrison consists of not less than four companies. When a general officer visits a post within his command, the troops will be paraded for review, unless he directs otherwise. When a salute is to be given an officer junior to another present at a post, the senior will be notified to that effect by the commanding officer.

404. In addition to the foregoing, occasions of a public nature frequently arise when salutes are both desirable and proper. Orders will be given in such cases.

405. The flag of a military post will not be dipped by way of salute or compliment.

VISITS AND COURTESIES.

406. 1. An officer arriving at the headquarters of a military command, station, or post, will call upon the commander thereof as soon as practicable and register his name, address, and the probable time of his stay. If the visiting officer be senior to the commander, the former may send his card and his address for registration, in which case it becomes the duty of the commander to make the first call.

2. When any officer arrives at Washington, D. C., or at the headquarters of a territorial department, he will report as prescribed in paragraph 825.

3. An officer arriving for duty with an organization, a staff department, at the Military Academy, or any of the service schools, will make both an official and a call of courtesy upon the head or commander thereof as soon as practicable. If the arriving officer is the senior, the first call will be made by the junior.

4. In case of large commands or posts, an arriving officer will pay such additional visits as his post, station, or regimental commander may prescribe. Under normal conditions it is considered desirable that at least the arriving field officers should call at the various organization headquarters.

5. Official calls are made at the office of the commanding officer. If made after office hours and the commanding officer is not present, the visiting officer will register, leave his card, and repeat the call informally the following morning during office hours. Social calls will be made at some convenient time at the quarters of the commanding officer.

6. As a rule, juniors will give way to seniors, and at all times juniors will show deference to their seniors and will not ignore their presence. These rules will apply whether in vehicles, on horseback, or on foot. In accompanying officers, juniors will walk or ride on the left of their seniors, unless there be special reason to the contrary.

7. In case of an organization reporting at a post or station for duty, the commanding officer thereof, accompanied by his staff (if there be one), will immediately make an official call upon the commander of the post or station, as prescribed in subparagraph 1. The commanding officer of the arriving troops may, at his discretion, be accompanied by the other officers of his command. If not accompanied by them at this first visit, he will arrange to present them officially at some convenient time to the post or station commander, unless otherwise directed. A similar procedure will be observed on the departure of an organization from a post or station.

8. A subordinate officer, after reporting officially to the commanding officer of the post, headquarters, or station, will report as soon as practicable to his intermediate commanding officers, presenting to them copies of his assignment or other duty order. An officer returning from leave or detached service makes an official call, without delay, on the post or station commander and upon his intermediate commanders. An officer about to leave the post or station for any length of time will make an official call upon the commander thereof and also upon his intermediate commanding officers.

9. Newly arrived officers will be called upon promptly by the other officers of the post or station. In case of large commands, where the conditions are such as to make this usual custom burdensome or impracticable, the commanding officer

may prescribe that visits shall only be exchanged between senior officers, or he may designate officers to make the visits, who shall extend the usual civilities on behalf of all the others, or he may prescribe that no visits of courtesy shall be required. A general officer is not required to return the official visits of officers of his command, except in the case of general officers or colonels; but when he considers it advisable, return calls on officers of grades junior to colonel shall be made at his direction by aids or other staff officers.

10. The interchange of compliments and visits between officers of the service is of great importance. Failure to pay the civilities customary in official and polite society is to the prejudice of the best interests of the service. The well-established customs of the Army in this regard will be carried out. (*C. A. R., No. 50.*)

407. 1. The interchange of official compliments and visits between military and naval officers is international in character and opens the way to official and social courtesies. In cases of vessels of war and transports carrying troops, foreign or otherwise, recently arrived, it is the duty of the post or station commander to send a suitable officer to offer civilities and assistance. This is called the "boarding visit," and it is expected that this civility will be returned. Within 24 hours thereafter, weather permitting, the officer in chief command of the ship or ships or the senior general officer on board the transport or, in case a general officer is not present, then the commanding officer of the troops should visit the commanding officer of the post or station should the latter be his equal or superior in grade. This visit will be returned within 24 hours. Should the naval officer in command or the general officer on board the transport, or in case a general officer is not present, the commanding officer of the troops, be superior in grade to the officer commanding the post or station, the first visit will be paid by the latter.

2. In ports of the United States, whether within the continental limits, outlying Territories, or in the insular possessions, visits of ceremony between officers of the United States Army and Navy will be governed by the rules laid down in subparagraph 1 of this paragraph.

3. In the interchange of visits between officers in command of Army posts, Territorial or other departments and the naval officers in command of naval stations on shore, whether within the continental limits, outlying Territories, or insular possessions of the United States, the officer already established will send an aid to offer the customary courtesies on the arrival for duty of a newcomer of the other service. The latter will then make the first visit if of equal or inferior grade to the former. The officer junior in grade will make the first visit, whether he is the last comer or not. (*C. A. R., No. 50.*)

408. The following rules prescribed by Navy Regulations shall be observed in regard to the interchange of visits between officers of the United States Navy, United States Army, and the governors of the United States insular possessions, and outlying territories.

1. When a naval vessel or group of vessels arrives at a port of an island or group of islands or outlying possession of the United States where there is a governor general or governor, holding a commission or appointment as such from the President of the United States, the commander in chief or senior commanding officer of such vessel or group of vessels will within 24 hours of arrival make the first visit upon such governor general or governor.

2. In case of the temporary absence of such governor general or governor from his post the official duly acting in his stead will receive the same courtesies.

3. Should such governor general or governor find that from indisposition or pressure of important business he is unable to make or return the prescribed visits in person, he will depute his aid or some other official to do so. In like manner should naval commander in chief or senior commanding officer find that from indisposition or pressing occupation he is unable to make the prescribed

visits, he will depute an officer of his staff to do so. In each case the officer failing to make the prescribed visit in person will report the circumstances and state the reasons which led to the omission of the visit to the department under which he is acting. (*C. A. R., No. 50.*)

409. For the purpose of developing efficiency in intercommunication between signal stations of the Army and the Navy, both on ship and ashore, commanding officers of seacoast fortifications will at all times encourage the interchange of messages and signals between signal stations at their posts and ships of the Navy or naval stations making use of radio telegraphy and visual signaling. Whenever, upon entering a harbor of the United States, vessels of the Navy come within signal distance of fortifications and open communication with them, suitable acknowledgment will be made by the Army stations. As far as practicable, the name of the fort, the name and rank of the commanding officer, and such other information as may be of interest will be communicated. A similar appropriate exchange of signals will be made when a naval vessel leaves a harbor, the initiative being taken by the Navy. Commanding officers of forts provided with radio equipment will issue the necessary orders requiring their stations to cooperate with and communicate with all naval radio stations in their vicinity, both on shipboard and ashore, but Army coast radio stations will not be used in the transmittal of official messages in any case where commercial or military telegraph lines are available and where the service is not between ship and shore. (*C. A. R., No. 55.*)

410. When a military commander officially visits a vessel of war he will give notice in advance of his intention to do so. He is received at the gangway by the commander of the vessel and is accompanied there by the same officer when leaving. The officer who is sent with the customary offer of civilities is met at the gangway of a vessel of war by the officer of the deck, and is presented by the latter to the commander of the vessel.

411. A vessel of war is approached and boarded by commissioned officers by the starboard side and gangway. In entering a boat, the junior goes first and other officers follow in order of rank; in leaving a boat, the senior goes first. The latter acknowledges the salutes which are given at the gangway of a naval vessel.

411½. The following regulations of the United States Navy are published for the information of the Army. So far as applicable they will govern Army officers and enlisted men visiting war vessels

1142. When a chief of staff or any commanding officer of a ship or of a flotilla visits officially another ship of the Navy, he shall be attended at his reception and departure by the commanding officer and, if of or above the grade of lieutenant commander, the guard of the day shall be paraded in his honor. When the chief of staff leaves or returns to the flagship officially, the guard of the day shall be paraded in his honor.

1143. When an officer of the Army or Marine Corps commanding a military post or station, of or above the grade of major and not above the grade of colonel, visits officially any ship of the Navy, he shall receive the same honors as prescribed in Article R 1142.

* * * * *

1165. The officer of the deck shall attend at the gangway on the arrival or departure of any commissioned officer or distinguished visitor.

1166. (1) On the occasion of the official reception or departure of a civil, diplomatic, or consular official or of any commissioned officer of the Navy, Army, Marine Corps, Naval Militia, or Coast Guard, the side shall be piped.

The side shall not be piped for shore boats, but officers in them, if in uniform, shall be so saluted on reaching or leaving the deck.

(2) Piping the side for officers not wearing side arms may, by order of the commanding officer, be dispensed with, without distinction of rank or grade, on board the ships to which they are attached.

1167. Side boys shall attend at the side when the side is piped, as follows, except as noted in (c) below:

(a) For officials saluted with 15 or more guns, eight.

(b) For officials saluted with 11 or 13 guns, six.

(c) For other officers of and above the rank of commander and for officials entitled to corresponding honors, four.

(d) For other commissioned officers of the Navy or Marine Corps and officials entitled to corresponding honors, two.

1168. (1) All honors, except as prescribed in Article R 1165 and such as social courtesy may demand, shall be dispensed with at the reception or departure of all officers under the following circumstances:

(a) When they are in plain clothes.

(b) When the departure or reception takes place after sunset and before 8 a. m. (except that for foreign officers the side shall be piped).

(c) During the meal hours of the crew, for officers of the United States Navy or Marine Corps.

(d) When coaling ship, for officers of the United States Navy or Marine Corps.

(e) On board ships having a complement, exclusive of the engineer force, of 125 men or less the attendance of side boys for officers of the United States Navy shall be required on occasions of ceremony, but shall not be required on ordinary occasions. When the side is piped for officers of the United States Army or of foreign services, side boys shall be in attendance between 8 a. m. and sunset.

(2) The guard and band shall not be paraded on Sundays for ships or officers of the United States Navy and Marine Corps.

1169. Sentries at the gangways shall salute all officers in uniform when going or coming over the side. All sentries on the upper decks, or in view from outside, shall salute all commissioned officers passing them close aboard, in boats or otherwise.

1170. The starboard gangway shall be used by all commissioned officers and their visitors; the port gangway shall be used by all other persons. If the construction of the ship or other circumstances make a change in this rule expedient, the change may be made at the discretion of the commanding officer.

1171. (1) All officers and men, whenever reaching the quarter-deck, either from a boat, from a gangway, from the shore, or from another part of the ship, shall salute the national ensign. In making this salute, which shall be entirely distinct from the salute to the officer of the deck, the person making it shall stop at the top of the gangway or upon arriving upon the quarter-deck, face the colors, and render the salute, after which the officer of the deck shall be saluted. In leaving the quarter-deck, the same salute shall be rendered in inverse order. The officer of the deck shall return both salutes in each case, and shall require that they be properly made.

(2) The commanding officer shall clearly define the limits of the quarter-deck; it shall embrace so much of the main or other appropriate deck as may be necessary for the proper conduct of official and ceremonial functions. When the quarter-deck so designated is forward and at a considerable distance from the colors, the salute to the colors prescribed in the preceding paragraph will not be rendered by officers and men except when leaving or coming aboard the ship.

(3) The salute to the national colors to be made by officers and enlisted men with no arms in hand shall be the "hand salute," the headdress not to be removed. (*C. A. R., No. 50.*)

412. Naval vessels fire personal salutes to officers entitled to them when the boats containing them have cleared the ship. It is an acknowledgment of the salute by the officer saluted for his boat to lie on her oars from the first until the last gun and for him to uncover; at the conclusion, to give way. Personal salutes are not returned by military posts.

413. In case of vessels of war of foreign powers at peace with the United States lying in our ports or harbors and celebrating their national festivities, the commander of each fort, battery, or military post may participate in the celebration by firing salutes, parading commands, etc. In such a case the flag of the United States will be hoisted and lowered simultaneously with that of the ship on board of which the celebration occurs.

414. When boats are rowing in the same direction, an inferior is not to pass a superior in grade unless he is on urgent duty, or authorized by the superior.

When boats are pursuing opposite directions, the rule of the road to prevent fouling is that both shall "put their helms to port," i. e., to pass to the right, circumstances permitting.

When boats are approaching the same landing or vessel, an inferior is always to give way to a superior in rank.

Boats about leaving a ship's side or landing are to give way in ample time to others approaching.

It is not proper to land over another boat without permission, and only when it can not be avoided is permission to be asked.

415. A vessel of war on which the President of the United States is traveling displays the President's flag at the main. In case of foreign sovereigns, vessels display the royal standard of the sovereign in like manner.

ESCORTS OF HONOR.

416. Escorts of honor may be composed of any or of all arms, according to the circumstances. They are detailed for the purpose of receiving and escorting personages of high rank, civil or military, when they arrive and depart. The troops for this purpose will be selected for their soldierly appearance and superior discipline, and are formed and maneuvered as prescribed in the authorized drill regulations. The post commander in each case will detail an officer to attend the personage escorted, and to bear communications from him to the commander of the escort.

FUNERAL HONORS.

417. On the receipt at any post or camp of official notice of the death of the President of the United States, the commanding officer will, on the following day, cause a gun to be fired every half hour, beginning at sunrise and ending at sunset. When posts are in sight or within 6 miles of each other the firing will take place only at the post commanded by the senior officer.

418. The orders announcing the death of a Secretary of War, Assistant Secretary of War, or a general officer on the active or retired list, or other person entitled to a salute of cannon, will specify the number of guns to be fired at half-hour intervals, commencing at 8 o'clock a. m. on the day after the receipt of the order, and the posts at which they shall be fired. During the firing the flag will be displayed at halfstaff.

419. When the funeral of an officer who was entitled to a salute takes place at or near a military post, minute guns will be fired while the remains are being borne to the place of interment, but the number of guns will not exceed that to which the officer was entitled as a salute. After the remains are deposited in the grave a salute corresponding to the rank of the deceased will be fired, in addition to three salvos of artillery or three volleys of musketry.

420. If the remains of a flag officer of the Navy or a general officer are brought ashore in the vicinity of a military post, the flag will be displayed at

halfstaff and minute guns will be fired as the procession moves. The number of guns will be that to which the officer was entitled as a salute.

421. During the funeral at or near a military post of a civil functionary who was entitled to a salute, the flag is displayed at halfstaff and minute guns are fired. The number of guns will be that to which the functionary was entitled as a salute.

422. On the death of an officer at a military post the flag is displayed at halfstaff and so remains, between reveille and retreat, until the last salvo or volley is fired over the grave; or if the remains are not interred at the post, until they are removed therefrom.

423. During the funeral of an enlisted man at a military post the flag is displayed at halfstaff. It is hoisted to the top after the final volley or gun is fired, or after the remains are taken from the post. The same honors are paid on the occasion of the funeral of a retired enlisted man.

424. All military posts in sight of each other display their flags at halfstaff upon the occasion of one doing so. The same rule is observed toward all vessels of war.

425. When the flag is displayed at halfstaff it is lowered to that position from the top of the staff. It is afterwards hoisted to the top before it is finally lowered.

426. The funeral escort of the Secretary of War or General of the Army will consist of a regiment of Infantry, a squadron of Cavalry, and a battalion of Field Artillery; of the Assistant Secretary of War or the Lieutenant General, a regiment of Infantry, a squadron of Cavalry, and a battery of Field Artillery; of a major general, a regiment of Infantry, two troops of Cavalry, and a battery of Field Artillery; of a brigadier general, a regiment of Infantry, a troop of Cavalry, and a platoon of Field Artillery; of a colonel, a regiment; a lieutenant colonel or major, a battalion or squadron; a captain, one company; a subaltern, a platoon. The funeral escort of a general officer, or of any other officer either on the active or retired list, when the funeral occurs at any other place than a military post or camp, will be ordered by the War Department, and will be composed of such bodies of troops, not exceeding the number prescribed in this paragraph, as the interests of the service will permit. But in all cases where the funeral ceremonies take place at or in the immediate vicinity of a military post, or where the remains are conveyed through a military post en route to the place of burial, the above regulation relative to escort will be complied with so far as the strength of the garrison will allow. The flag will be at halfstaff while the remains are at or in the immediate vicinity of the post, and the department or post commander will give the necessary orders.

427. The funeral escort of an officer will be commanded by an officer of the same grade; if none such be present, by one of the next lower grade available. The ceremony is prescribed in the drill regulations.

428. The funeral escort of a noncommissioned staff officer will consist of 16 men, commanded by a sergeant; of a sergeant, of 14 men, commanded by a sergeant; of a corporal, of 12 men, commanded by a corporal; of a private, of 8 men, commanded by a corporal; of an enlisted man of Field Artillery, one section.

429. Six pallbearers will be selected, as far as practicable, from the grade of the deceased.

430. Officers and enlisted men attending military funerals wear uniform and side arms and in the funeral procession follow the mourners in order of rank, seniors in front. The funeral of an officer is attended by such officers of the

post or organization in the field as other duties will permit. The funeral of a noncommissioned officer is attended by the noncommissioned officers and privates of the regiment, or such part of it as may be present and can be spared from other duties; that of a private by the noncommissioned officers and privates of his company.

431. The badge of military mourning shall consist of a straight band of black crape or plain black cloth, 5 inches wide, worn around the left arm above the elbow; also, when the sword is worn, a knot of black crape on the hilt; but no badge of military mourning shall be worn with the uniform except at funerals or for occasions prescribed by the War Department.

432. As family mourning, officers may wear the arm band prescribed in paragraph 431.

433. The drums of a funeral escort will be covered with black crape or thin black serge, furnished by the quartermaster.

434. The colors of a regiment will not be placed in mourning or draped, except when ordered from the War Department. Two streamers of crape 7 feet long and about 12 inches wide attached to the ferrule below the spearhead will be used for the purpose.

CEREMONIES.

435. All ceremonies will be conducted as prescribed in the authorized drill regulations.

436. The number and kind of parades will be determined by the post commander with the approval of the next higher tactical commander and of the department commander. After the schedule has been approved parades will not be dispensed with except on urgent occasions. All officers and men will be present unless specially excused or on duty incompatible with such attendance. (*C. A. R., No. 1.*)

437. At every military post or station the flag will be hoisted at the sounding of the first note of the reveille, or of the first note of the march, if a march be played before the reveille. The flag will be lowered at the sounding of the last note of the retreat, and while the flag is being lowered the band will play the national anthem, or, if there be no band present, the field music will sound "To the Color." When "To the Color" is sounded by the field music while the flag is being lowered the same respect will be observed as when the national anthem is played by the band, and in either case officers and enlisted men out of ranks will face toward the flag, stand at attention, and render the prescribed salute. The national flag will be displayed at one seacoast or lake fort of a group of forts within sight of each other at the beginning of and during an action in which the forts may be engaged, whether by day or by night. (*C. A. R., No. 50.*)

438. Troops will be mustered for pay on the last day of each month unless otherwise ordered by the War Department. When the commanding officer can not muster all the troops he will designate other officers to assist.

439. Each stated muster will, when practicable, be preceded by a minute and careful inspection. If the command consists of more than one company, the inspection will be preceded by a review. If the day for muster falls on Sunday, such review and inspection will be omitted.

440. On Memorial Day, May 30, at all Army posts and stations, the national flag will be displayed at halfstaff from sunrise till midday, and immediately before noon the band, or field music, will play some appropriate air, and the national salute of 21 guns will be fired at 12 m. at all posts and stations provided with artillery. At the conclusion of this memorial tribute, at noon, the

flag will be hoisted to the top of the staff and will remain there until sunset. When hoisted to the top of the staff, the flag will be saluted by playing one or more appropriate patriotic airs. In this way fitting testimonial of respect for the heroic dead and honor to their patriotic devotion will be appropriately rendered.

ARTICLE XLI.

GUARDS.

441. The authorized Manual of Guard Duty is the guide in all matters relating to duties of guards not contained in these regulations.

442. Quartermaster's supplies and ordnance and ordnance stores required for strictly post or police purposes, or for use by the post or camp guard, will be supplied by the quartermaster and ordnance officer, respectively, on request from the officer of the day, approved by the commanding officer, and will be continued on the returns of the quartermaster or ordnance officer, as the case may require.

443. Articles so obtained will be duly entered under the direction of the officer who receives them on a list of "articles in charge." They will be carried on the list and verified daily under the direction of the officer of the day. When no longer fit for use they will be submitted, as the case may require, by the quartermaster or ordnance officer for inspection and, if condemned, disposed of as ordered.

ARTICLE XLII.

ROUTE MAPS AND JOURNALS OF MARCH.

444. The commanding officer of every body of troops ordered to march will detail a competent person, preferably a mounted commissioned officer, as topographer, whose special duty will be to prepare and preserve the field notes, sketches, and maps necessary for a complete record of the route traversed and adjacent points of military interest. The topographer will be relieved of such of his routine duties as interfere with this work. He will be furnished with such official maps and descriptive notes of the proposed route as may be available. Should these be adequate, the fieldwork will be confined to marking thereon the route followed and adding such notes as may be required to complete the record. Where no maps are available or those furnished are inadequate, field maps to standard scales will be prepared. When necessary, selected enlisted men, preferably mounted, will be detailed to assist the topographer. The work will be done under the supervision of the commanding officer. For facility in reading, military maps are made according to a uniform system of scales and contour intervals, as follows:

1. One inch to 1 mile, vertical interval, 60 feet.
2. Three inches to 1 mile, vertical interval, 20 feet.
3. Six inches to 1 mile, vertical interval, 10 feet.
4. Twelve inches to 1 mile, vertical interval, 5 feet.

In general these scales and contour intervals are used as follows:

1. For route maps of extended marches, or of marches of large commands using several roads.
2. For ordinary route sketches and extended positions.
3. For position and outpost sketches.
4. For maps used in the war game, discussion of operations at maneuvers and in siege operations.

445. Field notes and maps of the route traversed each day will be completed the same day. In time of peace the original field notes and maps covering the entire march will ultimately be transmitted to the department engineer of the department in which it terminates for file and for use in the compilation of new or the correction of existing military maps. In campaign these records will be disposed of as prescribed in Field Service Regulations.

446. Journals of march will be kept by the adjutant of the command or by an officer detailed for that purpose. The journal will contain an historical record of the march, facts as to equipment, clothing, supply, shelter, roads, weather, health of troops, and incidents of any kind that may have value. Journals of march pertaining to provisional commands will be forwarded to the headquarters of the department in which the march terminates for file; those of permanent organizations will be retained at the headquarters of the organizations to which they pertain. In campaign, journals of march are incorporated in or replaced by war diaries, as provided in Field Service Regulations.

447. Commanding officers will see that the organizations under their command are at all times fully supplied with the engineer reconnaissance equipment prescribed in orders of the War Department, that the equipment is in good order and repair, and that selected officers and enlisted men are instructed in its use.

448. Notebooks, blanks, and reconnaissance instruments are supplied by the Engineer Department as a part of the authorized equipment of companies, regiments, and other organizations. When such books or blanks can not be obtained, substitutes will be prepared conforming to the standard forms. General instructions for the use and preservation of instruments, the character of the observations to be made, and the methods of recording them will be found in the Engineer Field Manual or as notes printed in the record books or on the blanks supplied.

ARTICLE XLIII.

MILITARY EDUCATION.

449. The military educational system of the United States comprises:

1. The Military Academy at West Point for the education of cadets.
2. Post schools for the instruction of enlisted men.
3. At each military post a garrison school for the instruction of officers in subjects pertaining to the performance of their ordinary duties.
4. Service schools—
 - a. The Army War College, Washington, D. C.
 - b. The Army Staff College, Fort Leavenworth, Kans.
 - c. The Coast Artillery School, Fort Monroe, Va.
 - d. The Engineer School, Washington, Barracks, D. C.
 - e. The Mounted Service School, Fort Riley, Kans.
 - f. The Army Medical School, Washington, D. C.
 - g. The Army Signal School, Fort Leavenworth, Kans.
 - h. The Army School of the Line, Fort Leavenworth, Kans.
 - i. The School for Bakers and Cooks, Washington Barracks, D. C.
 - j. The School for Bakers and Cooks, Presidio of Monterey, Cal.
 - k. The School for Bakers and Cooks, Fort Sam Houston, Tex.
 - l. The School for Bakers and Cooks, Fort Shafter, Hawaii.
 - m. The School for Bakers and Cooks, Fort Riley, Kans.
 - n. The School for Bakers and Cooks, Fort William McKinley, P. I.
 - o. The Army Field Engineer School, Fort Leavenworth, Kans.
 - p. The Army Field Service and Correspondence School for Medical Officers, Fort Leavenworth, Kans.

- q. The School of Fire for Field Artillery, Fort Sill, Okla.
- r. The School of Musketry, Fort Sill, Okla.
- s. The Signal Corps Aviation School, San Diego, Cal.
- t. The Signal Corps Aviation School, near New York City.
- u. The Signal Corps Aviation School, near Chicago, Ill.
- v. The U. S. Army Balloon School, Fort Omaha, Nebr.
- w. The Ordnance School of Application, Sandy Hook Proving Ground, N. J.

5. The military department of civil institutions at which officers of the Army are detailed under the provisions of law.

The detail of officers at these institutions is announced and the regulations governing the courses of instruction therein are issued in orders from the War Department. (*C. A. R., Nos 38 and 49*)

ARTICLE XLIV.

THE ORGANIZED MILITIA.

450 to 468. Rescinded, the matter being covered by special regulations. (*C. A. R., No. 55.*)

ARTICLE XLV.

THE GOVERNMENT HOSPITAL FOR THE INSANE.

464. The following classes of persons are entitled by law to admission to the Government Hospital for the Insane: (1) Officers, contract surgeons, and enlisted men of the Army who have become insane while in the military service, or within three years after their discharge therefrom, from causes which arose during and were incident to such service; (2) inmates of the Soldiers' Home and of the National Home for Disabled Volunteer Soldiers; (3) civilian employees of the Quartermaster Corps who may become insane during such employment; (4) general prisoners.

465. The insane of the military service, except as otherwise provided for in paragraph 469, will be reported, through military channels, to The Adjutant General of the Army, that the orders of the Secretary of War for their disposition may be obtained. No person will be reported under the provisions of this paragraph except after a critical examination by a board of at least two medical officers. The report will be accompanied by the proceedings and findings of the board giving the diagnosis, a detailed account of the medical history of the case in duplicate, and a statement as to whether the disability was or was not incurred in line of duty; also a statement as to whether the patient, if discharged from the service, can be released from military control without danger to himself or others. (*C. A. R., Nos. 10 and 46.*)

466. In the case of an insane soldier ordered by the War Department to be sent to the Government Hospital for the Insane, all papers, including his service record, certificate of disability, and form of medical certificate required by the Department of the Interior, properly filled in, will be forwarded directly to The Adjutant General of the Army by the post commander on the date of the soldier's departure from the post. An insane soldier will not be discharged from the service except by order of the Secretary of War.

The blank forms for the medical certificate required by the Department of the Interior will be furnished by The Adjutant General of the Army.

Prior to the departure of the insane soldier the post commander will prepare and sign an inventory, in duplicate, of his effects and will send one copy of the

inventory, together with his money and other valuables, by registered mail to the Superintendent, Government Hospital for the Insane, Washington, D. C., retaining the other copy for the post records. The other effects, such as clothing, will accompany the patient and attendant as baggage. (*C. A. R., Nos. 13 22, and 55.*)

467. An insane soldier ordered by the War Department to be sent to the Government Hospital for the Insane will be escorted by a noncommissioned officer. When a number are sent at one time or when the patient or patients require restraint, the department commander may order such addition to the escort as may be necessary. The noncommissioned officer will report to The Adjutant General of the Army, by telegraph, at least 24 hours in advance, the probable time and place of arrival in Washington. After leaving the patient at the hospital the noncommissioned officer will report to The Adjutant General of the Army for further instructions.

468. On the departure of the patient from his station the commanding officer will give such orders to the person in charge as will provide for transportation of the necessary attendants to the institution and returning to their posts, also subsistence during their absence. When payment of commutation, in lieu of subsistence in kind, is permissible under paragraph 1223, the commanding officer may, in writing, order commutation for the patient to be paid in advance to, and receipted for by, the noncommissioned officer to whose charge the patient is committed.

469. The insane of the military service in the Philippine Islands, except natives, will be sent by the commanding general, Philippine Department, to Letterman General Hospital, Presidio of San Francisco, Cal., for observation and treatment in that hospital before action is taken in their cases in accordance with the provisions of paragraph 465.

Insane natives of the Philippine Islands and Porto Rico serving in the Army of the United States may, under authority from the Secretary of War, be sent to an asylum in the Philippine Islands or to an asylum in Porto Rico, respectively.

470. To obtain the release of a patient when cured or his delivery to the care of friends, application must be made to The Adjutant General of the Army, accompanied by the recommendation of the superintendent of the hospital.

ARTICLE XLVI.

INDIANS.

INDIAN COUNTRY.

471. If any commanding officer of a military post has reason to suspect or is informed that any white person or Indian is about to introduce or has introduced any spirituous liquor or wine into the Indian country in violation of law, he may cause the boats, stores, packages, wagons, sleds, and places of deposit of such person to be searched; and if such liquor is found therein, the same, together with the boats, teams, wagons, and sleds used in conveying the same, and also the goods, packages, and peltries of such person, shall be seized and delivered to the proper officer, and shall be proceeded against by libel in the proper court. It shall, moreover, be the duty of any person in the service of the United States, or of any Indian, to take and destroy any ardent spirits or wine found in the Indian country, except such as may be introduced therein by the War Department. In all cases arising under sections 2139 and 2140, Revised Statutes, Indians shall be competent witnesses. It shall be a sufficient defense to any charge of introducing or attempting to introduce ardent spirits,

ale, beer, wine, or intoxicating liquors into the Indian country that the acts charged were done under authority, in writing, from the War Department or any officer duly authorized thereunto by the War Department.

472. The Indian country within the meaning of the foregoing paragraph may be defined, in general, as the Indian reservations, or districts occupied by Indian tribes and to which the Indian title has not been extinguished; or sections of country over which the operation of the Indian trade and intercourse laws has been retained by Indian treaty stipulations. Should any case arise which, in the opinion of the department commander, does not appear to be embraced within these definitions, he will report it to the Secretary of War, in order that the question whether the location is Indian country may be authoritatively determined.

473. When lands are secured to the Indians by treaty against occupation by the whites, the military commanders will keep intruders off the same by military force, if necessary, until such time as the Indian title is extinguished or the lands are opened by Congress for settlement.

474. When questions arise as to the ownership of animals in possession of Indians, the commanding officer of the nearest military post is authorized and directed to act in conjunction with the agent in charge of said Indians in the investigation and determination of ownership.

475. The introduction into the Indian country for the purpose of sale to, or exchange with, Indians of any breech-loading firearms and of any special ammunition adapted to them, and the sale and exchange to Indians in the Indian country of any such arms or ammunition is prohibited. The introduction into the country or district occupied by any tribe of hostile Indians, for the purpose of sale or exchange to them, of arms or ammunition of any description, and the sale or exchange thereof to or with such Indians is prohibited; and all such arms or ammunition introduced by traders or other persons, and which are liable in any manner to be received by such hostile Indians, shall be deemed contraband of war, to be seized by any officer and confiscated.

476. Supplies, stores, and property of any kind procured out of Army appropriations will not be transferred, in any way or under any circumstances, for the use of Indians except under authority first obtained from the Secretary of War. Any officer violating the terms of this regulation will be charged with the money value of the supplies, stores, or property transferred, and in addition be otherwise held accountable according to circumstances.

477. Indians held as prisoners of war are entitled to receive necessary subsistence, clothing, medicines, and medical attendance. There is no authority of law permitting such supplies and attendance to be furnished to Indians under the care and management of the Interior Department. All Indian prisoners will be reported on the post returns under the following form:

| Name of tribe. | Number of men. | Number of women. | Number of children above 12 years of age. | | Number of children 12 years of age and under. | | Date of capture. | Gain. | Loss. | Total. | Total last return. | Remarks. |
|----------------|----------------|------------------|---|---------|---|---------|------------------|-------|-------|--------|--------------------|----------|
| | | | Male. | Female. | Male. | Female. | | | | | | |
| | | | | | | | | | | | | |

PURCHASES FROM INDIANS.

478. Purchases of cattle, hay, grain, fuel, or other produce or merchandise which Indians may have for sale and which may be required for the military service may, with the approval of the Secretary of War, be made from Indians in open market, at fair and reasonable prices, but not exceeding the market prices in the localities where such purchases are made.

INDIAN SCOUTS.

479. Indians employed as scouts under the provisions of section 1112, Revised Statutes, and section 1, act of Congress approved February 2, 1901 (31 Stat. L., 748), will be enlisted for periods of seven years and discharged when the necessity for their services shall cease. While in service they will receive the pay and allowances of cavalry soldiers and an additional allowance of 40 cents per day, provided they furnish their own horses and horse equipments; but such additional allowance will cease if they do not keep their horses and equipments in serviceable condition.

480. Department commanders are authorized to appoint the sergeants and corporals for the whole number of enlisted Indian scouts serving in their departments, but such appointments must not exceed the proportion of 1 first sergeant, 5 sergeants, and 4 corporals for 60 enlisted Indian scouts.

481. The number of Indian scouts allowed to military departments will be announced from time to time in orders from the War Department.

482. The enlistment and reenlistment of Indian scouts will be made under the direction of department commanders. The appointment or mustering of farriers or horseshoers on the rolls of Indian scouts is illegal.

483. In all cases of enlistment of Indians the full Indian name, and also the English interpretation of the same, will be inserted in the enlistment papers and in all subsequent returns and reports concerning them.

ARTICLE XLVII.

EMPLOYMENT OF TROOPS IN THE ENFORCEMENT OF THE LAWS.

484. It is unlawful to employ any part of the Army of the United States, as a posse comitatus or otherwise, for the purpose of executing the laws, except in such cases and under such circumstances as such employment of said force may be expressly authorized by the Constitution or by act of Congress; and any person wilfully violating this provision will be deemed guilty of a misdemeanor, and, on conviction thereof, will be punishable by a fine not exceeding \$10,000 or imprisonment not exceeding two years, or by both such fine and imprisonment.

485. The provisions of the Constitution and of acts of Congress authorizing the employment of the military forces for the purpose of executing the laws, are as follows:

ARTICLE IV OF THE CONSTITUTION.

SEC. 4. The United States shall guarantee to every State in this Union a republican form of government, and shall protect each of them against invasion; and on application of the legislature, or of the executive (when the legislature can not be convened), against domestic violence.

REVISED STATUTES OF THE UNITED STATES.

CIVIL RIGHTS.

SEC. 1984. The commissioners authorized to be appointed by the preceding section [section 1983] are empowered, within their respective counties, to appoint, in writing,

under their hands, one or more suitable persons, from time to time, who shall execute all such warrants or other process as the commissioners may issue in the lawful performance of their duties, and the persons so appointed shall have authority to summon and call to their aid the bystanders or posse comitatus of the proper county, or such portion of the land or naval forces of the United States, or of the militia, as may be necessary to the performance of the duty with which they are charged; and such warrants shall run and be executed anywhere in the State or Territory within which they are issued.

SEC. 1989. It shall be lawful for the President of the United States, or such person as he may empower for that purpose, to employ such part of the land or naval forces of the United States, or of the militia, as may be necessary to aid in the execution of judicial process issued under any of the preceding provisions, or as shall be necessary to prevent the violation and enforce the due execution of the provisions of this title.

SEC. 1991. Every person in the military or civil service in the Territory of New Mexico shall aid in the enforcement of the preceding section [abolishing peonage.]

INDIANS.

SEC. 2118. Every person who makes a settlement on any lands belonging, secured, or granted by treaty with the United States to any Indian tribe, or surveys or attempts to survey such lands, or to designate any of the boundaries by marking trees, or otherwise, is liable to a penalty of one thousand dollars. The President may, moreover, take such measures and employ such military force as [he] may judge necessary to remove any such person from the lands.

SEC. 2147. The superintendent of Indian affairs, and the Indian agents and subagents shall have authority to remove from the Indian country all persons found therein contrary to law; and the President is authorized to direct the military force to be employed in such removal.

SEC. 2150. The military forces of the United States may be employed in such manner and under such regulations as the President may direct—

First. In the apprehension of every person who may be in the Indian country in violation of law; and in conveying him immediately from the Indian country, by the nearest convenient and safe route, to the civil authority of the Territory or judicial district in which such person shall be found, to be proceeded against in due course of law;

Second. In the examination and seizure of stores, packages, and boats, authorized by law:

Third. In preventing the introduction of persons and property into the Indian country contrary to law; which persons and property shall be proceeded against according to law;

Fourth. And also in destroying and breaking up any distillery for manufacturing ardent spirits set up or continued within the Indian country.

SEC. 2151. No person apprehended by military force under the preceding section shall be detained longer than five days after arrest and before removal. All officers and soldiers who may have any such person in custody shall treat him with all the humanity which the circumstances will permit.

SEC. 2152. The superintendents, agents, and subagents shall endeavor to procure the arrest and trial of all Indians accused of committing any crime, offense, or misdemeanor, and of all other persons who may have committed crimes or offenses within any State or Territory, and have fled into the Indian country, either by demanding the same of the chiefs of the proper tribe, or by such other means as the President may authorize. The President may direct the military force of the United States to be employed in the apprehension of such Indians, and also in preventing or terminating hostilities between any of the Indian tribes.

THE PUBLIC LANDS.

SEC. 2460. The President is authorized to employ so much of the land and naval forces of the United States as may be necessary effectually to prevent the felling, cutting down, or other destruction of the timber of the United States in Florida, and to prevent the transportation or carrying away any such timber as may be already felled or cut down; and to take such other and further measures as may be deemed advisable for the preservation of the timber of the United States in Florida.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That if any person or persons shall, after the passing of this act, take possession of, or make a settlement on any lands ceded or secured to the United States, by any treaty made with a foreign nation, or by a cession from any State to the United States, which lands shall not have been previously sold, ceded, or leased by the United States, or the claim to which lands, by such person or persons, shall not have been previously recognized and confirmed by the United States: or if any person or persons shall cause such lands to be thus occupied, taken possession of, or settled;

or shall survey, or attempt to survey, or cause to be surveyed, any such lands; or designate any boundaries thereon, by marking trees, or otherwise, until thereto duly authorized by law; such offender or offenders shall forfeit all his or their right, title, and claim, if any he hath, or they have, of whatsoever nature or kind the same shall or may be, to the lands aforesaid, which he or they shall have taken possession of, or settled, or caused to be occupied, taken possession of, or settled, or which he or they shall have surveyed, or attempt to survey, or cause to be surveyed, or the boundaries thereof he or they shall have designated, or cause to be designated, by marking trees or otherwise. And it shall moreover be lawful for the President of the United States to direct the marshal, or officer acting as marshal, in the manner hereinafter directed, and also to take such other measures and to employ such military force as he may judge necessary and proper, to remove from lands ceded, or secured to the United States, by treaty, or cession as aforesaid, any person or persons who shall hereafter take possession of the same, or make or attempt to make a settlement thereon, until thereunto authorized by law. And every right, title, or claim forfeited under this act, shall be taken and deemed to be vested in the United States, without any other or further proceedings: *Provided*, That nothing herein contained shall be construed to affect the right, title, or claim of any person to lands in the territories of Orleans or Louisiana, before the boards of commissioners established by the act, entitled "An act for ascertaining and adjusting the titles and claims to land within the territory of Orleans and the district of Louisiana," shall have made their reports and the decision of Congress been had thereon.

[Section 1 of an act approved March 3, 1807, perpetuated by section 5596, Revised Statutes.]

The Secretary of War, upon the request of the Secretary of the Interior, is hereafter authorized and directed to make the necessary detail of troops to prevent trespassers or intruders from entering the Sequoia National Park, the Yosemite National Park, and the General Grant National Park, respectively, in California, for the purpose of destroying the game or objects of curiosity therein, or for any other purpose prohibited by law or regulation for the government of said reservations, and to remove such persons from said parks if found therein. *Act of June 6, 1900 (31 Stat. L., 618).*

The President is hereby authorized to take such measures as shall be necessary to remove and destroy any unlawful inclosure of any of said [public] lands, and to employ civil or military force as may be necessary for that purpose. *Act of February 25, 1885 (23 Stat. L., 322).*

THE PUBLIC HEALTH.

SEC. 4702. The quarantines and other restraints established by the health laws of any State, respecting any vessels arriving in, or bound to, any port or district thereof, shall be duly observed by the officers of the customs revenue of the United States, by the masters and crews of the several revenue cutters, and by the military officers commanding in any fort or station upon the seacoast; and all such officers of the United States shall faithfully aid in the execution of such quarantines and health laws, according to their respective powers and within their respective precincts, and as they shall be directed, from time to time, by the Secretary of the Treasury. * * *

EXTRADITION.

SEC. 5275. Whenever any person is delivered by any foreign government to an agent of the United States, for the purpose of being brought within the United States and tried for any crime of which he is duly accused, the President shall have power to take all necessary measures for the transportation and safe-keeping of such accused person, and for his security against lawless violence, until the final conclusion of his trial for the crimes or offenses specified in the warrant of extradition, and until his final discharge from custody or imprisonment for or on account of such crimes or offenses, and for a reasonable time thereafter, and may employ such portion of the land or naval forces of the United States, or of the militia thereof, as may be necessary for the safe-keeping and protection of the accused.

OFFENSES AGAINST NEUTRALITY.

SEC. 13. Whoever, within the territory or jurisdiction of the United States, begins, or sets on foot, or provides or prepares the means for, any military expedition or enterprise, to be carried on from thence against the territory or dominions of any foreign prince or state, or of any colony, district, or people, with whom the United States are at peace, shall be fined not more than three thousand dollars, and imprisoned not more than three years. *Act of March 4, 1909 (35 Stat. L., 1090).*

SEC. 14. * * * In every case in which a vessel is fitted out and armed, or attempted to be fitted out and armed, or in which the force of any vessel of war, cruiser, or other armed vessel is increased or augmented, or in which any military expedition or enterprise

is begun or set on foot, contrary to the provisions and prohibitions of this chapter; and in every case of the capture of a vessel within the jurisdiction or protection of the United States as before defined; and in every case in which any process issuing out of any court of the United States is disobeyed or resisted by any person having the custody of any vessel of war, cruiser, or other armed vessel of any foreign prince or state, or of any colony, district, or people, or of any subjects or citizens of any foreign prince or state, or of any colony, district, or people, it shall be lawful for the President, or such other person as he shall have empowered for that purpose, to employ such part of the land or naval forces of the United States, or of the militia thereof, for the purpose of taking possession of and detaining any such vessel, with her prizes, if any, in order to enforce the execution of the prohibitions and penalties of this chapter, and the restoring of such prizes in the cases in which restoration shall be adjudged; and also for the purpose of preventing the carrying on of any such expedition or enterprise from the territory or jurisdiction of the United States against the territory or dominion of any foreign prince or state, or of any colony, district, or people with whom the United States are at peace. *Act of March 4, 1809 (35 Stat. L., 1090, 1091).*

Sec. 15. It shall be lawful for the President, or such person as he shall empower for that purpose, to employ such part of the land or naval forces of the United States, or of the militia thereof, as shall be necessary to compel any foreign vessel to depart the United States in all cases in which, by the laws of nations or the treaties of the United States, she ought not to remain within the United States. *Act of March 4, 1809 (35 Stat. L., 1091).*

INSURRECTION.

Sec. 5297. In case of an insurrection in any State against the government thereof, it shall be lawful for the President, on application of the legislature of such State, or of the executive, when the legislature can not be convened, to call forth such number of the militia of any other State or States, which may be applied for, as he deems sufficient to suppress such insurrection; or, on like application, to employ, for the same purposes, such part of the land or naval forces of the United States as he deems necessary.

Sec. 5298. Whenever, by reason of unlawful obstructions, combinations, or assemblages of persons, or rebellion against the authority of the Government of the United States, it shall become impracticable, in the judgment of the President, to enforce, by the ordinary course of judicial proceedings, the laws of the United States within any State or Territory, it shall be lawful for the President to call forth the militia of any or all the States, and to employ such parts of the land and naval forces of the United States as he may deem necessary to enforce the faithful execution of the laws of the United States, or to suppress such rebellion, in whatever State or Territory thereof the laws of the United States may be forcibly opposed, or the execution thereof forcibly obstructed.

Sec. 5299. Whenever insurrection, domestic violence, unlawful combinations, or conspiracies in any State so obstructs or hinders the execution of the laws thereof, and of the United States, as to deprive any portion or class of the people of such State of any of the rights, privileges, or immunities, or protection named in the Constitution and secured by the laws for the protection of such rights, privileges, or immunities, and the constituted authorities of such State are unable to protect, or, from any cause, fail in or refuse protection of the people in such rights, such facts shall be deemed a denial by such State of the equal protection of the laws to which they are entitled under the Constitution of the United States; and in all such cases, or whenever any such insurrection, violence, unlawful combination, or conspiracy, opposes or obstructs the laws of the United States, or the due execution thereof, or impedes or obstructs the due course of justice under the same, it shall be lawful for the President, and it shall be his duty, to take such measures, by the employment of the militia or the land and naval forces of the United States, or of either, or by other means, as he may deem necessary, for the suppression of such insurrection, domestic violence, or combinations.

Among the laws to be enforced under sections 5298 and 5299 are the following:

(1) Section 201, act of March 4, 1809 (35 Stat. L., 1127), which prohibits the obstructing or retarding the passage of the mail, and all other laws relating to the carrying of the mails.

(2) The following sections of an act approved July 2, 1890, entitled:

AN ACT to protect trade and commerce against unlawful restraints and monopolies.

Sec. 1. Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is hereby declared to be illegal. Every person who shall make any such contract or engage in any such combination or conspiracy shall be deemed guilty of a misdemeanor and, on

conviction thereof, shall be punished by fine not exceeding five thousand dollars or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

SEC. 8. Every contract, combination in form of trust or otherwise, or conspiracy, in restraint of trade or commerce in any Territory of the United States or of the District of Columbia, or in restraint of trade or commerce between any such Territory and another, or between any such Territory or Territories and any State or States or the District of Columbia, or with foreign nations, or between the District of Columbia and any State or States or foreign nations, is hereby declared illegal. Every person who shall make any such contract or engage in any such combination or conspiracy shall be deemed guilty of a misdemeanor and, on conviction thereof, shall be punished by fine not exceeding five thousand dollars or by imprisonment not exceeding one year, or by both said punishments, in the discretion of the court.

(3) The following section of an act approved July 2, 1864, entitled :

AN ACT granting lands to aid in the construction of a railroad and telegraph line from Lake Superior to Puget Sound, on the Pacific coast, by the northern route.

SEC. 11. *And be it further enacted*, That said Northern Pacific Railroad, or any part thereof, shall be a post route and a military road, subject to the use of the United States, for postal, military, naval, and all other Government service, and also subject to such regulations as Congress may impose restricting the charges for such Government transportation.

(4) The following section of an act approved July 1, 1862, entitled :

AN ACT to aid in the construction of a railroad and telegraph line from the Missouri River to the Pacific Ocean, and to secure to the Government the use of the same for postal, military, and other purposes.

[The Union and Central Pacific Railway Companies.]

SEC. 6. *And be it further enacted*, That the grants aforesaid are made upon condition that said company shall pay said bonds at maturity, and shall keep said railroad and telegraph line in repair and use, and shall at all times transmit despatches over said telegraph line, and transport mails, troops, and munitions of war, supplies, and public stores upon said railroad for the Government, whenever required to do so by any department thereof, and that the Government shall at all times have the preference in the use of the same for all the purposes aforesaid. * * *

(5) The following sections of an act approved July 27, 1866, entitled :

AN ACT granting lands to aid in the construction of a railroad and telegraph line from the States of Missouri and Arkansas to the Pacific coast.

SEC. 11. *And be it further enacted*, That said Atlantic and Pacific Railroad, or any part thereof, shall be a post route and military road, subject to the use of the United States for postal, military, naval, and all other Government service, and also subject to such regulations as Congress may impose restricting the charges for such Government transportation.

SEC. 18. *Be it further enacted*, That the Southern Pacific Railroad, a company incorporated under the laws of the State of California, is hereby authorized to connect with the said Atlantic and Pacific Railroad, formed under this act, at such point near the boundary line of the State of California, as they shall deem most suitable for a railroad line to San Francisco, and shall have a uniform gauge and rate of freight or fare with said road; and in consideration thereof, to aid in its construction, shall have similar grants of land, subject to all the conditions and limitations herein provided, and shall be required to construct its road on the like regulations, as to time and manner, with the Atlantic and Pacific Railroad herein provided for.

SEC. 5316. It shall be unlawful to take any vessel or cargo, detained under the preceding section [section 5315] from the custody of the proper officers of the customs, unless by process of some court of the United States; and in case of any attempt otherwise to take such vessel or cargo by any force, or combination, or assemblage of persons, too great to be overcome by the officers of the customs, the President, or such person as he shall have empowered for that purpose, may employ such part of the Army or Navy or militia of the United States, or such force of citizen volunteers as may be necessary, to prevent the removal of such vessel or cargo, and to protect the officers of the customs in retaining the custody thereof.

GUANO ISLANDS.

SEC. 5577. The President is authorized, at his discretion, to employ the land and naval forces of the United States to protect the rights of the discoverer [of a guano island] or of his widow, heir, executor, administrator, or assigns.

HAWAII.

SEC. 67. That the governor shall be responsible for the faithful execution of the laws of the United States and of the Territory of Hawaii within the said Territory, and whenever it becomes necessary he may call upon the commanders of the military and naval forces of the United States in the Territory of Hawaii, or summon the posse comitatus, or call out the militia of the Territory to prevent or suppress lawless violence, invasion, insurrection, or rebellion in said Territory, and he may, in case of rebellion or invasion, or imminent danger thereof, when the public safety requires it, suspend the privilege of the writ of habeas corpus, or place the Territory, or any part thereof, under martial law until communication can be had with the President and his decision thereon made known. *Act of April 30, 1900 (31 Stat. L., 153).*

ALASKA.

SEC. 29. An act entitled "An act to define and punish crimes in the District of Alaska, and to provide a code of criminal procedure for the District," approved March third, eighteen hundred and ninety-nine, be, and is, amended, by adding to section three hundred and sixty-three thereof the following: "*Provided, [That] section fifteen of an act entitled 'An act making appropriations for the support of the Army for the fiscal year ending June thirtieth, eighteen hundred and seventy-nine, and for other purposes,' approved June eighteenth, eighteen hundred and seventy-eight, shall not be construed to apply to the District of Alaska.*" *Act of June 6, 1900 (31 Stat. L., 330)*

Section 15 of the act of June 18, 1878 (20 Stat. L., 152), above referred to, reads as follows:

From and after the passage of this act it shall not be lawful to employ any part of the Army of the United States, as a posse comitatus, or otherwise, for the purpose of executing the laws, except in such cases and under such circumstances as such employment of said force may be expressly authorized by the Constitution or by act of Congress; and no money appropriated by this act shall be used to pay any of the expenses incurred in the employment of any troops in violation of this section.

486. Officers of the Army will not permit troops under their command to be used to aid the civil authorities as a posse comitatus, or in execution of the laws, except as provided in the foregoing paragraph.

487. If time will admit, applications for the use of troops for such purposes must be forwarded, with statements of all material facts, for the consideration and action of the President; but in case of sudden and unexpected invasion, insurrection, or riot, endangering the public property of the United States, or in case of attempted or threatened robbery or interruption of the United States mails, or other equivalent emergency so imminent as to render it dangerous to await instructions requested through the speediest means of communication, an officer of the Army may take such action before the receipt of instructions as the circumstances of the case and the law under which he is acting may justify, and will promptly report his action and the circumstances requiring it to The Adjutant General of the Army, by telegraph, if possible, for the information of the President.

488. In the enforcement of the laws troops are employed as a part of the military power of the United States and act under the orders of the President as Commander in Chief. They can not be directed to act under the orders of any civil officer. The commanding officers of troops so employed are directly responsible to their military superiors. Any unlawful or unauthorized act on their part would not be excusable on the ground of an order or request received by them from a marshal or any other civil officer.

489. Troops called into action against a mob forcibly resisting or obstructing the execution of the laws of the United States or attempting to destroy property belonging to or under the protection of the United States are governed by the general regulations of the Army and apply military tactics in respect to the manner in which they shall act to accomplish the desired end. It is purely a tactical question in what manner they shall use the weapons with which they are armed—whether by fire of musketry and artillery or by the use of the bayonet and saber, or by both, and at what stage of the operations each or either mode of attack shall be employed. This tactical question will be decided by the immediate commander of the troops, according to his judgment of the situation. The fire of troops should be withheld until timely warning has been given to the innocent who may be mingled with the mob. Troops must never fire into a crowd unless ordered by their commanding officer, except that single selected sharpshooters may shoot down individual rioters who have fired upon or thrown missiles at the troops. As a general rule the bayonet alone should be used against mixed crowds in the first stages of a revolt. But as soon as sufficient warning has been given to enable the innocent to separate themselves from the guilty, the action of the troops should be governed solely by the tactical considerations involved in the duty they are ordered to perform. They should make their blows so effective as to promptly suppress all resistance to lawful authority, and should stop the destruction of life the moment lawless resistance has ceased. Punishment belongs, not to the troops, but to the courts of justice.

ARTICLE XLVIII.

CEMETERIES.

NATIONAL CEMETERIES.

490. National cemeteries, and the records pertaining thereto, are under the charge of the Quartermaster General. All correspondence between his office and the officers of his department in charge thereof, and the civil engineers and agents especially employed in connection therewith will be direct, and the monthly reports of superintendents will be forwarded directly to him. (C. A. R. No. 10.)

BATTLE-GROUND CEMETERIES.

491. In order to secure, as far as possible, the decent interment of those who fall in battle and to establish beyond doubt their identity should it become desirable subsequently to disinter the remains for removal to a national or post cemetery, or for shipment home, it is the duty of commanding generals to set apart a suitable spot near every battlefield, and to cause the remains of the killed to be interred therein and, when practicable, to cause to be placed in the coffin or grave a glass bottle, corked and sealed, containing a slip of paper on which shall be written the name of the decedent, giving the cause and date of death and burial, and in the case of an officer or enlisted man, his rank, company, regiment, or corps, and bearing the signature of the surgeon or officer in charge of the interment. It is the duty of the commanding officer to cause to be made a sketch as accurate as the means at hand will permit of the burying places of those falling in battle.

492. Where conditions make it possible, the company commander will be held responsible that every grave of the men of his company who die or are killed on the field is carefully marked with a headboard, or with such other marker as may be authorized for use on the field or in the insular possessions,

giving the name, rank, and organization of the decedent. He will report, through the proper military channels, the date and cause of death, which reports will include a sketch showing the location of the grave, and how marked, in such manner as will enable the same to be readily found by a disinterring corps. When a soldier or civilian employee dies in hospital, the surgeon will be held responsible for similar action and report.

POST CEMETERIES.

493. The commanding officer of every post situated on public lands of the United States will see that a suitable portion of such land is, when practicable, set apart and properly maintained for the burial of deceased officers and soldiers and their families, and of Government employees.

494. Post cemeteries will be suitably inclosed with a wall or fence of the best material available, and will be maintained by the labor of the garrison. Materials for the construction and repair of fences and headboards will be furnished by the Quartermaster Corps.

495. At each grave will be placed a headboard, plainly marked with a number and with the name, company, regiment, and date of death of the decedent, the number to correspond to the number in the record of interments. Headboards will be of well-seasoned wood, painted with three coats of white paint, 4 feet long, 10 inches wide, 1½ inches thick, and stand 2 feet out of the ground; the inscriptions in black letters 1 inch long.

496. Walks will be 4 feet wide, neatly rounded, and properly drained and graveled when the material is at hand. When practicable, good grass sod should cover the rest of the ground, including the graves, and native trees and shrubs will be preserved or planted for ornament and shade.

497. A record of interments will be kept by the quartermaster, which will be turned over by him, when relieved, to his successor, or transmitted to the Quartermaster General if the post be discontinued. (*C. A. R., No. 10.*)

498. A report containing the names of persons buried during the calendar year, giving in each case number and locality of grave, date of death and burial, and in case of an officer or enlisted man, his rank, company, and regiment or corps, will be forwarded to the Quartermaster General. (*C. A. R., No. 10.*)

ARTICLE XLIX.

ADVERTISING AND PRINTING.

NEWSPAPER ADVERTISING.

No advertisement, notice, or proposal for any executive department of the Government, or for any bureau thereof, or for any office therewith connected, shall be published in any newspaper whatever, except in pursuance of a written authority for such publication from the head of such department; and no bill for any such advertising, or publication, shall be paid, unless there be presented, with such bill, a copy of such written authority. (*Sec. 888, Revised Statutes.*)

499. No official advertisement will be published in any newspaper except under prior written authority, special or general, from the Secretary of War. Special authority authorizes the publication of a given advertisement a specified number of times in a designated newspaper or newspapers. General authority authorizes the publication, during a fiscal year, in designated newspapers, of such advertisements for proposals as may be required by the duties of officers engaged in making frequent purchases or contracts. All authorities to advertise will be granted to the office, not to the officer. In making application for au-

thority to advertise, officers will specify the newspapers in which it is deemed advantageous to advertise. Due economy both as to the number of newspapers and as to the number of insertions will be observed by all officers, whether advertising under special or general authority, no greater number being used in any case than may be necessary to give proper and sufficient public notice.

500. Requests for authority to advertise will be made upon the prescribed blank forms, except that in case of great emergency, the nature of which will be stated, authority to advertise may be requested by telegraph.

501. When necessary to readvertise, owing to rejection of proposals received in accordance with a special authority to advertise, the approval of the Secretary of War must be obtained, as in the first instance; the approval of the original authority to advertise does not confer authority to readvertise.

502. Ordinarily advertisements will be given six insertions in daily, or four in weekly, papers. When more than 10 days are to intervene between the date of the first publication and the date of opening, those in daily newspapers inviting proposals will at once be given four consecutive insertions, and immediately before the date of opening two consecutive insertions. In case of emergency, advertisements may be given one or more insertions, as time and circumstances permit.

503. Advertisements in newspapers announcing sales of property or inviting proposals for furnishing labor or supplies will, as a rule, allow 30 days to intervene between date of first publication and date of sale or opening of bids. If necessity require, a shorter period may be allowed, but no period of less than 10 days will be designated except in case of emergency. The officer who is accountable for property which is to be advertised for sale, or who is authorized to invite proposals for furnishing labor or supplies, is the one upon whom devolves the duty of determining whether an emergency exists warranting the designation of a period less than 10 days for the publication of the advertisement. No officer will authorize the publication of an advertisement beyond the morning of the day on which the sale or opening of bids is to occur, and no payments will be made for continuing such publication beyond the period authorized.

504. Officers will observe conciseness in wording advertisements, and the matter, including the heading, must be set up close in one paragraph, without dash or blank lines, leading or display, and in type no larger than that ordinarily used in advertisements. Dates should be omitted from the headings. It is not necessary to publish the conditions usually imposed upon bidders and contractors; a statement that they will be furnished on application will suffice. Names or titles of signing officers should not appear in advertisements. The following is a sample of advertisement set up in accordance with these requirements:

PROPOSALS FOR FIRE HOSE.—Office of Depot Quartermaster, Washington, D. C.—Sealed proposals will be received here until 11 a. m., Dec. 28, 1914, and then opened, for furnishing 700 feet cotton-covered rubber-lined fire hose, 2-inch, in 50-foot sections, with couplings. Further information on application.

Any unnecessary expense to the Government resulting from failure to observe the requirements of this paragraph may be made a charge against the pay of the officer responsible therefor.

Advertisements for quartermaster's supplies will conform to the requirements of section 3716, Revised Statutes. (C. A. R., No. 24.)

505. Newspapers officially designated for publishing War Department and Army advertisements are required to forward to the Assistant and Chief Clerk of the War Department sworn statements of the commercial rates charged by them to individuals, with their usual discounts, and of any changes made in the

same, except that in cases originating in the jurisdiction of a department commander such sworn statements will be forwarded to the department commander concerned. These statements will give the size of type used in the advertisements and show whether the charges are made by the inch, line, square, or folio, the rate for the first and subsequent insertions, and if by the square or folio, the number of lines or words constituting a square or folio. Fractional parts of an inch, square, or folio will be paid for at proportionate rates. Line rates are preferred, as they offer fewer opportunities for mistakes and misunderstandings in the settlement of bills.

506. Vouchers covering bills for advertising in newspapers must, prior to payment, be submitted to the Assistant and Chief Clerk of the War Department, except that in cases originating in the jurisdiction of a department commander they will be submitted to the department commander for his approval before payment. They will be prepared upon the prescribed forms and forwarded in accordance with the instructions printed thereon.

507. Accounts presented to officers for advertisements which they did not order, but which are shown to have been ordered by the Secretary of War to be published in the newspaper presenting the accounts for payment, will be prepared upon the official forms and transmitted to the Assistant and Chief Clerk of the War Department in the same manner as other accounts for advertising, except that in cases originating in the jurisdiction of a department commander such accounts will be forwarded to the department commander concerned. The following form of certificate will be used in such cases:

I certify that the annexed advertisement was cut from the newspaper named in the above account, and that it was inserted in that newspaper for the period stated.

Claims of publishers of official newspapers for advertisements copied from other papers without authority from the Secretary of War will not be paid.

508. In the event of an officer's death or removal, the outstanding bills for advertisements pertaining to his office will be prepared, certified, and forwarded by his successor, who is authorized to vary the form to correspond to the facts. Officers changing stations will leave with their successors complete records relative to unsettled accounts for advertising.

509. The heads of bureaus of the War Department and department commanders will furnish officers charged with the publication of advertisements the necessary blanks for compliance with these regulations.

JOB PRINTING.

510. The printing required at the several department, brigade, and district headquarters will be executed under contract, 30 days' notice, when practicable, being given of the opening of proposals. Bids will be invited and contracts made in accordance with the form of proposal and circular of instructions furnished by the Quartermaster General. The period of the contract will not extend beyond the end of the fiscal year in which made, and the contract will be submitted to the department commander concerned for the scrutiny required by paragraph 751. (*C. A. R., Nos. 10 and 41.*)

511. Vouchers covering bills for printing for department, brigade, and district headquarters and for printing done in foreign countries near the Philippine Islands will, prior to payment, be submitted for approval to the department commander concerned. They will be made out on the prescribed forms and forwarded in accordance with instructions printed thereon.

512. Printed letter and note heads for department, brigade, and district headquarters will contain the designation of the headquarters; the office to which the correspondence pertains; post-office address; blank date; on left mar-

gin the words "From," "To," and "Subject"; margin marks; and in the upper left corner a brief request for reference to the file number in making reply. Those for posts, regiments, and schools of instruction will contain the designation of the post, regiment, or school; post-office address; blank date; on left margin the words "From," "To," and "Subject"; margin marks; and in the upper left corner a brief request for reference to the file number in making reply. Names of officers or other persons, telephone numbers, or any other printing except such as described above, will not be printed on letter or note heads for use in any branch of the military service without prior authority therefor in writing from the Secretary of War.

513. Necessary printing not covered by contracts will, as far as practicable, be secured after competition, or under written proposal and acceptance, awards being made to the lowest responsible bidders. All vouchers covering the service will, prior to payment, be submitted to the Assistant and Chief Clerk of the War Department, except that in cases originating in the jurisdiction of a department commander they will be forwarded to the department commander concerned for approval, accompanied by the original proposal and acceptance. (*O. A. R., No. 41.*)

514. Officers, as a rule, will obtain all blank forms, blank books, etc., by requisition upon the heads of the proper staff departments. Department commanders will furnish to officers in their jurisdiction, charged with the securing of job printing, the necessary blanks for compliance with these regulations.

ARTICLE L.

PURCHASE OF SUPPLIES AND ENGAGEMENT OF SERVICES.

GENERAL PROVISIONS.

515. No contract or purchase on behalf of the United States will be made unless it is authorized by law, or is made under an appropriation adequate to its fulfillment, except for clothing, subsistence, forage, fuel, quarters, transportation, or medical and hospital supplies, which, however, will not exceed the necessities of the current year. No officer of the United States will accept voluntary service for the Government or employ personal service in excess of that authorized by law, except in case of sudden emergency involving loss of human life or the destruction of property.

516. The labor of troops or Government employees, or Government means of transportation, will not be used to enable contractors to fulfill contracts, except in cases of manifest necessity, and then only on the written authority of the proper commander. Full deduction will be made for Government services when rendered.

517. Articles of foreign production or manufacture for the service of the United States will not be purchased abroad for importation without special authority from the Secretary of War.

518. Articles of domestic production or manufacture will be preferred to those of foreign origin, cost and quality being equal.

519. Supplies and services not personal, required for the use of the Army, will be procured where they can be purchased the cheapest, quality and cost of transportation and the interests of the Government considered. Except as indicated in paragraph 551 and in the special regulations of the several staff departments, they will be procured only after public notice inviting proposals for the same.

Whoever works personally as a servant of the Government renders personal service under the meaning of section 3709 of the Revised Statutes. Personal services may be either skilled or unskilled; may be rendered pursuant to informal agreement or contract, by individuals or firms, or their agents; but all consideration of material is excluded.

520. An officer charged with the duty of making a contract or purchase is responsible under the laws and regulations for his action. Permission or orders to make a contract or purchase without inviting competition will not justify the procedure, and will not be given.

521. Officers or agents in the military service will not purchase supplies for the Government from any other person who sustains, at the time, an active relation to military or civil administration under the War Department, nor contract with any such person to furnish supplies or service to the Government, except military publications and maps approved by the War Department for the official use of the Army and the National Guard, nor make any Government purchase or contract in which such person shall be admitted to share or receive benefit. (*C. A. R., No. 51.*)

ADVERTISING FOR PROPOSALS.

522. In cases of large purchases a period of 30 or more days should intervene between date of first publication and of opening proposals. In small purchases from 7 to 30 days should intervene, and when the public exigency (constituting an emergency) does not permit 7 days to intervene, the period should be for as many days as the circumstances will permit. The existence of such emergency is to be determined by the officer upon whom the duty of making the purchase devolves. Advertising for proposals by newspapers, in accordance with Article XLIX, will be adopted when time permits, and the quantity or value of the purchase, or character of the services, in the opinion of the purchasing officer, will justify the expense. In such cases paragraph 503 governs as to the number of days to intervene between the first publication and the date of opening proposals. When notice of less than 30 days is given, advertising by circulars (sent to principal dealers in the localities where the supplies or services are desired, and posted in public places) is permissible. A purchasing officer may advertise by newspapers and circulars at the same time.

523. When advertisements or specifications thereunder do not announce fixed standards for articles required, they should be so worded as to permit bids to be considered item by item and awards to be made for the most suitable articles of each kind offered.

524. Whenever it is intended to require that guaranties or certified checks shall accompany proposals, that fact, the amount in which the guarantors are to justify, or, if certified checks are substituted for the guaranties, the amount required and the periods to be allowed after the award for the execution of contract papers and bonds will be stated in the advertisement or specifications.

525. Advertisements inviting proposals will ordinarily be issued by the officer who is to make the contract or purchase; in special cases, if competent authority so direct, they may be issued by any other officer.

526. A copy of each advertisement and specification will be promptly forwarded by the officer issuing it directly to the proper bureau of the War Department, together with all information required for a complete understanding of the necessity for the proposed contract or purchase, and in case of notice by circular there will be indorsed on it the names of persons to whom sent, and if issued for a period of less than seven days the reason why a longer period was

not allowed will be stated. The forwarding of these notices at time of issuing may be dispensed with at the discretion of the chief of bureau to which the proposed contract or purchase pertains.

PROPOSALS.

527. Information in regard to supplies or services for which proposals have been invited will be furnished, on application, to all persons desiring it, but no person who sustains, at the time, an active relation to military or civil administration under the War Department will render assistance in the preparation of proposals. (*C. A. R., No. 51*)

528. Bidders for supplies will be informed of the kind, quantity, and quality of articles required, the place, time, and rate of delivery, and conditions of payment. They will be furnished with such specifications as have been adopted, and will be permitted to examine the standard samples at the places where deposited.

529. Bidders for labor will be informed of the nature and extent of the services required, where they are to be performed, and the time allowed for performance. They will be furnished with or allowed to examine plans and specifications of all works upon which they desire to bid, and in general will be furnished with any information needed to enable them to act understandingly.

530. No person will be informed, directly or indirectly, of the name of anyone intending to bid or not to bid, or to whom information in respect to proposals has been given.

531. Proposals should be prepared in duplicate, or in triplicate if required, in strict accordance with the requirements of the advertisement or specifications. They should make specific reference to the advertisement and to any plans or specifications which may have been furnished. Each proposal should give the place of residence and post-office address of the bidder, with county, State, or Territory, and should be signed by the bidder with his usual signature in full.

532. A proposal by a person who affixes to his signature the word "president," "secretary," "agent," or other designation, without disclosing his principal, is the proposal of the individual. Proposals by a corporation should be signed with the name of the corporation, followed by the signature of the president, secretary, or other person authorized to bind it in the matter, who should file evidence of his authority to do so. Proposals by a firm should be signed with the firm name by one of the members of the firm. If the signature to a proposal is that of an officer, attorney, or agent of the corporation, or of an attorney or agent of a firm or individual, and his authority to act on behalf of his principal is not a matter of general notoriety in the locality where the proposals are opened, the officer who opens such proposals should, before considering the same, satisfy himself that the signer is vested with sufficient authority to represent his principal in the transaction.

533. In proposals numbers and prices will be written in words as well as expressed in figures; but when a great variety of articles, such as stationery, hardware, etc., is required, quantities and prices may, if the amounts involved are inconsiderable and the forms of proposals so indicate, be expressed in figures only. It will be sufficient if specifications are referred to and are declared to form part of the proposal.

534. Erasures or interlineations should be explained by the bidder, in the proposal, over his signature.

535. Guaranties, signed by two responsible parties, or by a qualified surety company, will be required to accompany proposals whenever, in the opinion of,

the officer authorized to make the contract, they are necessary to protect the public interest, and when so required, no proposal unaccompanied by a guaranty, made in manner and form as directed in the advertisement or specifications, will be considered. At the option of bidders certified checks for the amount of the guaranty required may be received in place of the written guaranty. These checks will be kept in a secure place, and will be returned to bidders by the purchasing officer when no longer required to protect the interests of the Government.

536. The guaranty will be in duplicate, or in triplicate if required, and will be made out and executed with the necessary justification, in accordance with blank forms furnished by chiefs of bureaus. The certificate of sufficiency of guarantors will be executed in the manner prescribed in paragraph 578.

537. Proposals, with their guaranties, will be securely sealed in suitable envelopes indorsed and addressed as required by the advertisement, and must be in the possession of the officer addressed before the hour appointed for the opening. No responsibility will attach to an officer for the premature opening of any proposal not so indorsed as to clearly show its character.

538. When an advertisement calls for proposals to furnish labor or supplies at more than one place, a separate proposal will be made for performance at each place, but all may be submitted in the same envelope.

539. Proposals received prior to the time of opening will be securely kept. The officer whose duty it is to open them will decide when that time has arrived. No proposal received thereafter will be considered, except that when a proposal arrives by mail after the time fixed for the opening, but before the award is made, and it is clearly shown that the nonarrival on time was due solely to delay in the mails for which the bidder was not responsible, such proposal will be received and considered.

540. Before the time for opening any bidder may, without prejudice, withdraw from competition by giving written notice of his decision to the officer holding his bid, and when his bid is reached at the opening it will be returned to him or his authorized agent unread.

541. Proposals will be opened and read aloud at the time and place appointed for the opening (bidders having the right to be present), and each proposal will then and there be numbered and entered on an abstract, the articles being entered, after the reading of all proposals, and with the least practicable delay, in the order in which they are to appear on the returns. Articles to be procured by contract will be abstracted separately from those to be procured on written acceptance. If the number of proposals is large, those relating to specific articles or classes of articles may be entered on separate abstracts. The number of each proposal, with the quantities and prices of articles offered and dates of delivery, will appear in the proper columns, and a copy of the advertisement or notice under which the proposals are received, with a copy of the specifications, if any, will be attached to the upper left-hand corner of the abstract. When two or more sheets are used for the abstract, they will be properly fastened together and paged on the upper right-hand corner.

542. Proposals will be separately numbered as vouchers to the abstract. They will not be fastened together nor to contracts, except to the copy required to be sent to the Returns Office of the Department of the Interior. (*C. A. R., No. 41.*)

543. When proposals are received at a post, unless by an officer authorized to make the award, as in cases involving small expenditures, they and the abstract will be forwarded to department headquarters, with the recommendations of the receiving officer and the post commander as to the person to whom the award should be made. When a purchasing officer, acting under the direct

supervision of a chief of bureau, has invited and received proposals, he will make the award and execute the necessary papers, unless otherwise directed by the chief of bureau.

AWARD.

544. When proposals for supplies for the general service of a department are received at its headquarters, the chief officer of that branch of the staff to which they pertain will submit them to the department commander, and, under his supervision, will make the award and execute the necessary papers, unless under existing orders the action of higher authority is necessary.

545. Except in rare cases, when the United States elects to exercise the right to reject proposals, awards will be made to the lowest responsible bidder, provided that his bid is reasonable and that it is in the interest of the Government to accept it.

546. Slight failures on the part of a bidder to comply strictly with the terms of an advertisement should not necessarily lead to the rejection of his bid, but the interests of the Government will be fully considered in making the award.

547. When no guaranty is required, bidders must, if called upon by the awarding officer, furnish satisfactory evidence, before the award is made, of their ability to carry their proposals into effect.

548. The accepted quantity and price will be noted on the abstract of proposals in the column of "Remarks," opposite the name of the bidder. If a bid is rejected and one at a higher price accepted, the reason for the rejection will be written in the column of remarks. When contracts are made, the fact will be stated in the abstract.

ABSTRACTS OF PROPOSALS.

549. Abstracts and duplicate numbers of proposals will be forwarded to the proper bureaus of the War Department when specially directed by the heads of such bureaus or required by the regulations thereof.

FORMS OF AGREEMENT.

550. A purchase of supplies or engagement of services may be made:

1. By contract, "reduced to writing and signed by the contracting parties with their names at the end thereof." Agreements of this character only are termed "contracts" in these regulations. This method will, subject to such exceptions as may be authorized by regulations of particular staff departments issued in accordance with law, be used when delivery or performance does not immediately follow an award or bargain, as contemplated by section 2 of this paragraph or by section 1 of paragraph 551.

2. By written proposal and written acceptance, when authorized by the regulations of particular staff departments issued in accordance with law, or when the entire amount of supplies or services reasonably to be anticipated does not exceed \$500 and delivery or performance immediately follows an award or bargain.

3. By less formal agreement, when no formal contract is required under the foregoing exceptions, and the supplies or services have been procured without advertising under circumstances indicated in paragraph 551. (C. A. R., Nos. 30, 41, and 46.)

551. An open-market purchase of supplies or engagement of services is one made without advertising, and is authorized in the following cases:

1. In an emergency, as when the public exigencies require immediate delivery or performance and there is no time to advertise by newspapers, posters, or circulars.

2. When it is impracticable to secure competition.

3. When proposals have been invited and none have been received.

4. When proposals are above the market price or otherwise unreasonable.

5. When exceptional articles of subsistence stores are purchased.

6. When the aggregate amount of supplies or services to be procured does not exceed \$500, as authorized by the act of Congress approved June 12, 1906. (*C. A. R., No. 30.*)

552. Before making a purchase in open market the officer will inform himself concerning prevailing prices by inquiry among principal dealers in his locality.

553. Open-market purchases for the military service on or near an Indian reservation will be made as far as practicable from the Indians, under the conditions set forth in paragraph 478, when fair and reasonable rates, not exceeding the market prices in the locality, can be obtained.

554. Every open-market procurement of supplies or services not personal, from appropriations other than those for rivers and harbors and fortifications under the Engineer Department, exceeding \$100 in amount will be reported on the prescribed blank form, in accordance with instructions thereon, to the proper chief of bureau, who will submit such reports to the Secretary of War.

CONTRACTS.

555. Contracts will be made on forms furnished by the chiefs of bureaus, in cases where such forms are applicable, and those forms will be modified only to such extent as is necessary. When modifications are made they must be fully explained over the signatures of the contracting parties. All conditions of the contract will be stated therein as fully and clearly as possible.

556. Contracts will be made in the name of, and will be signed by, the officer designated by the chief of bureau to which the contracts pertain. They will not be made at posts unless ordered by superior authority, and they will not be so ordered unless the stores or services required, of proper quality or kind, can be procured as cheaply there as elsewhere.

557. Contracts may be made by quartermasters serving under the jurisdiction of department commanders for supplies and services other than personal, where the same have been designated by proper authority to be secured under such contracts. The contracts will be made under the direction and supervision of the department commander, who will scrutinize them carefully as required by paragraph 751, but will not be made subject to formal approval. The authority to make such contracts is subject to the proviso that the apportionments and allotments made for these supplies and services will not be exceeded. (*C. A. R., Nos. 21 and 41.*)

558. Purchasing officers of the several staff corps and departments, who are under the direct supervision of the chiefs of their respective bureaus, are authorized to make contracts for the purchase of supplies and for the engagement of services other than personal, without the approval of the chief of bureau, except in such specific cases as may be designated by the chief of bureau to be made subject to his approval, when such purchase of supplies or engagement of services is properly authorized. (*C. A. R., No. 21*)

559. When a contract is entered into with a partnership, the individual names of the partners should be given in the body of the instrument, with the recitation that they are partners composing a firm, which should be named. The contract may be signed in the name of the partnership by one of the partners, who will append his own signature as one of the firm.

A contract with a partnership doing business in the Philippine Islands through a local representative or agent may be executed in the name of the firm by such local representative or agent, in which case the contracting officer will file with the contract a properly certified copy of the power of attorney showing the authority of such representative or agent, or will certify on the contract that he has satisfied himself of the signer's authority to bind the firm and has waived the requirement as to furnishing evidence of such authority.

560. A contract of a corporation should have the name of the corporation written in the body of the instrument, as one of the parties thereto, and should be signed by the officer or person who has been authorized to contract in its behalf, who should sign the corporate name and his own. The contracting officer, will, in all cases, satisfy himself that the signer has authority to bind the corporation, and will either require from him satisfactory evidence thereof, and file the same with the contract, or will certify on the contract that he has satisfied himself of the signer's authority and has waived this requirement. If evidence be filed with the contract, it should consist of extracts from the articles of incorporation, the by-laws, or the minutes of the board of directors, duly certified by the custodian of such records under the corporate seal (if there be one), showing the signer to be properly vested with authority to bind the corporation.

561. All contracts will be executed in triplicate. One number is for the Auditor for the War Department, one for the head of the bureau to which the contract pertains, and one for the contractor. Two copies will be made, one for the contracting officer, and the other for the Returns Office of the Department of the Interior.

562. The three numbers of the contract will be forwarded to the head of the proper bureau for examination and for approval, if such approval is required. Should any illegality be discovered, it will be submitted to the Secretary of War.

563. The copy of the contract for the Returns Office of the Department of the Interior will be transmitted directly thereto by the officer who signs the contract, as soon as possible after the contract has been made and approved, and within 30 days after approval, together with one original of all bids, offers, and proposals made by persons to obtain the contract, and by a copy of the advertisement; all of which will be fastened together with a ribbon and seal, and numbered in regular order, with the affidavit of the contracting officer appended in the following form:

I do solemnly swear that the copy of contract hereto annexed is an exact copy of a contract made by me personally with _____; that I made the same fairly, without any benefit or advantage to myself, or allowing any such benefit or advantage corruptly to the said _____ or any other person; and that the papers accompanying include all those relating to the said contract, as required by the statute in such case made and provided.

[SEAL.]

Subscribed and duly sworn to before me this — day of —, 19—

When the copy of contract for the Returns Office can not be forwarded within the period of 30 days, as required by the statute, the contracting officer should transmit the same, with an explanation of the causes of delay, directly to the chief of bureau or other officer who approved said contract. This copy will then

be forwarded by such officer to the Returns Office, with a notation of his views as to whether or not the reasons set forth for the delay by the contracting officer are satisfactory.

In the case of contracts that are not subject to approval, copies thereof for file in the Returns Office will be forwarded directly to that office after such delay as may be deemed sufficient to receive advice from department commanders and chiefs of bureaus concerning any changes that may be directed to be made, but within the required 30 days. There will be stamped or noted at the bottom of such copies the words "Execution completed ——— (date)," showing the date on which the execution or signing of the contract was completed. (*C. A. R., No. 21.*)

564. The number of the contract for the Auditor for the War Department will be sent to him by the head of the bureau to which the contract pertains, and in case of a purchase made by an officer of the Quartermaster Corps after public notice of seven days or more, this number must be accompanied by a copy of the advertisement, a certificate of the contracting officer as to the time and manner of its publication, and his certificate that the award was made to the lowest responsible bidder for the best and most suitable article.

565. All papers relating to or affecting the performance of any contract will finally be transmitted to the bureau of the War Department to which the contract pertains, except as provided in paragraph 705.

MARKING SUPPLIES BY CONTRACTORS.

566. Contractors furnishing supplies will mark and distinguish them with their names and with such other designations as shall be directed by the purchasing officer.

ARTICLE II.

BONDS OF DISBURSING OFFICERS, BIDDERS, AND CONTRACTORS.

567. Officers of the Quartermaster Corps, before entering upon duty which involves accountability for public funds or public property, will give bonds as required by law. The Quartermaster General will see that such bonds are examined as to sufficiency of sureties at least once in two years, and renewed once in four years, or more frequently if necessary. (*C. A. R., No. 53.*)

568. Sureties to bonds given by disbursing officers will be bound jointly and severally for the whole amount expressed therein, and must satisfy the Secretary of War that they are worth, jointly, double such amount, each surety making affidavit that he is worth that sum over and above his debts and liabilities, and stating in the affidavit his place of residence.

569. Bonds for the faithful performance of contracts for supplies or service will be required when the consideration is \$5,000 or more and the contract can not be fully performed within 60 days from its date.

Bonds may be exacted or, in the discretion of the chiefs of bureaus concerned, waived in all other cases, except that bonds required under paragraph 572 will not be waived.

The amount of penalty in a contractor's bond will be fixed by the contracting officer, and will not be less than one-tenth nor more than the full amount of the consideration of the contract, except that the penalty of bonds required under the provisions of paragraph 572 will not be less than 50 per cent of the consideration of the contract.

570. When bonds for the faithful performance of contracts are exacted they will be made and executed with the necessary justification and certification

of sufficiency of sureties, in accordance with the instructions printed on the blank forms of contractors' bonds furnished by the chiefs of bureaus. Such bonds must be executed by the contractor as principal and by a surety company or by at least two sufficient and responsible persons, who must be citizens of the United States, as sureties. Each must affix his signature and seal, and each signature must be attested by at least one witness. When practicable there will be a separate witness to each signature. Sureties to bonds executed in any foreign country, or in the Philippine Islands, Porto Rico, or Hawaii, for the performance of contracts entered into in those places need not be citizens of the United States.

571. Contractors' bonds will be executed in duplicate, one to accompany the number of the contract which is sent to the Auditor for the War Department, and the other forwarded to the head of the bureau to which the contract pertains.

572. When a contract is entered into for the construction of any public building, or the prosecution and completion of any public work, or for repairs on any public building or public work, the contractor or contractors will be required, before entering upon performance of the same, to include in the bond given for the faithful performance of the contract the further obligation that he or they will promptly make payments to all persons who supply him or them with labor or materials for the prosecution of the work provided for in such contract. If no suit should be brought by the United States within six months from the completion and final settlement of said contract, then the person or persons supplying the contractor or contractors with labor or materials will be furnished with a copy of the contract and bond upon his or their application to the War Department, accompanied by an affidavit that the labor or materials have been supplied by him or them and have not been paid for by the contractor or contractors.

573. A company duly incorporated under the laws of the United States, or of any State, and legally authorized to guarantee bonds, may be accepted as surety, subject to the limitations prescribed in paragraphs 575, 576, and 577. Lists of such surety companies as have conformed to the requirements of law and these regulations will be furnished by the chiefs of staff bureaus concerned to disbursing and contracting officers, who will apply directly to the chiefs of their respective bureaus for the necessary copies. A firm, as such, will not be accepted as surety, nor a partner for a copartner or firm of which he is a member. Stockholders who are not officers of a corporation may be accepted as sureties for such corporation.

574. When the principal of the bond is a corporation, a copy of the record of the selection of the officers executing the bond in its behalf, and a copy of the by-law or other record of the proceedings of the governing body of the corporation, showing their authority to execute the same, will be attached to the bond; these copies to be certified by the custodian of such records, under the seal of the corporation, to be correct copies. These papers, however, may be dispensed with where the bond is executed by the president, vice president, general manager, or superintendent of the corporation, under the corporate seal, and attested by the secretary, and the contracting officer certifies that he has satisfied himself after due inquiry that the person who executed the bond is in active management of the business of the corporation and has been in such management for a considerable period prior to the execution of the bond. (*C. A. R., No. 54.*)

575. Before a corporation will be accepted as surety it must obtain authority in writing from the Secretary of the Treasury to do business under the act of August 13, 1894, as amended by the act of March 23, 1910, and before it will be

accepted as surety on the bond of a principal residing in a State or Territory other than the one in which incorporated it must comply with the requirements of section 2 of said amended act as to the appointment, etc., of an agent on whom process may be served. The certificate of the Treasury Department will be accepted as to the qualification of surety companies in both respects. In foreign countries and in the Philippine Islands foreign corporations who are authorized to act as sureties on bonds may be accepted as sureties on bonds executed in those places in an amount of penalty not exceeding 10 per cent of the paid-up capital and surplus of said corporation, although they have not qualified before the Treasury Department as hereinbefore provided. *C. A. R., No. 30.*)

576. Surety companies must furnish to the War Department, to be filed in the Office of the Judge Advocate General, powers of attorney as evidence of the appointment of, or changes in, the authorities of their officers or agents. These powers of attorney are required to be upon individual cards which will be furnished for that purpose. In cases where the officers or agents of a company are appointed periodically, powers of attorney must be promptly furnished as evidence of each of such appointments. Surety companies must furnish promptly proper evidence of the revocation of such powers of attorney.

All bonds and contracts shall be examined, as to the authority of the officers or agents executing the same on behalf of surety companies, by a reference to this file of powers of attorney. All bonds or contracts required to be approved or filed elsewhere than at the War Department in Washington shall be executed in duplicate, and the duplicate shall be forwarded to the War Department for examination. (*C. A. R., No. 53.*)

577. 1. No surety company shall be accepted under the provisions of the act of Congress approved August 13, 1894, as sole surety on any recognizance, stipulation, bond, or undertaking under the War Department for an amount greater than 10 per cent of its paid-up capital and surplus.

2. No such company shall be accepted as surety on any recognizance, stipulation, bond, or undertaking under the War Department which shall execute any such obligation, on behalf of any individual, firm, association, or corporation, for an amount greater than 10 per cent of its paid-up capital and surplus, unless such company shall be secured as to such excess to the satisfaction of the Secretary of War, by reinsurance, or by deposit with such company in pledge or conveyance to it in trust, for its security or indemnity, of property equal in value to such excess; or, if such bond is executed in behalf or on account of a fiduciary holding property in a trust capacity, the liability thereon in excess of 10 per cent of the paid-up capital and surplus shall be secured by such deposit or other disposition of a suitable and sufficient portion of the estate so held that no sale, mortgage, pledge, or other disposition can be made thereof without such company's approval: *Provided further*, That such portion of any such bond which shall have been reinsured by said company in another surety, trust, or guaranty company or companies, authorized to do business under the act of Congress of August 13, 1894, shall be deducted from the penal sum of such bond in determining the limitation of risk prescribed herein, if the same is within the 10 per cent limit of said reinsuring company or companies.

3. Two or more companies may be accepted as sureties upon any recognizance, stipulation, bond, or undertaking under the War Department, the penalty of which does not exceed 10 per cent of their aggregate paid-up capital and surplus, but in all cases the sureties must, where the law requires it, execute such obligation jointly and severally.

4. The amount of paid-up capital and surplus of such companies shall be determined by the quarterly financial statements filed with the Secretary of the Treasury pursuant to section 4 of the act hereinbefore referred to, after copies of such statements have been filed in the War Department.

5. If the amount of said capital and surplus shall at any time during the intervals between the dates of the rendition of such statements, as required by law, become less than the amount determined in the statement last filed, then every such company shall file, within 10 days after such diminution of its capital and surplus, a condensed statement, sworn to by one of its principal officers at the home office, showing the nature and extent of such diminution, and the amount of such capital and surplus remaining shall be the basis for risks until the rendition of the next quarterly statement.

6. Every such company shall file in the War Department, during the months of January, April, July, and October of each year, a report giving an itemized statement of all recognizances, stipulations, bonds, or undertakings which such company shall have executed during the previous three months in excess of 10 per cent of its paid-up capital and surplus, showing the character and penalty of such obligations, the nature and amount of indemnity, collateral, or reinsurance thereon, and such other information in regard thereto as may be required.

7. Any violation of the provisions of this order or failure on the part of any company to comply promptly with its requirements will be considered ground for refusing thereafter to accept such company as surety upon any recognizance, stipulation, bond, or undertaking under the War Department, and for recommending to the Secretary of the Treasury that the authority of such company to do business under the act hereinbefore referred to be revoked.

578. The sureties, if individuals, must jointly justify in double the amount of the penalty. The affidavit of justification must be taken before a person authorized by the laws of the United States, State, Territory, or District to administer oaths. Justification will be followed by the certificate of a judge or clerk of a United States court, a United States district attorney, a United States commissioner, or a judge or clerk of a State court of record, with the seal of said court attached, that the sureties are known to him, and that, to the best of his knowledge and belief, each is worth, over and above all debts and liabilities, the sum stated in his affidavit of justification. If found necessary, separate certificates may be furnished as to each surety. The affidavits of justification of sureties to contractors' bonds executed in any foreign country, or in the Philippine Islands, Porto Rico, or Hawaii, may be taken before a notary or any other officer having a seal and who by the laws of the place is authorized to administer such oaths, the official seal of the notary or other officer to be affixed. The certification of sufficiency of such sureties may be made by a United States consul, if any, by a notary, or by the judge or clerk of any court in such place having a seal, the official seal of the officer or court to be affixed. The regular blank forms of bonds when used as above will be modified accordingly and the changes will be fully explained over the signatures and seals of all parties to the bond.

579. A guarantor, or the guarantors, to a bidder's guaranty may be accepted as surety, or sureties, to the bond of the same person as contractor, provided such guarantor or guarantors are able to justify as required for the bond.

580. The principal and surety must sign and seal the bond. The corporate seal of the corporation must be affixed to the bond by some person duly authorized, who must also affix the name of the corporation to it, followed by his own signature and official designation written after the word "by." The names and places of business of the principal and surety must be written in the body of the bond.

581. In case of financial embarrassment, failure, or other disqualifying cause on the part of the surety to a bond, the Secretary of War will require the bond to be renewed to his satisfaction, upon notification to the principal. Official bonds may not be renewed at the will of the principal or surety, but only by direction of the Secretary, and the substitution of one corporate company for another as surety on a bond will not be permitted except by direction of the Secretary, or after the bond has run for a period of four years, when a renewal thereof is required by law.

ARTICLE LII.

MONEY ACCOUNTABILITY.

PUBLIC MONEYS.

582. The use of moneys for purposes other than those for which appropriated, liquidation of liabilities of one fiscal year by use of moneys appropriated for another, and expenditures in a fiscal year of any sum in excess of appropriations for that year, or involving the Government in any contract for future payment of money in excess of appropriations, except as authorized by paragraph 515, are prohibited.

583. Chiefs of bureaus will see that funds in the hands of a disbursing officer are limited to his requirements for a brief period.

DISBURSING OFFICERS.

584. When an officer disburses money in different capacities, his deposits and accounts will be kept distinct, according to the bureaus to which they pertain.

585. Disbursing officers will not pay an account until it is due. In cases of contracts for the performance of service or delivery of articles, payment will not exceed the value of services rendered or articles actually delivered.

586. Public money, subject to disbursement, coming into the hands of an officer from any source will be promptly placed by him to his credit with the Treasurer of the United States, or else transferred to a disbursing officer of that branch of the public service to which the money pertains. Exceptions to this rule are allowed in the cases and to the extent authorized by paragraph 587, and in cases where an officer, when stationed on the extreme frontier or at a place far remote from depositaries, has been specially authorized by the Secretary of War to keep at his own risk such money as may be intrusted to him for disbursement. Money in hand, subject to disbursement, may be disbursed at once without being placed in depositaries if a payment is due.

587. Recruiting officers and officers doing quartermaster duty at posts or independent stations are authorized to keep on hand, at their own risk, moneys pertaining to the appropriation "Subsistence of the Army" in such restricted amounts as may be necessary for facilitating payments of small amounts to public creditors.

When it becomes necessary to draw a check for obtaining subsistence funds to be kept in personal possession, the officer will draw it in his own favor and enter under the heading thereon, "Object for which drawn," or "On account of," the following: "To hold funds in personal possession under A. R. 587." Such checks will not be stated to be for "payments under \$20."

588. A disbursing officer who ceases to act as such will inform the Secretary of the Treasury at once what checks drawn against the public funds to his

credit, if any, are still outstanding and unpaid. He will also comply with the requirements of paragraphs 690 and 902.

589. The accounts of a bonded disbursing officer must be kept separately under each bond except when the second bond is cumulative, in which case the accounts will be stated under both bonds. When a new bond is given the officer will close his accounts under the former bond and will deposit to the credit of the Treasurer of the United States, or transfer to a bonded officer of the same department who is authorized by law to handle the same class of funds, any unexpended balance before an advance is made under the new bond, in order that the liability of the sureties on the respective bonds may be definitely fixed. In all cases where a transfer is made to a bonded officer there must be an actual transfer of funds and not a mere paper transaction. The date of the bond of a disbursing officer is the date on which it is approved by the Secretary of War, and such date is to appear on all requisitions for funds issued under such bond and also on the account current on which such funds are accounted for.

590. All amounts of money held at the end of each fiscal year by the Treasurer, an assistant treasurer, or a designated depository, credited to a disbursing officer whose account has remained unchanged, either by deposit or payment, for the space of three years, shall be covered into the Treasury, to be placed to the credit of such officer, if it be found that he is entitled to the credit.

591. No officer disbursing money for the military service, or directing the disbursement thereof, shall be concerned individually, directly or indirectly, in the purchase or sale of any article intended for, used by, or pertaining to the department of the public service in which he is engaged.

592. No officer or clerk of a disbursing officer shall be interested in the purchase of any soldier's certificate of pay due, or any other claim against the United States.

593. If any disbursing officer shall bet at cards or any game of hazard, his commanding officer will suspend his functions, require him to turn over all public funds in his keeping, and will immediately report the case to the proper bureau of the War Department. He will also report the case to the department commander, who will at once convene a court-martial for the trial of the officer.

594. Every disbursing officer, in opening his first account and before issuing any checks, will furnish the depository on whom the checks are to be drawn with his official signature, duly verified by some officer whose signature is known to the depository.

595. For every Treasury draft received by a depository to be placed to the official credit of a disbursing officer, and for every deposit of funds made by the officer to his official credit, subject to payment of his checks, a receipt, numbered in serial order, and giving the place and date of issue, will be furnished him by the depository, setting forth the character of the funds, i. e., whether coin or currency. If the credit is made by a disbursing officer's check transferring funds, the essential items of the check will be enumerated, and if by a Treasury draft, the warrant number. The title of the officer will be expressed, and the title of the account will also show for what branch of the public service it is kept. The receipt, called "a disbursing officer's receipt," will be retained by the officer in whose favor it is made.

596. An officer is not authorized to insure public money or property, and he will not be allowed credit for any expense paid for the collection of money on checks, except as provided in paragraph 1100 for military attaches serving abroad.

TRANSFERS.

597. Public funds will, as a rule, be transferred as follows: The officer making the transfer will draw his check directing the depositary to place a stated amount to the official credit of the officer named on the check. The check will be sent to the depositary and not to the officer in whose favor it is drawn. If it is necessary that the officer to whom the funds are transferred shall receive them without delay, the transferring officer may draw his check and transmit it directly to the payee. In either case an invoice will be sent to the receiving officer, but no receipt will be given by him except for cash transfers.

598. Funds will not be transferred from one appropriation for the use of another by borrowing or otherwise, except as authorized by law.

CHECKS.

599. A disbursing officer may draw his check in favor of himself (1) to make payments of amounts not exceeding \$20; (2) to make payments at a distance from a depositary; or (3) to make payments of fixed salaries due at a certain period. In the first and last named cases the check will be drawn not more than two days before the payments become due. In all other cases the checks will be drawn only in favor of the persons, firms, or corporations, by name, to whom the payments are to be made.

600. On the face of each check that he draws a disbursing officer will state his address, the object of the expenditure, the number or other necessary description of the voucher, and, in case of payment to an officer, enlisted man, or civilian employee, the period for which the payment is made. Such statements will be brief, but clear, as, for instance, "pay," "pay roll," or "payment of troops," adding the post or station; "purchase of subsistence," or of other supplies, naming them; "on contract for construction," mentioning the fortification or other public work for which the payment is made; "payments under \$20." Payment is refused on all checks where regulations are not complied with, and report of the fact is made to the Treasury Department. In writing checks on the protective surface-tinted blanks furnished by the Treasury Department the ordinary typewriter with plain type, or rubber stamps, may be used. Only typewriter record ribbons, writing black or blue, the ink of which must be heavy and of the most permanent nature, or stamp pads inked with a permanent black ink, shall be used for the purpose, so as to secure clear, well-inked impressions which can not be easily erased without removing the protective surface-tinting at the same time. The data on the check stub or register of checks issued will be the same as on the check to which it relates.

601. Officers serving in and disbursing funds pertaining to more than one staff department, and officers assigned to duty in any of the staff departments, in issuing checks, will confine the designation of their official capacity to their rank and the particular staff department on account of which the checks are drawn.

602. Whenever an original check of a disbursing officer is lost, stolen, or destroyed, the owner, to better protect his interest, should, in writing, notify the office or bank on which it was drawn of the fact of such loss, stating the name of the disbursing officer or agent by whom it was drawn, describing the check, giving if possible its date, number, and amount, and requesting that payment of the same be stopped. In order to procure the issue of a duplicate check the party in interest must furnish the disbursing officer or

agent who issued the original check with an affidavit explaining the loss, and an indemnity bond, both of which should be prepared on the form furnished for the purpose by the Treasury Department. The form contains full instructions as to the proper method of preparation. Upon these papers a duplicate check may be issued after the expiration of thirty days and within three years from the date of issue of the original, and such duplicate check, with the affidavit and bond, will be forwarded directly to the Secretary of the Treasury for approval. In case the disbursing officer who issued the original check is no longer in the service, the notice and proof of loss and the indemnity bond will be sent to the Secretary of the Treasury, and it becomes the duty of the proper accounting officer, under section 3647, Revised Statutes, to state an account in favor of the owner of the lost check and to charge the amount thereof to the account of the disbursing officer. No disbursing officer or agent is authorized to issue a duplicate check except as prescribed in this paragraph. (*C. A. R., Nos. 27 and 44.*)

603. In case of death, resignation, or removal from active service of a disbursing officer, checks previously drawn by him will be paid from the funds to his credit, unless such checks were drawn more than four months before their presentation, or reasons exist for suspecting fraud. A check previously drawn by him and not presented for payment within four months of its date will not be paid until its correctness shall have been attested by the Comptroller of the Treasury or by his chief clerk.

604. A check drawn by a disbursing officer still in active service, presented before it shall have been issued three full fiscal years, will be paid in the usual manner by the office or bank on which it is drawn, and from funds to the credit of the drawer.

605. Upon receipt of the statement of his disbursing account for the month of June of each year, from the office or bank in which his funds are kept, each disbursing officer will immediately make a return to the Secretary of the Treasury, through the chief of his bureau, of all checks drawn by him which have been outstanding and unpaid for three full fiscal years on June 30 of that year, stating the number of each check, its date and amount; in whose favor, on what office or bank, and for what purpose drawn; the number of the voucher in payment of which it was drawn, and, if known, the address of the payee, and he will inclose in the return all checks described therein that may be in his possession.

606. At the close of each fiscal year all amounts remaining to the credit of a disbursing officer, represented by checks or drafts drawn upon the Treasurer, an assistant treasurer, or any designated depository, three or more years prior thereto, will be covered into the Treasury and there stand to the credit of the payees in an appropriation account denominated "outstanding liabilities."

607. A check which has been issued for a period longer than three full fiscal years will be paid only by the settlement of an account in the Treasury Department. For this purpose an officer who receives such a check will transmit it, through the proper channels, to the Secretary of the Treasury. If a check is lost, proof of ownership and loss and a bond of indemnity will be furnished.

OFFICIAL CHECK BOOKS.

608. Official check books are issued by the Treasurer of the United States directly to disbursing officers who have public money on deposit with him. Rules for issue, transfer, etc., of these check books accompany each book. In making payments only official checks will be used.

609. Every disbursing officer or agent shall retain with his official records the stubs or register of checks issued by him. Should a disbursing officer or agent make an erasure or alteration on any of his checks, however slight, he shall certify to the correctness of such erasure or alteration on the upper margin of such check.

The greatest care will be exercised in the custody of blank checks. They will be kept under lock and key when not in use. No disbursing officer will issue a check on the Treasurer of the United States until after he shall have ascertained from said Treasurer his individual numerical symbol, which shall be printed, stamped, or written in the lower right-hand corner of each check.

610. Spoiled or canceled official checks shall be sent quarterly by each disbursing officer directly to the Auditor for the War Department. A record of the dates of both cancellation and transmission will be entered on the stub.

CERTIFICATES OF DEPOSIT.

611. Public moneys are transferred to the General Treasury by being deposited to the "credit of the Treasurer of the United States," either at the Treasurer's office, or at the office of one of the assistant treasurers, or at one of the designated depositaries. All "miscellaneous receipts on account of proceeds of Government property" (par. 618) must be deposited; also, when required by chiefs of bureaus to which the funds pertain, the public moneys in the possession of or to the credit of disbursing officers or others. For each deposit made a "certificate of deposit" in duplicate will be given, showing the full name, rank, regiment, or corps of the depositor, and to what appropriation or fund the amount belongs, the depositor giving the necessary information when making the deposit.

612. The "originals" of all certificates of deposit are required by law to be forwarded by the depositaries directly to the Secretary of the Treasury; the "duplicates" will be filed by the depositing officers with their retained papers. Immediately upon making a deposit to the credit of the Treasurer of the United States the depositing officer will notify the proper chief of bureau of the fact, stating the name of the depositary, the amount, the appropriation to which the money pertains, when known, and whether the amount arose from proceeds of sales, or is a repayment of an unexpended balance, or a refundment on account of an error in the accounts or returns. The number of the certificate of deposit will also be stated if known, but the report will not be delayed for the purpose of obtaining such number. If the deposit is on account of the indebtedness of any person other than the depositing officer, the source from which the money was derived and the object of the payment will be distinctly stated and reference made to the vouchers, if any, to which the deposit pertains.

613. A disbursing officer of one staff department making stoppages on account of the funds or property of another staff department will, in the absence of special instructions to the contrary, deposit the funds so received, and not leave them to be transferred upon the settlement of his accounts at the Treasury.

614. Nothing in paragraphs 612, 613, and 615 will be construed to affect the existing system of depositing collections by quartermasters of the Army. Whenever an officer refunds money to the Government by payment to an Army quartermaster, duplicate descriptive receipts will be issued by the latter for the amount refunded.

The quartermaster, with the least practicable delay, will forward, without letter of transmittal, the original receipt directly to the Quartermaster General and furnish the officer with the duplicate. (*C. A. R., No. 10.*)

615. When a disbursing officer of the Army receives any moneys of the United States as the proceeds of sales, as miscellaneous receipts, or funds of like character, not available for disbursement, he will deposit, without delay, such funds to his official credit with an authorized depository or, if more convenient, to the credit of the Treasurer of the United States, at the nearest authorized depository. In the former case, at the close of the month in which such funds are received the total will be made the subject of one check issued by him in favor of the depository, and marked "for deposit to the credit of the Treasurer of the United States."

The disbursing officer will indorse on the back of the check issued for this purpose the title of the appropriations and the amount that pertains to each into which the several sums embraced in the deposit should be covered into the Treasury.

The number, date, name, location of the depository, and amount of the certificate of deposit will be noted on the account current upon which the depositor desires to be credited with the money deposited.

616. Certificates of deposit must be recorded in the proper bureaus of the War Department. The "originals," upon their receipt at the Treasury, are immediately forwarded to the Secretary of War, who refers them to the proper bureaus to which the deposits pertain for verification and designation of the appropriation.

PROCEEDS OF SALES.

617. Moneys received from authorized sales of property (except property, other than river and harbor, mentioned in pars. 679 and 680) will be deposited to the credit of the Treasurer of the United States, and respectively revert to the appropriations out of which originally expended. But the moneys arising from the authorized disposition of serviceable ordnance and medical and hospital property and the sales of useless ordnance material are expended under conditions prescribed by law. All moneys arising from sales of subsistence supplies or stores, authorized by law and regulations, shall be covered into the Treasury to the credit of the proper appropriation and shall remain available throughout the fiscal year following that in which the sales were effected, for the purposes of that appropriation from which such supplies or stores were authorized to be supplied at the time of the sales. (*C. A. R., No. 10.*)

618. The proceeds of sales of all public property the disposition of which is not provided for by paragraph 617, after the expenses of sale have been deducted will be deposited to the credit of the Treasury of the United States as "Miscellaneous receipts on account of proceeds of Government property," for which certificates of deposit will issue, showing the name, rank, regiment, or corps of the depositor, the nature of the deposit, the kind of property, and the bureau to which it pertained.

619. The transfer of public property other than subsistence stores is not regarded as a sale. Vouchers for property so transferred will be sent through the chief of the bureau concerned to the proper accounting officer of the Treasury Department for settlement, as prescribed in paragraph 671. If credit is received therefor the money may be used to replace the property transferred.

APPROPRIATIONS.

620. The fiscal year ends on June 30. The quarters of the fiscal year are as follows: First quarter, July 1 to September 30; second, October 1 to December 31; third, January 1 to March 31; fourth, April 1 to June 30.

621. Chiefs of bureaus, in notifying officers of remittances, will inform them of the amount remitted under each head of appropriation, giving the designation by fiscal years when necessary.

622. All accounts of a disbursing officer shall be rendered and stated in one consolidated account for each bureau under which he is disbursing, without regard to the number of appropriations or headings involved.

623. Money received and disbursed under the appropriation for contingent expenses of the Army will be accounted for by officers authorized to disburse it, on special accounts current, in which funds belonging to other appropriations will not be entered.

624. When an article purchased is not named in the appropriation act, the purpose for which it is intended determines the appropriation from which payment is made.

625. All public funds on hand at the close of a fiscal year, except those required to pay outstanding liabilities incurred during such year (a schedule of which will, if possible, accompany the last account current for the year), and except balances in cash in the hands of disbursing officers of the Quartermaster Corps in the Philippine Islands, Alaska, and in other places outside of the continental limits of the United States, who are located at points remote from depositaries, and appropriations not limited to any fiscal year or years, will be deposited to the credit of the Treasurer of the United States and the disbursing officers account closed by a credit for such deposit. In case of funds in cash in the hands of disbursing officers of said corps who come within the foregoing exception, said officers will, at the close of business on the 30th day of June each year, or as soon thereafter as possible, inform the department quartermaster of the department in which they are serving, or, if not under the jurisdiction of a department quartermaster, inform the Quartermaster General directly of the amount of cash in their hands in excess of what is needed to pay outstanding liabilities, and that they will credit and charge themselves on their accounts current for June and July, respectively, with such amount as transferred from the old to the new fiscal year appropriations. Upon receipt of this information in each case the department quartermaster will make a debit entry on his account current for the amount under the former fiscal year and a corresponding credit entry under the latter fiscal year for the purpose of adjusting the disbursing officer's fiscal year appropriation account, thus accomplishing the same result as if an actual transfer of funds had taken place. The Quartermaster General will arrange to have similar action taken in each case reported to him directly. Where an account is closed in the manner above described, the balance in cash in the officer's hands should be counted, wherever practicable, by three disinterested persons and their certificates as to its correctness should accompany the account current. (*C. A. R., No. 10.*)

626. An account current, accompanied by abstracts and vouchers, will be forwarded to the chief of the bureau to which it pertains, and a memorandum copy thereof retained by the officer. A disbursing officer who for any reason (e. g. separate bonds, etc.) is required to render separate accounts will keep separate and distinct accounts of his funds in the Government depositaries and will unmistakably designate such several depositary accounts on his vouchers, requisitions, deposits, and accounts current. The balances acknowledged by a disbursing officer and his analyses thereof must actually represent the state of his business at the close of the last day for which the account is rendered. He will so arrange his business that he may, when called upon to do so, close his accounts and analyze his acknowledged balances. All transactions coming within the time covered by the account will be reported therein. No payments or collections not actually made, and not in the hands of the officer during the

period of the account, will be included therein. An officer disbursing in part by cash and drawing official checks to obtain cash to make payments will render with his account current a subsidiary cash account, the balance of which will agree or be reconciled with his cash as shown by his analysis of balance with his account current.

627. Disbursing officers who render accounts which eventually pass to the Treasury Department for settlement are required to prepare their accounts, with abstracts and vouchers complete, and deposit them in the post office, addressed to the chief of the bureau of the War Department to which they pertain, on or before the 10th day of each month. Irregularities in the mail service or want of blank forms will not excuse a failure to comply with this paragraph. When vouchers are not sent with the account to which they belong, but are subsequently rendered, suitable explanations will be made.

628. Original vouchers will, if possible, accompany the accounts; copies will not be accepted unless duly certified and accompanied by satisfactory evidence of the loss or destruction of the originals, or that their retention is indispensable to the performance of duty by an officer.

629. With the accounts will be forwarded all orders of commanding officers and all other papers upon which the officer accountable relies to relieve himself from responsibility.

630. When an officer is relieved from duty in a staff department at any station he will certify outstanding debts, if any, to his successor, and transmit a list of the same to the head of the proper bureau. Unless otherwise ordered, he will turn over to his successor the public money, property, books, and papers pertaining to the service from which he is relieved. He will also comply with the requirements of paragraphs 588 and 902.

MONEY VOUCHERS.

631. A voucher will not be made in duplicate or in triplicate unless the instructions on the proper blank require it, in which case the original only will be certified.

632. The correctness of the facts stated on a voucher and the justness of the account must be certified by an officer, except when some other mode of authenticating the same is authorized in these regulations.

633. Every voucher in support of a payment for supplies or for services, except as provided in paragraph 634, will be made out in favor of the creditor, giving his address, and will show (if for supplies furnished) the date of the purchase (or the order number), the quantity and price of each article, and the amount, or (if for services) the character of the services, the date or dates on which they were rendered, and the amount. When a purchase is made as a result of a written proposal and a written acceptance, the voucher (if there be only one) will be accompanied by a copy of the public notice, the accepted bid, and a copy of the letter accepting the bid, and will contain a certificate showing that the procurement of the articles or service was made in the manner indicated thereon; if two or more vouchers are made, the papers required will be filed with the first voucher paid and reference thereto made on the other vouchers. A voucher for service rendered by the day or month will show the character of the service, the inclusive dates thereof, the time for which payment is made, the rate of pay, and the amount. The certificate of a creditor to a voucher for supplies furnished or for services rendered will contain the words "I certify that the above bill is correct and just and that payment therefor has not been received."

634. Vouchers for supplies or for services other than by the day or month submitted in support of payments for all work carried on under the War Department or any bureau thereof may, if desired, be accompanied by the original bills submitted by the creditor and dated and signed by him or by his authorized representative, and vouchers with such bills attached will be made out in favor of the creditor, giving his address, and stating the account in general terms, with the aggregate amount only extended, and the words "as per bill hereto attached," or words of like import added, except that such original bills need not be attached to vouchers in the following cases, viz: Where under a contract quantities delivered or amounts due are determined by a duly authorized inspector, and his certificate as to the facts is filed with the voucher to which it pertains; where a bill of lading or transportation request accompanies a voucher for transportation services performed under public tariffs; where a voucher is for telegraphic services at rates fixed by the Postmaster General; when the account is small and the creditor does not submit a bill. The certificate of a creditor to a voucher for supplies furnished or services rendered will contain the words "I certify that the foregoing account is correct and just and that payment therefor has not been received."

When desirable, the creditor may place the foregoing certificate upon the original bill and, when so placed, the certificate upon the voucher need not be signed, provided that the bill be attached to and made a part of the voucher before the same is signed by the disbursing officer.

635. Money amounts will be expressed in terms of dollars and cents. When a fraction of a cent less than one-half occurs in the footing of a voucher it will be disregarded. If the fraction be one-half or greater it will be reckoned as a cent.

If the agreement calls for foreign currency, the account shall be stated in that currency. The total amount will be reduced to its equivalent in United States currency at the current rate of exchange at the date of payment. The amount in United States currency having been determined, checks may be drawn therefor by disbursing officers to their own orders in United States currency and by them exchanged at local fiscal agencies of the United States where possible, or at local banks, for the necessary amount in the currency or exchange required to pay the creditor in the money originally agreed upon where the creditor declines to accept check payable in currency of the United States.

The vouchers for accounts will be made to show the debt as actually incurred in the coin in which payment is made and the reduction from this coin to United States currency, the rate of exchange being stated on the voucher and the amounts stated on abstracts and account current in United States currency.

636. A voucher for purchases and services not personal will show thereon the mode of purchase or engagement, using the form of notations on the standard prescribed forms.

637. The giving or taking of a receipt for public money in blank or in advance of actual payment, or the signing of a check for public money in blank, is prohibited.

638. A voucher for funds disbursed will be made out in full before being certified by a public creditor. If paid with check no receipt will be required, but if paid with cash one receipt will be obtained.

639. An invoice of funds transferred will show the place and date of transfer, the name and title of the officer to whom transferred, the character of funds, and the amount transferred under each head of appropriation.

If the transfer is of cash, a receipt will be obtained and filed with the account current. If the transfer is for the correction of errors, whether arising from

the settlement of accounts or otherwise, the facts will be noted in detail on the invoice.

640. A voucher for a payment made or an invoice for money transferred will have noted thereon the number, date, and amount of checks given and the depository on which drawn. If payment or transfer is made with currency, wholly or in part, the facts will be stated and a receipt given for the currency.

641. Vouchers must be stated in the name of the corporation, company, firm, or person rendering the service or furnishing the articles for which payment is made.

642. Payment with currency will not be made to the holder of a power of attorney or to a holder of an instrument operating as a transfer or an assignment.

If payment with currency is made to an incorporated or to an unincorporated company, the money will be delivered to and the voucher certified and receipted by a duly authorized officer or agent of the company; the certificate and receipt to be signed with the company name, followed by the autograph signature of the officer, with his title, or of the agent, to whom the money was delivered, and the receipted voucher will be accompanied by evidence showing his authority. This evidence will consist of extracts from the articles of incorporation or association, the by-laws, or the minutes of the board of directors duly certified by the custodian of such records (under the company seal, if there be one), showing that the signer is properly vested with authority to receive and receipt for money due to the company.

If payment of currency is made to an individual or to a copartnership doing business under a company title, the certificate and receipt will be signed with the company name, followed by the autograph signature of the individual proprietor or of one of the members of the firm with the words "proprietor" or "one of the proprietors" affixed thereto.

If payment with currency is made to a copartnership doing business as such, the certificate and receipt will be signed with the firm's usual signature by one of the members of the firm, who will be required to affix his own signature as "one of the firm."

If payment with currency is made to an individual creditor, the certificate and receipt will be signed by him in person.

643. If payment is made with check to the order of any company (incorporated or unincorporated), or firm or individual by name, and the fact that the check has been so drawn is stated on the voucher, giving its number, date, amount, and United States depository on which drawn, the certificate to the voucher may be signed by an officer, attorney, or agent of the company, or by an attorney or agent of the firm or individual, stating the capacity in which he signs, without filing with the voucher evidence of his authority to sign. The disbursing officer in all such cases will deliver the check to such person only as he is satisfied is authorized by the principal to certify to the voucher and receive the check.

644. Receipts for small sums paid with currency to a corporation, such as a railroad, telegraph, turnpike, transfer, express, steamboat, hotel, newspaper, or ice company, for an occasional service rendered may be signed and the vouchers certified by the local agent in charge of the business of the company at the place where the service is rendered or where it begins or terminates, and the certificate of the officer who made the payment that the person to whom payment was thus made was then the local agent of the company in charge of its business at the place designated will be sufficient evidence of the agent's authority to certify to the vouchers and to receipt for the money paid.

645. When an account is presented by an individual who is not known to the disbursing officer, the latter will require him to be identified.

646. The form of the signature to the certificate, and to the receipt when required, and the name of the person or business firm as entered at the head of an account must be literally alike.

647. When a signature is not written by the hand of the party it must be witnessed by a disinterested party, a commissioned officer when practicable.

648. In final statements, receipts for money, and papers of like character, money amounts will, in all cases, be written out in full and also expressed by figures in parentheses. This requirement does not apply to pay rolls of military organizations, pay rolls of other descriptions, nor to lists of deposits on final statements.

649. Fees of civil officers for administering oaths in matters of military administration (where the services of department judge advocates, or judge advocates of courts-martial, or trial officers of summary courts were not obtainable) will be paid from the appropriation applicable to the subject matter of the oaths, and in case there be no appropriation applicable thereto the fees will be paid by the Quartermaster Corps.

650. Disbursing officers will not issue vouchers for unpaid accounts as due-bills against the United States, but a certified statement of personal services and of wages due may be given to a discharged employee who for want of funds was not paid at time of discharge.

651. When applicable, the following rules for the computation of time in payment for services will be observed:

1. For any full calendar month's service, at a stipulated monthly rate of compensation, payment will be made at such stipulated rate without regard to the number of days in that month.

2. When service commences on an intermediate day of the month, 30 days will be assumed as the length of the month, whatever be the number of days therein.

3. When the service terminates on an intermediate day of the month, the actual number of days during which service was rendered in that calendar month will be allowed.

4. When the service embraces two or more months or parts of months but one fraction will be made, thus: From September 21 to November 25, inclusive, will be calculated—September 21 to October 20, inclusive, one month; from October 21 to November 20, inclusive, one month; from November 21 to 25, inclusive, five days, making the time allowed two months and five days.

5. When two fractions of months occur and both are less than a whole month, as from August 21 to September 10, the time will be determined thus: August 21 to 30, inclusive (ignoring the 31st), 10 days; from September 1 to 10, inclusive, 10 days; making the time allowed 20 days.

6. Service commencing in February will be calculated as though the month contained 30 days, thus: From February 21 to 28 (or 29), inclusive, 10 days. When the service commences on the 28th day of that month, 3 days will be allowed, and if on the 29th, 2 days.

7. If service commences on the 31st day of any month, payment will not be made for that day.

8. For commutation of subsistence and for services of persons employed at a per diem rate, payment will be made for the actual number of days.

9. When services are rendered from one given date to another, the account will state clearly whether both dates are included.

10. In computing the wages of persons employed at a per diem allowance the day on which service begins and the day on which it ends will be allowed in the computation.

11. Unauthorized absence on the 31st day of a month results in the loss of one day's pay.

652. Disbursing officers, except those serving in the Philippine Islands, will not settle with heirs, executors, or administrators except by authority of the proper bureau of the War Department, and upon accounts that have been duly audited and certified by the proper accounting officers of the Treasury.

In the Philippine Islands disbursing officers may settle directly with executors or administrators upon accounts accruing in those islands, which are accompanied by the duly attested copies of the decrees appointing said executors or administrators in conformity with the civil laws of the archipelago governing such matters. The settlement thus made by any disbursing officer is, however, subject to review by the accounting officers of the Treasury when his accounts shall come before them for adjustment.

PECUNIARY RESPONSIBILITY OF OFFICERS.

653. An officer will have credit for an expenditure of money made in obedience to the order of his commanding officer. Every order issued by any military authority which may cause an expenditure of money in a staff department will be given in writing. One copy thereof will be forwarded by the officer receiving it to the head of his department, and the other will be filed by the disbursing officer with his voucher for the disbursement. If the expenditure be disallowed, it will be charged to the officer who ordered it.

654. If a payment made on the certificate of an officer as to the facts is afterwards disallowed for error of fact in the certificate, it will pass to the credit of the disbursing officer and be charged to the officer who gave the certificate; but the disbursing officer can not protect himself in an erroneous payment made without due care by charging lack of care against the officer who gave the certificate.

ADMINISTRATIVE EXAMINATION OF MONEY ACCOUNTS.

655. The chief of a bureau to which accounts pertain will cause each account current, with its accompanying papers, to be examined and transmitted to the Treasury Department, with his decision indorsed thereon, within 60 days from the date on which such account was received at his office. He will bring to the notice of the Secretary of War all matters of account that require or merit it. When a suspension or disallowance is made, the bureau will notify the officer that he may have an opportunity to submit explanations or take an appeal to the Secretary of War.

656. In case of discovered error or disallowance in an account upon its examination by the proper authority, the officer responsible will, upon notification thereof, unless able to furnish evidence to correct or remove the same, make the proper correction in his next account current, and refer therein to the particular voucher in which the error occurred or the disallowance was made.

ARTICLE LIII.

PUBLIC PROPERTY ACCOUNTABILITY AND RESPONSIBILITY.

GENERAL PROVISIONS

657. Accountability and responsibility devolve upon any person to whom public property is intrusted and who is required to make returns therefor.

Responsibility without accountability devolves upon one to whom such property is intrusted, but who is not required to make returns therefor. An accountable officer is relieved from responsibility for property for which he holds a proper memorandum receipt. A responsible officer is not relieved from responsibility for public property for which he has given memorandum receipt until he has returned the property to the accountable officer or has secured memorandum receipt from a successor, or until he has otherwise been relieved by the operation of regulations or orders.

658. The officer in permanent or temporary command of a post or station is responsible for the security of all public property of the command, whether in use or in store, and, although for purposes of periodical accountability to the War Department it may all have been officially receipted for by subordinate officers, the commanding officer is nevertheless responsible and pecuniarily liable with them for the strict observance of the regulations in regard to its preservation, use, and issue. He will take care that all storehouses are properly guarded, that only reliable agents are employed, and only trustworthy enlisted men are detailed for duty in them or in connection with property.

659. If an officer in charge of the public property of a command (not properly pertaining to a company or detachment) is, by order, leave of absence, or any other cause separated from it, the commanding officer, or an officer designated by him, will receipt and account for it.

660. If it becomes necessary to remove all officers from the charge of public property, the commanding officer will take measures to secure it and report the circumstances to the proper authority.

661. A company or detachment commander is responsible for all public property pertaining to his company or detachment, and will not transfer his accountability therefor to a successor during periods of absence of less than a month unless so ordered by competent authority; when such absence exceeds a month, the question of responsibility is settled by the proper authority.

662. The officer in temporary or permanent command of a company or detachment is responsible for all public property used by or in possession of the command, whether he receipts for it or not.

663. The property responsibility of a company commander can not be transferred to enlisted men. It is his duty to attend personally to its security, and to superintend issues himself or cause them to be superintended by a commissioned officer.

664. An officer will not when it can be avoided be detailed for duty which will separate him from public property for which he is accountable.

665. A transfer of public property involves a change of possession and accountability. In ordinary cases of transfer the transferring officer will furnish the receiving officer with invoices in duplicate, accurately enumerating the property, and the latter will return duplicate receipts. In cases in which complete transfer of property occurs, instead of exchanging separate invoices and receipts, as above provided, the receiving officer may make direct entry on the final return (both original and duplicate) of his predecessor that all the property thereon enumerated as on hand and transferred to successor was received by him. The transferring officer may make similar entry on his final return, stating that all the property therein enumerated as on hand and transferred to successor was actually turned over by him.

666. When an officer to whom stores have been forwarded believes them to have miscarried he will promptly inform the issuing and forwarding officers.

667. If an officer to whom public property has been transferred fails to receipt for it within a reasonable time, the invoicing officer will report the facts

to the commanding officer of the former for action. Copies of all papers relating to the transaction will be filed with his returns.

668. Upon the receipt of public property by an officer he will make careful examination to ascertain its quality and condition, but will not break original packages until issues are to be made, unless he has reason to believe the contents defective. Should he discover defect or shortage, he will apply for a survey to determine it and fix the responsibility. Should he consider the property unfit for use, he will submit inventories in duplicate and request the action of an inspector. The same rule will be observed in regard to packages when first opened for issue, and for property damaged or missing while in store.

669. When packages of supplies are opened for the first time, whether because of apparent defect or for issue, the officer responsible or some other commissioned officer will be present and verify the contents by actual weight, count, or measurement, as circumstances may require, and in case of deficiency or damage will make written report of the facts to the post commander. If only the officer responsible be present and make the report, he will secure the sworn statements in writing of one or more civilians or enlisted men regarding the condition of the property when examined. Should a survey be ordered, the post commander will refer to the surveying officer the report made by the examining officer, together with the sworn statements. At arsenals and depots, where there are persons whose special duty it is to receive and issue public stores, the reports herein required may be made by them instead of officers of the Army.

670. The giving or taking of receipts in blank for public property is prohibited.

671. Supplies procured by one bureau will not be furnished to another bureau except on special authority of the Secretary of War, except in the Philippine and Hawaiian Departments, where the authority of the department commanders is sufficient. When restored in kind, the supplies will be delivered at the post from which they were received or at such other post as department commanders or chiefs of bureaus concerned may determine. If the transaction is between two bureaus of the War Department or between a bureau of the War Department and a bureau of another executive department (except in case of subsistence stores, payment for which shall be made in cash by the proper disbursing officer of the bureau, office, or department concerned, or by the employee to whom the sale is made, and in the case of transactions to which either the Engineer Department or the Signal Corps is a party, in which case payment shall be made by the proper disbursing officer of the bureau, office, or department concerned), the transferring officer will prepare itemized bills or invoices, in triplicate, accurately enumerating the supplies transferred, and will present them to the receiving officer, who will acknowledge receipt of the supplies thereon, designate the appropriation and allotment chargeable, and return the original and duplicate to the transferring officer. The transferring officer will indicate thereon the appropriation to be credited, and will forward the papers to the chief of his bureau in Washington, by whom they will be transmitted, through the chief of the bureau chargeable with the bill, to the proper accounting officer of the Treasury Department for settlement, except that in the case of ordnance and ordnance stores when transferred or sold to another bureau of the War Department, or to another executive department, the chief of the bureau chargeable with the bill will forward it to the proper disbursing officer for direct payment, the check being drawn payable to the Chief of Ordnance, U. S. A. The different copies of the bills will be plainly marked "Original," "Duplicate," or "Triplicate," and the statement "Settlement to be made on the original

only " will appear on the original copy issued. The original copy must always be the ribbon copy.

When the transaction is between two bureaus of the War Department, the prices to be charged will be regulated by the contract or invoice price of the stores. When the transaction is between a bureau of the War Department and a bureau of another executive department, the price to be charged will include the contract or invoice price and the cost of transportation, and in case of subsistence stores for another executive department of the Government or employee thereof 10 per cent additional to cover wastage in transit. For regulations governing sales of subsistence supplies to officers and enlisted men of the Navy and the Marine Corps, see paragraph 1241½.

When the transaction covering the transfer or sale of ordnance and ordnance stores is between two bureaus of the War Department, the price to be charged shall be the cost price of the stores, including the cost of inspection. When the transaction is between the Ordnance Department and another executive department of the Government, the price to be charged shall include the cost price of the stores and the costs of inspection and transportation.

In requests for transfers of appropriations under the provisions of this paragraph, the original invoice and the duplicate copy will be forwarded with the request for transfer. The original invoice will be signed by the invoicing officer and will be supported by an acknowledgment on the part of the proper official of the receipt of the supplies or of the services rendered as shown by the invoice. The invoice will also show units and unit prices where practicable. (*C. A. R., Nos. 2, 10, 22, and 46.*)

672. In no case will means of transportation or other property of any branch of the military service be taken as a part of the outfit of surveying or exploring expeditions for which Congress has made appropriations without the express authority of the Secretary of War.

673. When it is impracticable for an officer to personally superintend his issues—as may be the case with one charged with disbursements or the care of depots—he should choose with great caution the agent to whom he intrusts the duty.

674. The keys of storerooms or chests will not be intrusted to enlisted men or civilians without great vigilance on the part of the accountable officer and a resort to every reasonable precaution, including frequent personal inspections, to prevent loss or damage.

675. An officer in charge of public property in use or in store will endeavor by timely repairs to keep it in serviceable condition. For this purpose the necessary means will be allowed on requisition, and property in store so repaired will be issued.

676. All movable public property will, if practicable, be conspicuously branded "U. S." before being used.

677. Public property will not be used nor will labor hired for the Government be employed for any private purpose whatsoever, except as authorized in these regulations.

678. Unserviceable property is, with reference to its disposition, divided into classes as follows:

1. Property worn out by fair wear and tear in the service, which has no salable value.
2. Property worn out by fair wear and tear in the service which presumably has some salable value.
3. Property which has been rendered unserviceable from causes other than fair wear and tear in the service.

Property of the first class may be submitted to a surveying officer and disposed of as indicated in paragraph 717, or it may be submitted to an inspector without prior action of a surveying officer.

Property of the second class will be submitted to an inspector without prior action of a surveying officer.

Property of the third class will be submitted to a surveying officer, except as provided in paragraph 1073 in case of public animals, and unless destroyed under the provisions of paragraph 717 will subsequently be submitted to an inspector. The inventory and inspection reports will be accompanied by the report of the surveying officer.

In the application of this paragraph to articles of the unit accountability equipment furnished by the Engineer or Ordnance Department, articles pertaining to the reconnaissance and surveying equipment of posts and forts, and miscellaneous stores covered by Class X, Ordnance property classification, the following will be considered property of the first class:

1. Articles, not under the supervision of an armament officer, rendered unserviceable, due to fair wear and tear in the service, which have no salable value after parts useful in repair have been removed.

2. Unserviceable articles not under the supervision of an armament officer, which can not be economically repaired with the facilities available and for the disposition of which specific instructions have been given by the Engineer or Ordnance Department.

3. Unserviceable articles pertaining to artillery and machine-gun materiel, under the supervision of the armament officer when specifically given in War Department publications or orders as falling within the provisions of this paragraph. All other unserviceable articles and parts of artillery and machine-gun matériel under charge of armament officers, including guns, mounts, vehicles, sights, and fire-control instruments, will, when replaced, be shipped to an arsenal or submitted to a surveying or inspecting officer with a view to condemnation, as directed by the armament officer under the instructions of the Chief of Ordnance.

Arms for which a test for determining unserviceability is definitely prescribed, and which have not been subjected to the same, are excepted from the application of the above.

Property falling under the classifications indicated in paragraphs 913 and 1566 will not be considered subject to the provisions of this paragraph until the necessary permission for its submission to a surveying officer or inspector has been obtained. (*C. A. R., No. 30.*)

679. Empty barrels, boxes, crates, and other packages, together with metal turnings, scrap metals, ground bone, and other waste products which accumulate at arsenals, depots, and military posts, which are unsuitable for the public service, will be disposed of in the manner prescribed for property condemned and ordered sold in paragraph 680. At arsenals and depots where such accumulations have considerable money value proposals will be invited for specific lots and quantities, or for the accumulations of definite periods, as the head of the department to which the property pertains may deem best suited to the public interest.

680. Military stores and public property condemned and ordered sold will be disposed of for cash at auction, or to the highest bidder on sealed proposals, on due public notice, and in such market as the public interests may require. The officer making the sale will suspend it when in his opinion better prices can be obtained, except in the case of condemned animals, the disposition of which is provided for in paragraph 1073. The auctioneer's certified detailed account of the sale, and the vouchers for the expenses attending it, will be

reported on the proper forms to the chief of the bureau to which the property pertained.

681. Public property which has been condemned, or the issue price of which has been reduced as the result of a survey or inspection, will not be purchased by an officer who was responsible therefor at the time of condemnation or reduction of price, nor by an officer who bore any part in such condemnation or reduction.

PROPERTY DAMAGED, LOST, DESTROYED—REWARDS.

682. Causes of damage to, and of loss and destruction of, military property are classified as follows:

1. Unavoidable causes, being those over which the responsible officers have no control, occurring (a) in the ordinary course of service, or (b) as incident to an active campaign.

2. Avoidable causes, being those due to carelessness, willfulness, or neglect.

683. Officers responsible for public property will be charged for any damage to or loss or destruction of the same, and the money value will be deducted from their monthly pay, unless they show, to the satisfaction of the Secretary of War, by their own affidavits, or by their certificates, supported by one or more affidavits, that the damage, loss, or destruction was occasioned by unavoidable causes and without fault or neglect on their part.

684. Oaths, where required in the administration of the affairs of the Army, will be taken (except when otherwise specially provided) before an officer of the Army authorized by the provisions of the one hundred and fourteenth article of war to administer oaths; or before an officer authorized by the laws of the United States or by the local municipal law to administer oaths. (*C. A. R., No. 55.*)

685. If an article of public property be lost or damaged by the neglect or fault of any officer or soldier, he shall pay the value thereof, or the cost of repairs, at such rates as may be determined by a survey of the property.

686. The amount charged against an enlisted man on the pay rolls on account of loss or damage of, or repairs to, Government property shall not exceed the value of the article or cost of repairs; and such charge will only be made on conclusive proof, and never without a survey, if the soldier demand it. He will be informed at the time of signing the pay rolls that his signature will be regarded as an acknowledgment of the justice of the charge.

687. When a deserter carries away public property, or when such property is lost through his desertion, its value will be determined by a survey and charged against him on the next pay rolls, as prescribed in paragraph 116.

688. If articles of public property are embezzled, or lost or damaged through neglect, by a civilian employee, the value or damage as ascertained (and by a survey if necessary) shall be charged to him and set against any pay or money due him.

689. Whenever information is received that animals or other property belonging to the military service of the United States are unlawfully in the possession of any person not in the military service, the quartermaster or other proper officer will promptly cause proceedings to be instituted and diligently prosecuted before the civil authorities for the recovery of the property; and, if the same has been stolen, for the arrest, trial, conviction, and due punishment of the offender and his accomplices.

690. Upon satisfactory information that such United States property, unlawfully in the possession of any parties, is likely to be taken away, concealed, or otherwise disposed of before the necessary proceedings can be had in the civil tribunals for its recovery, the post or detachment commander will at once cause the same to be seized, and will hold it subject to any legal proceedings that may

be instituted by other parties. Persons caught in the act of stealing public property will be summarily arrested by the troops and turned over to the civil authorities for trial.

691. When public property has been lost or stolen and the officer responsible therefor has failed to get possession of it by the ordinary means, the post commander may authorize the quartermaster to offer a reward for its recovery, such reward not to exceed one-fifth of the value of the property lost or stolen, and in no case shall it exceed \$50. If the property has been stolen, the reward shall include payment for such information as the claimant possesses in regard to the larceny and recovery of the property as may lead to a conviction of the guilty party.

692. The expenses necessarily incurred by any action under the three preceding paragraphs, with the exception of attorney's fees, will be paid by the Quartermaster Corps, upon proper vouchers approved by the department commander. Officers will promptly report their action to department headquarters.

PROPERTY ACCOUNTABILITY.

693. All public property, whether paid for or not, must be accounted for on the proper returns. All public property unaccounted for when discovered by an accountable officer will be taken up and the usual returns rendered therefor. When discovered by officers not accountable for that class of property, or by enlisted men or civilian employees, they shall report the same as soon as practicable to an officer so accountable, who will take it up and account for it. In the absence of such an accountable officer the senior officer, enlisted man, or civilian employee present will take charge of such property and report it to the commander of the department wherein it may be located with a view to its proper disposition.

694. An officer accountable for the public property of two or more companies will account for that pertaining to each, except quartermaster supplies, on a separate return.

695. Accountability for public property will not be transferred to enlisted men, except to ordnance sergeants and quartermaster sergeants, senior grade, and quartermaster sergeants, Quartermaster Corps, at ungarrisoned posts and sergeants of the Signal Corps or enlisted men acting as such. (*C. A. R., No. 52.*)

696. Vouchers for issues or expenditures of property not authorized by regulations will be accompanied by copies of the orders directing the issues or expenditures.

697. An officer will have credit for an expenditure of property made in obedience to the order of his commanding officer. If the expenditure is disallowed, it will be charged to the officer who ordered it.

698. Public property expended in the military service will be accounted for by the certificate of the accountable officer, and property lost or destroyed will be accounted for by the affidavit of the responsible officer, or by his certificate supported by one or more affidavits. These certificates and affidavits will accompany the return covering the period during which the expenditure occurred or the loss or destruction was discovered; but in exceptional cases, when it is impracticable to submit such certificate, and affidavits with the return, these delayed vouchers, together with the reasons for not transmitting the same, will be specified upon the return, and they will be forwarded, as soon as practicable, properly numbered and indorsed, to the proper bureau of the War Department.

699. When an enlisted man has, by a court-martial, been convicted of losing or damaging public property, the officer accountable for the property will send

with his property return a certified copy of so much of the court-martial order as refers to the case, giving number, date, and place of issue of the order, and stating on the face of said copy the rolls on which the charges are made.

700. Should an officer or agent of the Government charged with public property fail to render the prescribed returns thereof within a reasonable time, a settlement of his accounts will be made by the proper bureau of the War Department, and the money value of the property with which he is charged will be reported against him for stoppage.

701. All returns of stores or supplies will be rendered as required by regulations or orders. Those of subsistence stores will be forwarded within 10 days after the expiration of the accounting periods and those of other classes of stores and property within 20 days to the chiefs of bureaus to which they pertain. In cases in which complete transfer of property from one officer to another occurs within an accounting period, a return will be forwarded by the officer making the transfer within 20 days after the date of such transfer; but when ordnance property is transferred by a commanding officer of an ordnance establishment, by a coast defense ordnance officer, or by a post ordnance officer, and when submarine mine property is transferred by a coast defense artillery engineer, within an accounting period, the transfer of accountability will be made on the current return, which will be completed and rendered by the officer accountable at the close of the accounting period.

ADMINISTRATIVE EXAMINATION OF PROPERTY RETURNS.

702. As soon as possible after the receipt of a return by the proper chief of bureau, it will be examined in his office, and the officer making the return will be notified of all errors and irregularities found therein and granted three months to correct them. Suspensions or disallowances will not be made on account of slight informalities which do not affect the validity of a voucher, but the officer's attention may be called to them. Whenever the errors have been corrected or compensation has been made for deficient articles, and the action of the bureau chief is sustained or modified by the Secretary of War, the return will be regarded as settled, and the officer who rendered it will be notified accordingly.

703. If the necessary corrections in the return be not made within the prescribed time, the facts will be reported to the Secretary of War. When it shall have been determined that the money value of the property for which an officer has failed to account shall be refunded to the United States, the proper chief of bureau will forward to the Auditor for the War Department a certificate setting forth the condition of the officer's property return, with the statement that it includes all charges made up to its date and not previously certified, and that he has had a reasonable opportunity to be heard and has not been relieved of responsibility. Such certificate, when received, will raise a charge on the books of the Treasury Department against the officer until refundment shall have been made.

ARTICLE LIV.

LANDS, BUILDINGS, AND IMPROVEMENTS.

704. Land shall not be purchased for the United States except under an act of Congress authorizing the purchase, nor shall public money be expended for the erection of armories, arsenals, forts, fortifications, or permanent buildings of any description thereon, until the written opinion of the Attorney General

shall have been obtained announcing the validity of the title thereof in the Government, nor, if the land be within any State, until jurisdiction over it shall have been ceded to the United States by the legislature of the State, or such cession of jurisdiction shall have been expressly waived by Congress

705. All papers relating to the Washington Aqueduct and public buildings and grounds in the District of Columbia will be filed in the office of the Chief of Engineers. All other deeds and papers pertaining to the title or sale of, and any lease, grant, license, or easement of, upon, or over any military reservation or other lands under the jurisdiction of the War Department will be filed in the office of the Judge Advocate General. When any such papers come into the possession of any bureau they shall within five days thereafter be transferred to the office of the Judge Advocate General.

706. Permanent military buildings will be constructed only under special authority granted by an act of Congress, unless the work or labor connected therewith is performed by troops, and in such case the authority of Congress must first be obtained if the estimated cost of the building or structure exceeds \$20,000.

707. Permanent barracks, quarters, or other buildings, or piers or wharves, will not be erected or constructed except by the order of the Secretary of War, and in accordance with plans approved by him; nor will any material alterations be made in public buildings unless like authority is first obtained; nor will any expenditures exceeding \$500 be made upon any building or grounds at any post, fort, arsenal, or depot without the approval of the Secretary of War and upon detailed estimates submitted to him.

708. A copy of the plat of the lands at each post, fort, arsenal, and depot, furnished from the proper bureau, will be carefully preserved in the office of the commanding officer.

709. The route and location of duct lines and trenched cables on posts and other military reservations will be carefully recorded and copies of these records, obtained from the department concerned, will be furnished by the commanding officer to the respective post quartermasters. Coast defense and post commanders will exercise care in issuing instructions or granting permits for digging in the vicinity of any military underground electrical cable in order to diminish the possibility of damage thereto. Officers in charge of construction will in all cases see that no excavating or trenching is done on any post or other military reservation without previously ascertaining the location of the cables and ducts installed thereat and determining that these will not be injured by the contemplated work. (*C. A. R., No. 55.*)

709. Whenever a public building at a military post or station in the United States is destroyed or seriously damaged by fire, storm, or other natural cause, the post or station commander will make immediate report of that fact by telegraph directly to The Adjutant General of the Army, stating the numerical or other designation of the building involved and the date and cause of the destruction or damage, and will make a like report to the department commander if the post or station is under his command. When the destruction or damage occurs at a general depot of supply, a general hospital, or an arsenal or armory, or involves a building owned or leased by the Government and used for military purposes, but not located on a military reservation, the officer in charge, in addition to making the telegraph report hereinbefore prescribed to the head of the staff bureau of the War Department to which any such building may pertain, will make a like report by telegraph directly to The Adjutant General of the Army.

In the Philippine and Hawaiian Departments telegraphic report of the damage or destruction of such buildings will be made to the department com-

manders, who will cable the report to The Adjutant General of the Army if the case is of more than minor importance.

In addition to the foregoing, the estimated damage and the cost of repairs or reconstruction will be reported upon by a board of officers, to be appointed for the purpose by the post commander when the building is located at a military post, and to be appointed in orders from the office of The Adjutant General of the Army in all other cases, except in the Philippine and Hawaiian Departments, where the board will be appointed by the department commanders. In the event that the destruction or damage is not due to natural causes, the board will make a thorough investigation with a view to fixing the responsibility for such destruction or damage, and will make such recommendation with respect thereto as the case may demand. The report of the board will be forwarded through military channels to The Adjutant General of the Army.

The action contemplated by this paragraph will apply, as far as practicable, in the case of loss or destruction of or damage to an Army transport, Army mine planter, cable ship, or other vessel owned or operated by the War Department.

ARTICLE LV.

SURVEYS OF PROPERTY.

710. Public property which has been damaged, except by fair wear and tear, or is unsuitable for the service, before being submitted to an inspector for condemnation, will be surveyed by a disinterested officer, preferably the summary court officer.

711. The surveying officer will be designated by the commanding officer of the regiment, separate battalion, post, or station, from the field officers of his command whenever practicable. Such officer may, however, be appointed by the commanding officer of a department, field army, division, brigade, or district. If none but the commanding officer and interested officers be present for duty, then the commanding officer will survey the property. When only the responsible or interested officer is present, he will not appoint himself surveying officer, but will furnish the next higher administrative commander his certificate of facts and circumstances, supported by the sworn testimony of witnesses, or by the affidavits of enlisted men or others who are cognizant thereof. Should the case thus presented not be considered satisfactory, or in a case in which only interested officers with opposing interests are present for duty at the post or station, the next higher administrative commander may make the necessary investigation. In cases where the property in question has been previously acted upon, the officer making the investigation will be so informed and the previous reports will be considered. (*C. A. R. No. 50.*)

712. The surveying officer must fully investigate matters submitted to him. He will call for all evidence attainable, and will not limit his inquiries to proofs or statements presented by parties in interest. He will rigidly scrutinize the evidence, especially in cases of alleged theft or embezzlement, and will not recommend the relief of officers or soldiers from responsibility unless fully satisfied that those charged with the care of property have performed their whole duty in regard to it. He should hear in person or by deposition all persons concerned in the subject matter before him. In no case, however, will his report take the place of the evidence required in paragraph 683.

713. The person responsible for public property to be surveyed will, in all cases, furnish the original certificates and affidavits upon which he relies to be relieved from responsibility, together with the duly attested copies of such

certificates and affidavits that are to accompany the report of survey. Whenever loss or destruction of, or damage to, public property, requiring the action of a surveying officer, occurs, such action will be requested by the responsible officer as soon as practicable and in every case within 30 days after discovery of the loss, destruction, or damage, unless exceptional circumstances, which will be explained by the officer's certificates, prevent such action within that period.

714. Any officer of the Army detailed to conduct an investigation, and the recorder, and, if there be none, the presiding officer of any military board appointed for such purpose, shall have authority to administer an oath to any witness attending to testify or depose in the course of such investigation.

715. The surveying officer can not condemn public property. His action is purely advisory. He will ascertain and report facts, submitting opinions and making recommendations upon questions of responsibility which may arise through accident, mistake, or neglect. For example, he investigates and determines questions involving the character, amount, and cause of damage or deficiency which public property may have sustained in transit, store, or use, and which is not the result of ordinary wear and tear of the service, and reports the investigation made, his opinions thereon, and fixes responsibility for such damage or deficiency upon the proper party. He makes inventories of property ordered to be abandoned when the articles have not been enumerated in the orders for abandonment. He recommends the prices at which damaged clothing may be issued and the proportion in which supplies shall be issued in consequence of damage or deterioration that renders them, at the usual rate, unequal to the regulation allowance, fixing in each instance responsibility for actual condition. He verifies the discrepancy between invoices and the actual quantity or description of property transferred from one officer to another, fixes definitely amounts received for which the receiving officer must receipt, and ascertains, as far as possible, where and how the discrepancy has occurred.

716. The report will be prepared in triplicate and will then be submitted to the convening authority for approval or disapproval. Separate reports will be made for each staff department concerned.

717. On the approved recommendation of a surveying officer the following classes of property may be destroyed: (1) Clothing infected with contagious disease; (2) stores that have become so deteriorated as to endanger health or injure other stores; and (3) unserviceable property of no salable value submitted to a surveying officer under the provisions of paragraph 678. The decision of the commanding officer will be final as to whether such property has salable value.

When in the application of this paragraph under (3), to ordnance stores, the value of the stores to be destroyed on any survey shall bring the total for the quarter for any organization in excess of the amounts hereinafter given, the approval of the next higher administrative commander shall first be obtained.

Cavalry troops and Engineer and Signal Corps companies, \$300.

Batteries of Field Artillery, \$500.

Infantry and Coast Artillery companies and all other cases, \$150.

When the disposition of unserviceable articles is covered by specific instructions of any of the supply departments, they will be disposed of in accordance with such instructions in lieu of being destroyed under the provisions of this paragraph, but requests for specific instructions will not be submitted in individual cases instead of placing the property before a surveying officer or inspector.

Before ordering the destruction of property or stores under the provisions of this paragraph the commanding officer will personally inspect the same and will be held responsible that the conditions justify the action. In case the invoice value of the stores involved exceeds \$500, the approval of the next higher administrative commander will be obtained before destruction of the property, as provided in paragraph 719. A certificate of the witnessing officer that the property has been destroyed as authorized will be appended to the report. (C. A. R., No 30)

718. When the value of the property submitted for survey or the loss or damage to be inquired into does not exceed \$500 the report will be considered complete. for submission as a property voucher, upon the approval of the appointing authority, if the interested officer does not request the action of the next higher administrative commander. One copy will then be forwarded to the commanding officer of the post, if a general officer, otherwise to department headquarters, and the others delivered to the officer accountable.

719. Should the appointing authority be the responsible or interested officer, or should the report be disapproved by the appointing authority, or should the report hold the accountable officer responsible, or should the value of the property submitted for survey or the loss or damage to be inquired into exceed \$500, or should the officer pecuniarily interested request it, the report in triplicate will be forwarded to the next higher administrative commander for review, and with his action is complete. But all reports of surveys of property, whatever their nature or the amounts involved, are subject on call to such review of the next higher administrative commander as the merits of the case or the interests of the Government may require. When a next higher administrative commander acts on a report of survey as herein contemplated he will cause such action to be noted on all three copies of the report. One copy will then be filed at department headquarters and the others sent to the accountable officer, except when the latter is held responsible, when one copy only will be sent to him and the remaining copy forwarded directly to the chief of bureau to which the property pertains.

720. The reports of a survey which recommend the relief of officers and enlisted men from responsibility should not be approved unless full and careful investigation and convincing proof to sustain the findings appear.

721. When the approved report of a surveying officer holds a common carrier, or a person not in the military service of the United States, responsible for the loss of or damage to public property or stores, steps will at once be taken to make collection from the party so held responsible. Public property that has been in transit will be carefully checked upon arrival at its destination by the receiving quartermaster with the bill of lading or manifest in order to ascertain whether the carrier has fully carried out all obligations imposed upon him. Should any discrepancy, loss, or damage be found, the receiving quartermaster will at once make application for a surveying officer by whom the facts will be fully investigated (unless the carrier voluntarily assumes liability for the loss) and the money value of the damage or deficiency will be charged to the party responsible therefor, whether it be the invoicing officer or the carrier. The property will be delivered by the receiving quartermaster to the officer to whom it is invoiced or to other proper consignee with a statement of the deficiency or damage and that action by a surveying officer has been requested. Upon approval, the authority that approves the reports of the surveying officer will transmit 1 copy to the receiving quartermaster, 1 copy to the officer to whom the property is invoiced, and 1 copy to department headquarters.

In case the report of the surveying officer finds the invoicing officer responsible, 1 copy of the report will be sent to the invoicing officer instead of to the receiving quartermaster. In case the responsibility is fixed upon the carrier the receiving quartermaster will note on the bill of lading the deductions which shall be made for such loss or damage by the quartermaster who pays the account, and will attach to the bill of lading 2 copies of the approved report of the surveying officer. The quartermaster who pays the account will make the deduction and refund the amount stopped to the proper department in the following manner, for example: If from an account of \$100 for transportation services there is a deduction of \$25 for ordnance stores lost, the quartermaster will take credit under the proper item number of "Supplies, services, and transportation," for \$75 paid to the carrier, and also for \$25 deposited to the credit of the Treasurer of the United States on account of "Replacing ordnance and ordnance stores"; but if the deduction is on account of supplies lost by the carrier, pertaining to the appropriation "Barracks and quarters," he will take credit on his account current, under the proper item number of "Supplies, services, and transportation," for \$25 as carried to "Barracks and quarters," under which head he will charge himself with that amount. If, in any instance, collection can not be made, that fact, together with reasons therefor, will be reported to the proper chief of bureau. (*C. A. R., No. 42.*)

Should the officer to whom the property is invoiced on receipt of the same discover loss, damage, or discrepancy not noted by the receiving quartermaster, he will at once make application for a surveying officer, notifying the receiving quartermaster of the action.

In the case of shipments to the Philippine Islands via commercial lines, the receiving quartermaster is authorized to accomplish bills of lading on the receipt of stores, noting thereon the value of the stores lost or damaged, as shown by the invoices, plus the cost of transportation, settlement to be made with the carriers with proper deduction to cover the value of the stores and the cost of transportation, final settlement to await the action of a surveying officer, to be called for immediately by the receiving officer.

722. Properly approved reports of surveys of property may be submitted as vouchers to property returns. They are not to be considered as conclusive until accepted by the Secretary of War. Until then they are to be regarded simply as the opinions and recommendations of disinterested officers, to aid in the settlement of questions of accountability between the Government and the individuals concerned. If, on examination in the proper bureau, they exhibit serious errors, or defects either of investigation or of finding, they will not be accepted as sufficient vouchers, and the officer submitting them will be duly notified, that he may have opportunity to make explanations or appeal to the Secretary of War.

723. At posts or stations not under the control of department commanders commanding officers will be governed by these regulations in appointing surveying officers and acting upon their reports, but in cases referred to in paragraph 719 will forward the papers to the chiefs of bureaus to which the property pertains.

724. Whenever a report of a survey recommends a stoppage against an enlisted man and the recommendation is approved, the appointing authority will cause a copy of the report to be furnished to the company commander, who will charge the amount on the next pay rolls of the company.

725. If an inspection of property follows the report of a survey thereon, one copy of the proceedings will accompany the inventory and inspection report which is transmitted for approval, and will afterwards be returned to be used as a voucher to the officer's returns, and another, with the inventory and inspection report, will be filed by the officer with his retained papers.

726. Compensation may be made under the provisions of the act of Congress approved March 3, 1885, as extended by the act of Congress approved March 4, 1915, for private property of officers or enlisted men lost or destroyed in the military service under any of the following circumstances:

1. Without fault or negligence on the part of the claimant, and on account of some exigency or necessity of the military service.

2. Where the private property so lost or destroyed was shipped on board an unseaworthy vessel by order of an officer authorized to give such order or direct such shipment.

3. Where it appears that the loss or destruction of the private property of the claimant was in consequence of his having given his attention to the saving of the property belonging to the United States which was in danger at the same time and under similar circumstances

4. For the loss of or damage to the regulation allowance of baggage of officers and enlisted men sustained in shipment under orders, to the extent of such loss or damage over and above the amount recoverable from the carrier furnishing the transportation, provided such loss or damage occurred on or after March 4, 1915.

Compensation will not be made for losses sustained in time of war or hostilities with Indians, and claim for compensation must be presented within two years from the occurrence of the loss or destruction. Each claim for compensation will be forwarded, through military channels, to the Auditor for the War Department and will, if possible, be accompanied by the proceedings of a board of officers showing fully the circumstances of the loss. All personal property for the loss or destruction of which payment is claimed must be enumerated and described in the proceedings of the board of officers, but the board will recommend payment for only such articles as in the opinion of the board were reasonable, useful, necessary, and proper for the claimant to have in the public service in the line of duty

As in most cases the property for which compensation is claimed has been more or less worn, the board will determine the value of each particular article and recommend the amounts to which claimants may be entitled. (*C. A. R.*, No. 25.)

ARTICLE LVI.

CIVILIAN EMPLOYEES.

GENERAL PROVISIONS.

727. In the staff corps and departments the employment of civilians will be regulated by the respective chiefs of bureaus under the direction of the Secretary of War. Those whose services are engaged with the intention or probability of retaining them in the service are considered permanent employees. Their appointment, dismissal, promotion, or reduction will be made, under the supervision of the respective chiefs of bureaus, by the officers employing them, except as controlled by statute or the civil service rules; but in selections for such employment preference will be given, as far as practicable, to applicants who have served meritoriously as enlisted men in the Army, and the appointments and promotions of all permanent employees, except laborers, teamsters, and others of similar or kindred occupations, will be submitted for the approval or confirmation of the Secretary of War.

728. The clerks and messengers authorized by the act of Congress of August 6, 1894, will be employed and apportioned to the several headquarters and stations by the Secretary of War, and will not be transferred without his

authority. All messenger service at the several department headquarters, except for staff officers not assigned to the headquarters staff, and, as far as practicable, all clerical services thereat, will be performed by this class of employees.

729. Department commanders will confine expenditures for civilian employees within the allotments for the purpose made under the direction of the Secretary of War.

730. Civil engineers, clerks, inspectors, storekeepers, packers, watchmen, messengers, teamsters, mechanics, and laborers will, as a rule, be engaged by the month, day, or piece, and paid at the end of each calendar month. They will be designated upon the rolls in the capacity in which employed and at the rates established. When discharged and not paid, certified statements will be given them.

731. Eight hours shall constitute a day's work for all mechanics, laborers, and workmen employed by the several staff departments. The service of mechanics and laborers employed by contractors in the execution of public works, including the construction of barracks, quarters, or other buildings on military reservations, is also limited and restricted to eight hours in each calendar day, and no officer or contractor shall require or permit any such laborer or mechanic to work more than eight hours in any calendar day except in cases of extraordinary emergency. There are excepted from the operation of this rule: (1) The officers and crews of vessels; (2) teamsters, packers, and other employees belonging to wagon and pack trains when engaged in field service or in the prosecution of military operations; (3) persons employed as cooks and cooks' helpers, overseers of labor of prisoners, and others who, owing to the nature of their employment being peculiar, may be decided by the Secretary of War, upon the facts being reported to him, to be neither laborers nor mechanics within the meaning of the eight-hour law. All exceptions on the ground of extraordinary emergency will be promptly reported to the Secretary of War.

All contracts for the execution of public works, including the erection of buildings for the use of the Military Establishment, will contain a stipulation restricting the service of mechanics and laborers to eight hours per day, and officers charged with the supervision and execution of such contracts will report all violations of such stipulation to the head of the bureau charged with the prosecution of the work.

TRAVELING EXPENSES.

732. For authorized journeys of civilian employees of any branch of the military service transportation requests will be obtained when practicable, but will be obtained in every case for travel over bond-aided railroads.

733. Reimbursement of actual expenses when traveling under competent orders will be allowed, under the following heads, to civilians in the employ of any branch of the military service, excepting the expert accountant of the Inspector General's Department and those mentioned in paragraph 734, viz:

1 Cost of transportation over the shortest usually traveled route, when it was impracticable to furnish transportation in kind on transportation requests.

2 Cost of transfers to and from railroad stations, not to exceed 50 cents for each transfer.

3. Cost of one lower berth in a sleeping car, seat in a parlor car, or customary stateroom accommodations on boats and steamers when extra charge is made therefor.

4. Fees to expressmen and porters on arrival at and departure from hotels and stations not to exceed 10 cents in each case when the service is rendered in connection with the transportation of baggage; fees for checking baggage at stations and hotels not to exceed 10 cents for each piece checked; and fees

to sleeping-car and parlor-car porters not to exceed 25 cents per day, or 10 cents when the car is used in daytime only.

5. Cost of meals, including tips, not to exceed \$4.50 a day while en route when meals are not included in the transportation fare paid, and not to exceed \$4.50 a day for meals, tips, and lodgings during necessary delay en route, and when meals are included in the transportation fare paid tips for meals not to exceed 15 cents each.

6. Cost of meals and lodgings, including baths, tips, and laundry work, not to exceed \$4.50 a day for the first 30 days while on duty at places designated in the orders for the performance of temporary duty and a flat per diem allowance of \$1 a day after the first 30 days of temporary duty at any one place. In time of actual war no such reimbursement of expenses or per diem allowance will be allowed to the civilian employees specified who accompany troops in the field, but in lieu thereof the allowance of tents prescribed by the War Department and a ration will be furnished such employees.

7. In lieu of reimbursement for the actual expenses provided in sections 5 and 6, civilian employees, when their orders so prescribe, may be allowed a flat per diem allowance not exceeding \$4 when traveling and when on duty for the first 30 days at places designated in their orders for the performance of temporary duty, but no per diem allowance will be allowed for temporary duty to civilian employees who in time of actual war accompany troops in the field, nor for travel on Army transports. Where a period of travel or temporary duty includes fractional parts of a calendar day the allowance for fractional parts will be as follows:

1. If in travel status, the day will be divided into three fractional parts, and allowance of \$1.33 $\frac{1}{3}$ being made for each meal.
2. If not in travel status, the day will be divided into four fractional parts, an allowance of \$1 being made for each of 3 meals and \$1 for lodging.

A statement will accompany each voucher showing the following data

- Time of departure from permanent station
- Time of arrival at temporary station.
- Time of departure from temporary station
- Time of arrival at permanent station.

The provisions of paragraph 735, in so far as they require the keeping of a memorandum of the actual expenses incurred and taking of receipts, have no application to civilians operating under conditions which entitle them to a per diem allowance, except for the period while actually traveling and then only for such items of expenses as are not embraced within the per diem allowance. (*C. A. R., Nos. 13, 18, 25, 27, and 45.*)

784. Mechanics, laborers, teamsters, and employees of similar character, traveling under competent orders, will be entitled to such actual and necessary expenses of transportation and subsistence or per diem allowance in lieu of subsistence, not exceeding \$4, as may be authorized by the chief of bureau which pays the accounts. Those entitled to rations under paragraph 1203 will not be allowed commutation therefor, and if it be impracticable for them to carry food, a ration and savings account will not be opened for them for the period during which they are traveling.

Commanding officers of troops in the field may order civilian employees to nearest Army hospital for treatment when adequate medical service is not available at their stations. On recovery such employees should be returned to their stations for duty by the proper commanding officer. In all cases, where practicable, orders should be issued based on a medical certificate. (*C. A. R., No. 13.*)

735. None but the authorized items of traveling expenses of civilians will be allowed. A true memorandum of the actual expenses paid from day to day will be kept and the expenses will be fully itemized upon the voucher, which will be properly sworn to by the person rendering it. Receipts for lodging (European plan) or for board and lodging (American plan) must be furnished when practicable to obtain them, showing the dates for which the charge is made and the first and last meal or lodging. Charge for lodging pertains to the day in which the night for which the lodging was procured began. Receipts will not be required for meals except where included with lodging on the American plan, nor for railroad or steamboat fares, hack fares, baggage transfers, car fare, tips, or fees, or similar expenses. For all other expenses receipts will be taken, unless it is impracticable to obtain them, when the reason for not obtaining receipts must be explained on the voucher. The usual Pullman berth check or seat check will be a sufficient receipt for sleeping-car or parlor-car accommodations.

736. The allowances hereinbefore provided for the subsistence of civilian employees cease upon the arrival of the employees at the destination mentioned in their orders for travel; they must then subsist on their rations, if entitled to them, or provide for their subsistence out of their regular pay.

737. Pay clerks, Quartermaster Corps, and the expert accountant, Inspector General's Department, will be entitled to mileage at the same rates and under the same conditions as is provided by law for officers of the Army.

738. Actual traveling expenses, as contemplated in the preceding paragraphs, are paid by the following departments, viz:

ORDNANCE DEPARTMENT.—To employees at arsenals and armories (cost of transportation included) from appropriations for the service of the Ordnance Department.

ENGINEER DEPARTMENT.—To employees on public works and fortifications (cost of transportation included) from appropriations made specifically for the work.

QUARTERMASTER CORPS.—To civilians summoned as witnesses before, and authorized civilian reporters of, military courts; to employees of the Quartermaster Corps, and to other employees of the Army not above provided for.

739. When officers of the staff departments change station the transfer of clerks or other employees to the new stations at the expense of the United States is prohibited, except in cases of urgent necessity, for which the sanction of the Secretary of War will be first obtained.

ARTICLE LVII.

STAFF ADMINISTRATION.

740. The supply, payment, and recruitment of the Army, and the direction of the expenditures of the appropriations for its support, are by law intrusted to the Secretary of War. He exercises control through the Chief of Staff and the bureaus of the War Department. He determines where and how particular supplies shall be purchased, delivered, inspected, stored, and distributed.

741. The exercise by the President of his power to call the Organized Militia into the service of the United States, or to raise volunteers, authorizes the chiefs of the supply departments of the Army to equip and supply said forces in the manner authorized by the Army and Field Service Regulations, limited only by available appropriations.

742. When a chief of bureau of the War Department desires to change the station of an officer or enlisted man of his department, or to send him on duty

peculiar thereto (except as hereinafter authorized), he will apply to The Adjutant General of the Army for the necessary orders, setting forth the reasons for the change or the purpose of the journeys. Journeys, not involving change of station to be performed by officers of the Corps of Engineers on duty peculiar to fortification work or to river and harbor or other civil work, may be ordered by the Chief of Engineers when such officers are subject to his immediate orders, and similarly may be approved by him under paragraph 73. District engineer officers may issue orders to their military assistants for journeys to be performed by them on duty peculiar to fortification work or to river and harbor or other civil work within the geographical limits of their respective districts and may approve such travel under paragraph 73.

743. The assignment to stations of officers or enlisted men of the staff departments, except as provided in the Field Service Regulations, will be made by the War Department or by commanders of territorial departments under the special authority of the War Department. The commander of a department who, in consequence of the movement of troops or other necessity of service, removes an officer from the station to which he has been assigned by the War Department will promptly report the case to The Adjutant General of the Army. (*C. A. R., No. 52.*)

744. When business upon which a board of officers is to be assembled is solely within the sphere of duty of a particular staff department, and the members thereof are to be selected from the same, the chief of such department will call the board if it is to meet at a post or station under his immediate control and is to be composed only of officers serving thereat; otherwise the order appointing it will be issued by direction of the Secretary of War.

745. Copies of all important communications from a bureau of the War Department to a disbursing officer on the staff of a department commander, which concern service in such department, will be sent direct to the department commander.

746. Staff officers assigned to the command of an officer are under his supervision and control in all matters pertaining to or affecting the command and in all other matters which are not specially excepted from such control by the regulations or orders of the War Department.

747. Commanders of departments, in order to avoid unnecessary clerical labor and accumulation of papers, will call upon officers under their orders for only such abstracts or reports, in addition to those required by regulations, as may be needed for proper administration, but will not require regular reports and returns at stated times without the authority of the War Department.

748. Commanding officers will cause returns, requisitions, and estimates pertaining to their respective commands to be promptly made and forwarded.

749. Officers doing duty as staff officers of military posts and commands will submit their estimates and requisitions for supplies, property, and money to their immediate commanding officers for revision and approval, who will carefully examine estimates and requisitions and satisfy themselves that money or articles asked for are in amount, quantity, and kind actually required for the public service during the period covered.

750. The chief of each branch of the staff of any command will carefully revise the estimates and requisitions for money and supplies for the command in so far as his particular branch is concerned. He will ascertain and recommend the cheapest markets and most economical routes of transportation. Such officers will receive from their commanders timely instructions as to all contemplated movements of troops and as to any probable increase or diminu-

tion of the garrison at any particular post, that a proper and economical distribution of supplies may be made.

751. It is the duty of commanding officers to enforce rigid economy in public expenditures and to correct all irregularity and extravagance which they may discover; to see that disbursements are economically made and that public property is protected; to scrutinize carefully all contracts and vouchers for disbursements; and to guard the public interests in every particular

ARTICLE LVIII

GENERAL STAFF CORPS.

752. The General Staff Corps, created in conformity to the act of Congress approved February 14, 1903, is composed of officers of the grades and number specified in said act, detailed for service in said corps for a period of four years unless sooner relieved, under rules of selection prescribed by the President. Upon being relieved from duty in the General Staff Corps officers return to the branch of the Army in which they hold permanent commissions, and except in case of emergency or in time of war are not eligible to further detail therein until they have served for two years with the branch of the Army in which commissioned. This ineligibility does not apply to any officer who has been relieved prior to the expiration of four years' duty with the corps; but such officer will become ineligible as soon as he shall have completed a total of four years of said duty. While serving in the General Staff Corps officers may be temporarily assigned to duty with any branch of the Army.

753. The law establishes the General Staff Corps as a separate and distinct staff organization, the chief of which has supervision, under superior authority, over all branches of the military service, line and staff, except such as are exempted therefrom by law or regulations, with a view to their coordination and harmonious cooperation in the execution of authorized military policies.

754. The General Staff Corps, under the direction of the Chief of Staff, is charged with the duty of investigating and reporting upon all questions affecting the efficiency of the Army and its state of preparation for military operations, and to this end considers and reports upon all questions relating to organization, distribution, equipment, armament, and training of the military forces (regulars, volunteers, and militia), proposed legislative enactments and general and special regulations affecting the Army, transportation, communications, quarters, and supplies; prepares projects for maneuvers; revises estimates for appropriations for the support of the Army and advises as to disbursement of such appropriations; exercises supervision over inspections, military education and instruction, examinations for the appointment and promotion of officers, efficiency records, details and assignments, and all orders and instructions originating in the course of administration in any branch of the service which have relation to the efficiency of the military forces; prepares important orders and correspondence embodying the orders and instructions of the President and Secretary of War to the Army; reviews the reports of examining and retiring boards, and acts upon such other matters as the Secretary of War may determine.

755. The General Staff Corps, under like direction, is further charged with the duty of preparing plans for the national defense and for the mobilization of the military forces (including the assignment to armies, corps, divisions, and other headquarters of the necessary quota of general staff and other staff

¹ This article is subject to the provisions of the order of the Secretary of War of April 14, 1906.

officers), and incident thereto with the study of possible theaters of war and of strategic questions in general; with the collection of military information of foreign countries and of our own; the preparation of plans of campaign, of reports of campaigns, battles, engagements, and expeditions, and of technical histories of military operations of the United States.

756. To officers of the General Staff Corps are committed the further duties of rendering professional aid and assistance to the Secretary of War and to general officers and other superior commanders and of acting as their agents in informing, and coordinating the action of, all the different officers who are subject under the provisions of law to the supervision of the Chief of Staff. They perform such other military duties not otherwise assigned by law as may from time to time be prescribed by the President. Under the authority here conferred officers of the General Staff Corps are intrusted with the executive duties hereinafter indicated.

757. Officers of the General Staff Corps assigned to duty with commanders of armies, divisions, separate brigades, and territorial departments are collectively denominated the General Staff serving with troops. They serve under the immediate orders of such commanders; those not so assigned perform duty under the immediate direction of the Chief of Staff and constitute the War Department General Staff.

758. The assignment of duties to the General Staff Corps does not involve in any degree the impairment of the initiative and responsibility which special staff corps and departments have in the transaction of current business.

WAR DEPARTMENT GENERAL STAFF.

759. To facilitate the performance of its duties, the War Department General Staff will be arranged in sections, each under the direction of an officer of the General Staff Corps to be designated by the Chief of Staff. Such committees will be designated in the sections from time to time as may be necessary to facilitate the transaction of business in hand.

760. The War Department General Staff in its several sections and committees stands in an advisory relation to the Chief of Staff in the performance of the duties herein devolved upon him. The distribution of duties to the several sections and committees is regulated by the Chief of Staff.

CHIEF OF STAFF.

761. Under the act of February 14, 1903, the command of the Army of the United States rests with the constitutional Commander in Chief, the President. The President will place parts of the Army, and separate armies whenever constituted, under commanders subordinate to his general command; and, in case of exigency seeming to him to require it, he may place the whole Army under a single commander subordinate to him; but in time of peace and under ordinary conditions the administration and control of the Army are effected without any second in command.

The President's command is exercised through the Secretary of War and the Chief of Staff. The Secretary of War is charged with carrying out the policies of the President in military affairs. He directly represents the President and is bound always to act in conformity to the President's instructions. Under the law and the decisions of the Supreme Court his acts are the President's acts and his directions and orders are the President's directions and orders.

The Chief of Staff reports to the Secretary of War, acts as his military adviser, receives from him the directions and orders given in behalf of the President, and gives effect thereto in the manner hereinafter provided. For

purposes of administration the office of the Chief of Staff will constitute a supervising military bureau of the War Department.

Exceptions to this ordinary course of administration may, however, be made at any time if the President sees fit to call upon the Chief of Staff to give information or advice, or receive instructions, directly.

Wherever in these regulations action by the President is referred to, the action of the President through the Secretary of War is included; and wherever the action of the Secretary of War is referred to, the Secretary of War is deemed to act as the representative of the President and under his direction.

The Chief of Staff is detailed by the President from officers of the Army at large not below the grade of brigadier general. The successful performance of the duties of the position requires what the title denotes—a relation of absolute confidence and personal accord and sympathy between the Chief of Staff and the President, and necessarily also between the Chief of Staff and the Secretary of War. For this reason, without any reflection whatever upon the officer detailed, the detail will in every case cease, unless sooner terminated, on the day following the expiration of the term of office of the President by whom the detail is made; and if at any time the Chief of Staff considers that he can no longer sustain toward the President and the Secretary of War the relations above described, it will be his duty to apply to be relieved.

The provisions of paragraph 752 regarding the redetail of an officer who has not completed a total of four years' service apply to the Chief of Staff.

762. The Chief of Staff is charged as limited and provided by law with the duty of supervising, under the direction of the Secretary of War, all troops of the line, the Adjutant General's, Inspector General's, Judge Advocate General's, Medical, and Ordnance Departments, the Quartermaster Corps, the Corps of Engineers, and the Signal Corps. He performs such other military duties not otherwise assigned by law as may be assigned to him by the President.

763. The supervisory power vested by statute in the Chief of Staff covers primarily duties pertaining to the command, discipline, training, and recruitment of the Army, military operations, distribution of troops, inspections, armament, fortifications, military education and instruction, and kindred matters, but includes also, in an advisory capacity, such duties connected with fiscal administration and supply as are committed to him by the Secretary of War.

In respect to all duties within the scope of his supervisory power, and more particularly those duties enumerated in this and the following paragraph, he makes and causes to be made inspections to determine defects which may exist in any matter affecting the efficiency of the Army and its state of preparation for war. He keeps the Secretary of War constantly informed of defects discovered, and under his direction issues the necessary instructions for their correction.

764. Supervisory power is conferred upon the Chief of Staff over all matters arising in the execution of acts of Congress and executive regulations made in pursuance thereof relating to the militia. This supervision is especially directed to matters of organization, armament, equipment, discipline, training, and inspections. Proposed legal enactments and regulations affecting the militia and estimates for appropriations for its support are considered by him, and his recommendations submitted to the Secretary of War.

765. The Chief of Staff is charged with the duty of informing the Secretary of War as to the qualifications of officers as determined by their records, with a view to proper selection for special details, assignments, and promotions, including detail to and relief from the General Staff Corps; also of presenting recommendations for the recognition of special or distinguished services.

766. All orders and instructions emanating from the War Department, and all regulations affecting the Army or the status of officers or enlisted men therein, are issued by the Secretary of War through the Chief of Staff, and are communicated to troops and individuals in the military service through The Adjutant General of the Army.

767. The assignment of officers of the General Staff Corps to stations and duties is made upon the recommendation of the Chief of Staff.

768. In case of absence or disability of the Chief of Staff the senior officer of the General Staff present for duty in Washington shall act as such chief unless otherwise specially directed by the Secretary of War.

769. In the performance of the duties hereinbefore enumerated and in representation of superior authority, the Chief of Staff calls for information, makes investigations, issues instructions, and exercises all other functions necessary to secure proper harmony and efficiency of action upon the part of those placed under his supervision.

THE GENERAL STAFF SERVING WITH TROOPS.

770. The general staff of a command consists of general staff officers of such number and grades as may be assigned to it on the recommendation of the Chief of Staff.

771. The senior general staff officer on duty with a command shall, unless otherwise directed by the War Department, be the chief of staff of the command. Ordinarily he will be so assigned by the War Department.

772. The duties of the chief of staff of a command are as prescribed for officers of the General Staff Corps in paragraphs 754 to 757, and in addition he will, under direction of the commander of the troops, perform all duties analogous to those devolved by paragraphs 762 to 769 upon the Chief of Staff of the Army. The other general staff officers serving with troops are employed under the direction of the commanders thereof upon the duties prescribed for officers of the General Staff Corps, and they shall perform such other duties within the scope of general staff employment as may be directed by such commanders. General staff officers will not be assigned to other than general staff duties except by special authority of the War Department.

773. The two general officers authorized for the General Staff Corps are detailed by the President from officers of the Army at large not below the grade of brigadier general. All vacancies that may occur in the General Staff Corps in grades below that of brigadier general will be filled on the recommendation of a board of five general officers of the line, not more than two of whom shall be members of the General Staff Corps, convened by the War Department at such times as may be necessary. The board will be sworn to recommend officers solely on their professional efficiency, and on their probable aptitude and fitness for general staff service, and will select such number of officers of the proper grades to fill existing or expected vacancies as the War Department may direct.

ARTICLE LIX.

ADJUTANT GENERAL'S DEPARTMENT.

774. The Adjutant General's Department is the department of records, orders, and correspondence of the Army and the militia.

The Adjutant General is charged, under the direction of the Secretary of War, and subject to the supervision of the Chief of Staff in all matters pertaining to

the command, discipline, or administration of the existing Military Establishment, with the duty of recording, authenticating, and communication to troops and individuals in the military service all orders, instructions, and regulations issued by the Secretary of War through the Chief of Staff; of preparing and distributing commissions; of compiling and issuing the Army Register and the Army List and Directory; of consolidating the general returns of the Army; of arranging and preserving the reports of officers detailed to visit encampments of militia; of preparing the annual returns of the militia required by law to be submitted to Congress; of managing the recruiting service, and of recording and issuing orders from the War Department remitting or mitigating sentences of general prisoners who have been discharged from the military service.

The Adjutant General is vested by law with the charge, under the Secretary of War, "of the military and hospital records of the volunteer armies and the pension and other business of the War Department connected therewith"; and of the publication and distribution of the Official Records of the War of the Rebellion. He also has charge of the historical records and business of the permanent Military Establishment, including all pension, pay, bounty, and other business pertaining to or based upon the military or medical histories of former officers or enlisted men.

The archives of The Adjutant General's Office include: All military records of the Revolutionary War; the records of all organizations, officers, and enlisted men that have been in the military service of the United States since the Revolutionary War; the records of the movements and operations of troops; the medical and hospital records of the Army; all reports of physical examination of recruits and all identification cards; the records of the Provost Marshal General's Bureau; the records of the Bureau of Refugees, Freedmen, and Abandoned Lands; the Confederate records, including those pertaining to the legislative, executive, and judicial branches of the Confederate government.

Upon the muster out or discharge of volunteers or militia from the service of the United States all the records that pertain to them, and that have not already been filed in The Adjutant General's Office, will be transferred to and filed in that office.

The Adjutant General takes such steps as are necessary to complete or correct the records in his custody, and answers all calls or inquiries that are answerable from those records and that do not require administrative action by other bureaus of the War Department.

ARTICLE LX.

MILITARY CORRESPONDENCE.

775. An official letter should refer to one subject only. Letters of transmittal will be used only when necessary, and when used must refer only to the matter transmitted; none are required with rolls, returns, estimates, requisitions, or periodical reports. Telegrams will be followed by official copies sent by first mail in cases of financial transactions of more than trifling importance and in cases in which chiefs of bureaus of the War Department may deem it necessary themselves to send, or to require officers serving under their immediate control to send to them, such copies.

776. Letters will be written, folded, numbered, briefed, marked, and signed; indorsements will be written, numbered, and signed; and inclosures will be numbered and marked as prescribed in orders from the War Department. Models illustrating the system are furnished from The Adjutant General's Office.

777. The post-office address of an officer's station will be given in his official letters. Indefinite expressions of locality, which do not indicate where the letter was written, will not be used.

778. In order to reduce the possibility of confidential communications falling into the hands of persons other than those for whom they are intended, the sender will inclose them in an inner and an outer cover; the inner cover to be a sealed envelope or wrapper addressed in the usual way but marked plainly "Confidential" in such manner that the notation may be most readily seen when the outer cover is removed. The package thus prepared will then be inclosed in another sealed envelope or wrapper addressed in the ordinary manner with no notation to indicate the confidential nature of the contents.

The foregoing applies not only to confidential communications entrusted to the mails or to telegraph companies but also to such communications entrusted to messengers passing between different offices of the same headquarters, including the bureaus and offices of the War Department.

Government telegraph operators will be held responsible that all telegrams are carefully guarded. No received telegram will ever leave an office except in a sealed envelope, properly addressed. All files will be carefully guarded, and access thereto will be denied to all parties except those authorized by law to see the same.

779. Official communications will be signed or authenticated with the pen and not by facsimiles, and if written by order, it will be stated by whose order. Signatures will be plainly and legibly written. By virtue of the commission and assignment to duty, the adjutant general or adjutant of any command transacts the business or correspondence of that command over his own signature; but when orders or instructions of any kind are given, the authority by which he gives the order must be stated. In the absence of a commanding general, his chief of staff, or, if there be none, his adjutant general, in signing the communications to be forwarded to higher authority, will add to his signature the words, "In the absence of the ——— commander."

780. An officer will not be designated in orders nor addressed in official communications by any other title than that of his actual rank.

781. Private correspondence from persons in the military service which they may desire to have forwarded through the dispatch agents of the United States will be addressed, under cover, to the War Department.

782. Except as otherwise specially authorized or required by Army Regulations, all official communications from officers and enlisted men of the Army outside of the War Department intended for the Secretary of War or for any bureau or office of the War Department will be in writing and addressed to The Adjutant General of the Army, who will submit all business, coming to him from the Army, which requires action in the War Department or by the President and which does not come within the jurisdiction of chiefs of bureaus, to the Chief of Staff, to be acted upon by him in conformity to the rules duly prescribed for that purpose by the President or the Secretary of War.

Correspondence of the War Department with the Army will be through or by The Adjutant General of the Army.

783. Communications, whether from a subordinate to a superior, or vice versa, will pass through intermediate commanders. This rule will not be interpreted as including matters in relation to which intermediate commanders can have no knowledge, and over which they are not expected to exercise control. Chiefs of War Department bureaus are intermediate commanders between higher authority and the officers and enlisted men of their respective corps or departments, who are serving under the exclusive control of themselves and

their subordinates. Verbal communications will be governed by the same rules as to channels as written communications. When necessity requires communications to be sent through other than the prescribed channel, the necessity therefor will be stated.

Communications from superiors to subordinates will be answered through the same channel as received.

784. Correspondence between an officer of a staff corps or department and the chief of the War Department bureau in which he is serving, which does not involve questions of administrative responsibility within the supervision of commanding officers outside that staff corps or department nor relate to individual interests or status of a military nature requiring the action of authority outside that staff corps or department, and which is concerned exclusively with the business of that staff corps or department, will pass directly. All business emanating from the bureaus of the War Department requiring the action of higher authority will be submitted to the Chief of Staff for his consideration, either orally in person, or in writing through The Adjutant General of the Army. In all cases the action of higher authority thereon will be communicated in writing by The Adjutant General of the Army to those concerned. Matters, however, of a purely civil nature will be submitted by chiefs of bureaus directly to the Secretary of War unless otherwise required by their subject matter.

785. Except as provided in paragraph 783, all communications, reports, and estimates from officers serving at a military post, and communications of every nature addressed to them relating to affairs of the post, will pass through the post commander.

786. Officers who forward communications will indorse thereon their approval or disapproval, with remarks. No communication will be forwarded to the War Department by a department commander or other superior officer for the action of the Secretary of War without some recommendation or expression of opinion.

787. A commander or chief of bureau may communicate with those under his command or direction through a staff or other suitable officer. With all others he will himself make the communication.

788. Unless otherwise expressly authorized by statute, an application for the official opinion of the Judge Advocate General or of an officer of any Executive Department of the Government other than the War Department will be addressed to The Adjutant General of the Army. Abstract questions will not be presented.

789. Unimportant and trivial communications need not be forwarded to The Adjutant General of the Army simply because addressed to him. Department, brigade, and district commanders should decide whether a communication is of sufficient importance to be forwarded.

790. In official correspondence between officers or between officers and officials of other branches of the public service, and especially in matters involving questions of jurisdiction, conflict of authority, or dispute, officers of the Army are reminded that their correspondence should be courteous in tone and free from any expression partaking of a personal nature or calculated to give offense. Whenever questions of such character shall arise between officers and officials of other branches of the public service, and it is found that they can not be reconciled by an interchange of courteous correspondence, the officer of the Army, as the representative of the interests of the War Department in the matter involved, will make a full presentation of the case to the Secretary of War through the proper military channels, in order that the same may be properly considered.

ARTICLE LXI.**ORDERS**

791. The routine orders of commanders of armies, divisions, brigades, regiments, battalions not organized into regiments, posts, departments and districts are denominated "general (general court-martial or special) orders" of such army, division, etc., according to character, and are numbered in separate series, each beginning with the calendar year or at the time of the establishment of the headquarters. Orders issued by commanders of battalions forming parts of regiments, companies, or small detachments are simply denominated "orders," and are numbered in a single series, beginning with the year. Circulars issued from any headquarters are numbered in a separate series.

The orders of commanders of armies, divisions, brigades, regiments, separate battalions, and companies in the field, relating entirely to tactical or strategical operations incident to a state of war, are denominated "field orders" and are numbered in series.

792. General orders publish matters of importance to the whole command which are of permanent interest or are to be constantly observed, such as hours for roll calls and duties, police regulations and prohibitions, laws and regulations for the Army, and eulogies or censures.

793. Special orders are such as concern individuals or relate to matters that need not be made known to the whole command.

794. General orders and all important special orders must be read and approved, before issue, by the officer whose orders they are.

795. An order will state the source from which it emanates, its number, date, place of issue, and the authority under which issued. It may be put in the form of a letter addressed to the individual concerned through the proper channel.

796. Orders for any body of troops will ordinarily be addressed to its commanding officer, the address naming the office and not the individual. They will be executed by the commander present, who will publish them and distribute copies when necessary.

797. Orders eulogizing the conduct of living officers will not be issued except in cases of gallantry in action or performance of especially hazardous service. Obituaries of commissioned officers will be limited to statements of service as shown by the records. (*C. A. R. No 1*)

798. In the field, verbal and important written orders are carried by officers. Dispatches for distant corps should be intrusted only to officers to whom their contents may be confided.

799. Mounted enlisted men will be employed to carry important dispatches only in special and urgent cases. The precise hours of departure and the rates at which they are to be conveyed will be written clearly on the covers of all dispatches transmitted by mounted orderlies.

800. Orders to an officer involving travel on duty, as for the inspection or payment of troops, etc., will designate the troops and posts to be visited and the order in which he will visit them.

801. Orders and instructions will be transmitted through intermediate commanders, in order of rank, except when they are of such character that the commanders have no power to modify or suspend them. In such cases the orders or instructions will be sent directly to the officer by whom they are to be executed, copies being furnished to the intermediate commanders.

802. Printed orders are generally distributed directly to posts by the headquarters from which issued. Files of such orders will be kept by each regiment

and company and at each military post, and will be turned over by a commander, when relieved, to his successor. If general orders in regular succession are not received within a reasonable time, commanding officers will report missing numbers to the proper headquarters.

803. General orders of the War Department issued from the Office of The Adjutant General of the Army will be distributed by The Adjutant General's Department. The distribution will be made, first, by The Adjutant General of the Army directly, and, second, under the immediate direction of The Adjutant General of the Army, by the department adjutants of the several territorial departments, each department adjutant to make the distribution within his own department.

1. BY THE ADJUTANT GENERAL OF THE ARMY.

(a) To the department adjutants of the several territorial departments, such number of copies as will enable them to make the distribution hereinafter prescribed. (b) To the Chief of Staff and to the chiefs of bureaus and offices of the War Department, for use in the official files and for the personal files of such officers as are on duty in Washington in the War Department General Staff, the bureaus and offices of the department, and the Army War College. (c) To each military attache, one copy for his personal file.

2. BY THE DEPARTMENT ADJUTANTS OF THE SEVERAL TERRITORIAL DEPARTMENTS.

(a) To the several offices at department, brigade, and district headquarters for the official files thereat. (b) To each regimental, coast defense, and post headquarters for the official files thereat; to each troop, battery, or company organization for its official file; and to each officer, whatever his duty or station, who is under assignment to or is serving within the geographical limits of any territorial department and who is not supplied directly by The Adjutant General of the Army as hereinbefore provided, including every officer absent sick, on leave of absence, or otherwise temporarily absent, for his personal file. (c) To each civil educational institution to which an officer of the Army is detailed, two copies, one of which is for the file of the institution and the other for the personal file of the officer, both copies to be sent directly to the officer, who will deliver one of them to the head of the institution. (d) To the following institutions, depots, stations, and other establishments that may be located within the geographical limits of any territorial department, for official and personal files, to wit, the United States Military Academy, the service schools (except the Army War College), the United States Military Prison or any branch thereof, general recruit depots, general recruiting stations, general hospitals, arsenals, armories, general depots of supply, and Signal Corps stations. (e) To the Army transports, mine planters, and cable ships serving within the geographical limits of any territorial department, or having home ports therein.

In making the distribution hereinbefore provided for the following rules will govern: An official file or a personal file consists of one copy of each general order of the series. Only one personal file will be allowed in any individual case and the number of official files will be as follows: (1) To department and military district headquarters, such number as may be necessary (2) To a coast defense or a regimental headquarters, five; to a post, one for the post, one each for the adjutant, quartermaster, surgeon, and ordnance officer, and one for the post artillery engineer at each coast artillery

post that is not coast defense command headquarters. (3) To each troop, battery, or company organization, one. (4) To an Army transport, mine planter, or cable ship, one.

The requisite number of copies of orders to supply all authorized official and personal files at a post will be sent to the post commander, who will distribute them in accordance with the provisions of this paragraph.

When a regiment is serving in the field it will be furnished with three copies of each general order, in addition to the number for the official and personal files hereinbefore authorized.

In all cases in which the number of orders to be supplied for official files is not definitely fixed by this paragraph, the number of such files to be maintained and supplied will be determined by special instructions from The Adjutant General's Office.

Chiefs of bureaus and offices of the War Department will not supply copies of War Department orders for the official or personal files of any of their subordinates, except such as are on duty in their respective bureaus and offices in Washington.

The official files of general orders will not be removed from the stations or organizations to which they belong.

Individual officers serving, or under assignment to duty, within the geographical limits of any territorial department, but not reporting to the headquarters thereof, will make application to the department adjutant of such department for their supply of War Department general orders, and will thereafter keep him informed of any change in their respective addresses, such application to show in each case the number of the last general order of the officers' files, in order that his files may be brought to date and kept complete.

Officers failing to receive copies of general orders of the War Department, or desiring to replace copies that have been lost or destroyed, will make application for the desired copies to the officer by whom such orders are ordinarily furnished to them.

SPECIAL ORDERS.

Full copies of special orders will be furnished directly from The Adjutant General's Office to the chiefs of bureaus and officers of the War Department and, for use in the official files, to the headquarters of each department, brigade, and district.

Extracts of special orders will be furnished from the Office of The Adjutant General of the Army directly, or through intermediate commanders, only to those concerned.

When a special order involves travel, the office issuing it will furnish the person concerned with a copy for his personal file and an additional number of copies sufficient to enable him to meet the requirements of regulations.

804. In camp or garrison, orders that affect a command will, as a rule, be read to the troops at the first regular parade after they are received. In the field, when orderly hours can not be observed, they will be sent directly to the troops, or commanders of regiments or corps will be informed when to send to headquarters for them, or during a halt orders will be read to troops, without waiting for the regular parades.

805. Commanding generals of territorial departments will forward to The Adjutant General of the Army, as soon as issued from their headquarters, such number of copies of general orders and circulars and special orders, with indexes thereto, and rosters of troops as may be directed from time to time by the War Department.

Commanding officers of separate brigades will forward to The Adjutant General of the Army two copies of all orders and circulars as soon as issued from their headquarters.

806. The date of any appointment, detail, or removal affecting the pay of staff officers or acting staff officers will be immediately reported by the officer making the same to The Adjutant General of the Army and to the quartermaster of the department or command to which such officers belong.

ARTICLE LXII.

MUSTER ROLLS.

807. At every monthly muster of troops pay rolls will be prepared, signed, and disposed of in accordance with instructions published in orders from time to time by the War Department, and at each bimonthly muster on the last day of February, April, June, August, October, and December muster rolls will be prepared, signed, and disposed of in accordance with the instructions on the blank forms furnished by The Adjutant General of the Army.

There will be reported on the coast defense muster rolls, the noncommissioned staff of the Coast Artillery Corps; on band muster rolls, the members of the Coast Artillery Corps and Engineer bands; on the noncommissioned staff and headquarters detachment muster rolls of each regiment of engineers, the noncommissioned staff officers and other enlisted men of the regiment not borne on company rolls; and on company muster rolls, the officers and enlisted men belonging to the company. Enlisted men of the Medical Department, Quartermaster Corps, Ordnance Department, and Signal Corps, not belonging to companies will be borne on detachment muster rolls, separate rolls being prepared for each corps or department. When detachments of enlisted men are serving at a post or station and are not under the immediate command of an officer of their respective arm, corps, or department, the muster rolls for such detachments will, unless otherwise authorized by instructions from the War Department, be prepared and signed by the adjutant, who will also keep the accounts and prepare the final statements of the men borne thereon.

The names of officers will not be borne on pay rolls of Regular Army organizations or detachments, nor on muster rolls, except as provided herein for officers belonging to companies. (*C. A. R., Nos. 10 and 49.*)

808. A soldier on duty or in a hospital at a post or station where his company is not mustered will be mustered on a detachment roll, a separate muster roll being prepared for each regiment or corps. Where two or more of such soldiers are at a post or station their names will be borne on one consolidated pay roll, which will show in a column ruled for that purpose the organization to which each soldier belongs.

809. Companies will be designated on the rolls by letters or numbers, and regiments or corps.

810. Corrections on muster and pay rolls, after muster and before they have been forwarded, will not be made except with the approval of the mustering officer. Retained rolls will not be changed without authority from the War Department. Calculations on the pay roll are made by the quartermaster and copied on the retained roll by the company or detachment commander, who will certify that he witnessed the payment, and will enter thereon the name of the quartermaster.

ARTICLE LXIII

RETURNS OF TROOPS, RECORDS

811. Commanders of territorial departments posts subposts, field armies, tactical divisions, separate brigades, regiments, companies, detachments, general hospitals, field hospitals, and mine planters will make monthly returns of their respective commands on forms furnished by The Adjutant General of the Army and in accordance with directions printed thereon. Chiefs of staff corps and departments will make similar monthly returns of their corps and departments, and transport quartermasters will make similar monthly returns of officers and enlisted men serving on transports under regular detail in the transport service.

In the case of a subpost the returns will be prepared by the commanding officer of the main post, unless the detachment at the subpost is in command of a commissioned officer, in which event such officer will prepare the returns and forward them through the commanding officer of the main post.

Commanders of brigades and districts will forward each month to department headquarters a statement of any changes occurring during the month in the status of the brigade or district commander and his staff.

812. In addition to the monthly returns required by paragraph 811, commanding officers of regiments, companies, and detachments will make similar returns of their commands to The Adjutant General of the Army and to their immediate commanding officer whenever they leave or join a station, or when they sail from a port of embarkation or arrive at a port of destination.

When leaving station the return to the immediate commanding officer will be accompanied by a report from each organization on the monthly return blank showing alterations since last return only, with record of events to date.

The commanding officer of troops on a transport will, before sailing and on reaching port of destination, make a special return to the department commander and to The Adjutant General of the Army of all casualties and unattached officers and enlisted men passengers on the ship.

813. When a field officer is serving with detached companies of his regiment or corps the commanders thereof will forward their returns through him.

814. Whenever the strength of a separate command is temporarily or permanently increased by the arrival or decreased by the departure of any organization, the commanding officer will immediately report by telegraph to the next higher commander the designation of such organization moved and the names, with arm of the service, of officers accompanying it who do not belong thereto.

BATTLE REPORTS, RETURNS OF EFFECTIVES. CASUALTIES.

815. In campaign two columns will be added to the monthly return in the space reserved for remarks, in which shall be entered the effective strength of the organization. In determining such strength only those who are available for service in the line of battle will be included. Officers or enlisted men who are sick or disabled, on duty in any of the staff or supply departments, or for any cause not available in line of battle, will be excluded.

816. After every battle or engagement with the enemy, written reports thereof will be made by commanders of regiments, separate battalions or squadrons, companies or detachments, and by all commanders of a higher grade, each in what concerns his own command, which reports will be forwarded, through the proper channel, to The Adjutant General of the Army. It shall be the especial duty of all general staff officers attached to commands in

the field to keep careful journals of the operations, from which they will compile reports of said operations for their immediate commanders.

817. Whenever upon marches, guards, or in quarters different corps of the Army happen to join or do duty together, and an officer of the Marine Corps or the militia shall command the whole, such officer shall report his action and the operations of the force under his command, through military channels, to the Secretary of War as well as to his superiors in his own branch of the service.

818. Immediately after any engagement in which casualties have occurred the commanding officer of each organization that participated therein will submit, by telegraph, if possible, to his immediate superior commander a report showing by name each person killed, wounded or otherwise injured, or missing, officers and enlisted men to be reported separately, and wounds and other injuries to be classified, if practicable, as slight or severe. If telegraphic communication can not be had, the report will be sent by the most expeditious means available. The report will be consolidated, if necessary, at the proper headquarters and telegraphed to The Adjutant General of the Army. In addition to the foregoing report, commanding officers of posts, regiments, or separate organizations will prepare and forward by mail a return in triplicate, showing the name, rank, and organization of each person killed, wounded or otherwise injured, or missing, the date and place of the engagement, and, in the case of wound or other injury, the location of the wound or the nature of the injury, and whether slight or severe. Whenever necessary, commanding officers will call on their senior medical officers for all information that can be supplied in this connection. One copy of the return will be forwarded by the officer making it to his immediate superior commander, 1 copy will be retained for file with the records of the post or organization, and 1 copy will be sent by mail directly to The Adjutant General of the Army.

819. A return of all captured property will be rendered to The Adjutant General of the Army, through intermediate channels, by the immediate commander of the troops making the capture.

RECORDS.

820. All military records must be carefully preserved.

821. All public records, reports, and papers, such as document files, files of general and special orders and circulars, correspondence books, guard reports, morning reports, the records of enlisted men as kept in descriptive and deposit books or on loose leaves, and sick reports, are the property of the United States and will be required by the War Department in the settlement of claims against the Government and for other official purposes. Whenever posts, districts, territorial divisions, departments, corps, divisions, brigades, regiments, and companies are discontinued, all such records will be carefully labeled, packed, and marked, showing the command to which they pertain, and will be forwarded to The Adjutant General of the Army, who will be promptly advised of the date of shipment and furnished with a schedule of records shipped. Records of discontinued depots of the staff departments will be forwarded directly to the chief of the staff department to which they pertain.

822. The use of colored inks, except as carmine or red ink is used in annotation, ruling, or compliance with specific instructions issued by the War Department on blank forms or otherwise, is prohibited in the records and correspondence of the Army.

823. Sections 128 and 129 of the Federal Penal Code of March 4, 1909, prescribe penalties for the willful and unlawful concealment, removal, mutilation,

obliteration, falsification, or destruction of any record, proceeding, map, book, document, paper or other thing, filled or deposited in any public office.

824. No information will be furnished by any person in the military service which can be made the basis of a claim against the Government, except it be given as the regulations prescribe to the proper officers of the War, Treasury, or Interior Departments or the Department of Justice. Information concerning sick and wounded officers and enlisted men may be freely conveyed to allay the anxiety of friends, and, in time of peace, when, in the opinion of the surgeon, the condition of an officer or enlisted man, by reason of injury or disease, is such as to indicate the probability of fatal termination, the surgeon will report the circumstances to the immediate commander, who will promptly communicate the fact to the nearest relative. The fact of death may be communicated to relatives, but not circumstances connected therewith which could be made use of in prosecuting claims against the Government. If any person in the military service has knowledge of facts pertaining to the service of an individual who is an applicant for a pension, he may, upon request, if not pecuniarily interested, furnish a certificate or affidavit setting forth his knowledge, but such certificate or affidavit will be furnished only to The Adjutant General of the Army to be forwarded to the proper officer of the Interior Department. Record evidence will be furnished by the War Department only.

The surgeon of a post, through the commanding officer thereof, is authorized to furnish to the health authorities of the State or locality in which the post is situated, in accordance with existing State laws or local ordinances, information concerning all births and deaths occurring in the post, such information to be given on the proper blanks furnished for the purpose by the State or local authorities. (*C. A. R., Nos. 13 and 40.*)

ARTICLE LXIV.

PERSONAL AND EFFICIENCY REPORTS.

825. When any officer arrives at Washington, D. C., or at the headquarters of a territorial department, he will report at the office of The Adjutant General of the Army, or of the department adjutant, and will register his name and address, and the authority for his presence there.

826. 1. An officer detached from his regiment or corps for duty will report immediately upon arrival at his new station to The Adjutant General of the Army and to the chief of his corps or to his regimental commander the date of departure from former station and of arrival at new station, the date of departure from or arrival at a foreign station, and date of departure from or arrival in the continental limits of the United States, when going to or returning from a foreign station, citing the authority for the change and giving his post-office address. As soon as practicable thereafter he will report the nature of his duties. Thereafter any such officer not carried on any regular return as present for duty will report to The Adjutant General of the Army and to the chief of his corps or to his regimental commander any material change in his duties and any change of address immediately after such change in his official status; and any such officer who may incur any sickness or injury will make report of that fact as soon as practicable, giving the nature and cause of such sickness or injury.

2. Any general officer not carried on any regular return as present for duty will make to The Adjutant General of the Army the reports required by section . of this paragraph. (*C. A. R., No. 24.*)

827. 1. An officer of a staff corps or department, or an officer serving therein by detail, will make report to the head of the corps or department on the last day of every month, giving his address, a statement of the duties on which he has been employed during the month, the date of his assignment thereto, and the authority by which so assigned. He will report to The Adjutant General of the Army, at the time of change, any change of station during the month, giving dates of departure and joining; also the dates of departure from and arrival at foreign stations and of departure from and arrival in the continental limits of the United States when going to or returning from a foreign station.

2. An officer on the retired list assigned to duty by War Department orders will make a like report to The Adjutant General of the Army as soon as practicable after such assignment; thereafter any such officer, if not carried on any regular return as present for duty, will report to The Adjutant General of the Army any material change in his duties and any change of address immediately after such change in his official status. An officer on the retired list not assigned to duty by War Department orders, unless specially exempted, will report his address to The Adjutant General of the Army on the last day of every month and will also report promptly any change of address. (*C. A. R., No. 24.*)

828. Regimental field officers not serving at the headquarters of their regiments will make monthly reports to their regimental commanders. These reports will embrace everything essential to a correct record of their services and of the services of the battalion staff and noncommissioned staff officers serving under them.

8284. A Personal Report and Statement of Preferences will be made on December 31 of each year by each officer of the Army except general officers. This report will be forwarded directly to The Adjutant General of the Army. In the event that an officer, after the rendition of this report, wishes to change any of the preferences that he has expressed therein, he should promptly notify The Adjutant General of the Army directly of the change desired, in order that proper notation thereof may be made on the Personal Report and Statement of Preferences in The Adjutant General's Office. (*C. A. R., No. 20.*)

829. 1. Efficiency reports are intended to cover, as far as practicable, the whole of the calendar year to which they refer, and will be prepared by reporting officers as named below and forwarded, subject to the exception stated in section 5 of this paragraph, on December 31 of each year to The Adjutant General of the Army through intermediate commanders, who will indorse thereon such remarks as may be proper in each case:

(a) By the commanding officer of each territorial department or mobilized division respecting each general officer serving under his command and each officer of the department or division staff; by each department commander respecting each post commander not reported on by a subordinate commander; and by each brigade or district commander respecting each regimental or coast-defense commander under his command and each officer of the brigade or district staff

(b) By the chief of each staff department or corps and each staff bureau respecting each officer of his department, corps, or bureau not otherwise reported on.

(c) By the department surgeon of a territorial department respecting each officer of the Medical Department serving in the department and by the head of each other staff department or corps at the headquarters of a territorial department respecting each officer attached to his office or serving under his immediate direction.

The report of the department surgeon concerning officers of the Medical Department not attached to his office or serving under his immediate direction will be made in the form of an indorsement on the efficiency reports of such officers.

(d) By each officer of the Corps of Engineers serving as division engineer respecting each officer in charge of an engineering district within his division, and by each district officer respecting each officer on duty under his orders.

(e) By each coast defense commander respecting each fort commander in his command, each coast defense staff officer, and the commanding officer of any mine planter on duty in his coast defenses.

(f) By each post or fort commander respecting each officer of his command not otherwise reported on at the post or fort.

(g) By each surgeon of a post respecting any officer of the Medical Department serving under his direction.

(h) By each company commander respecting each subaltern officer on duty with the company.

(i) By each field officer commanding a battalion respecting each company commander and battalion staff officer serving with the battalion. By each regimental commander respecting each officer serving with the regiment at regimental headquarters not otherwise reported upon.

(j) By the Superintendent of the Military Academy, the commandant of each service school, the commandant of the disciplinary barracks and of any branch thereof, the commanding officer of a general recruit depot, and the commanding officer of a mine planter, respecting each officer serving under them, respectively, not otherwise reported on.

(k) By the commanding officer of each arsenal, armory, and general depot of supply respecting each officer on duty thereat.

(l) By the recruiting officer on duty at each general recruiting station respecting each officer serving under his supervision.

(m) By the commanding general, Philippine Department, respecting officers on duty with the various branches of the civil government in the Philippine Islands.

(n) By the professor of military science and tactics at each civil educational institution respecting each officer serving under his supervision.

2. Whenever an officer is permanently relieved from duty at a post or station, or is detailed on temporary duty elsewhere, the probable period of which duty may exceed 30 days, the reporting officer will make the required entries on the efficiency report blank and, after signing the certificate attached thereto, will forward the report through intermediate commanders to the officer upon whom the duty devolves of continuing or completing the report.

3. Whenever a reporting officer is permanently relieved from duty, or is temporarily relieved for a period that will probably exceed 30 days, he will make the required entries on the efficiency report blank and turn it over to the officer upon whom the duty devolves of continuing or completing the report.

4. The continuation of an efficiency report may be made in the form of a statement under "Remarks," in the following cases: (a) Where the period to be covered is less than 30 days; (b) where a reporting officer is required to report a second time on an officer during the same year.

5. On December 31 of each year the report of each officer of Cavalry, Field Artillery, and Infantry, assigned to a regiment but not serving at the same station with the regimental commander, will be referred directly to the regimental commander by the officer making the final entries on the efficiency report, for the information of the regimental commander and for such remark as he

may desire to make. The report will then be returned directly to the officer from whom it was received, to be forwarded through military channels.

6. Whenever the brigade and division commanders at maneuvers in time of peace are not the same officers as are regularly assigned to those units during other periods of the year, special reports as to the efficiency of regimental commanders and the brigade staff officers, as judged by the performance of their duties at such maneuvers, will be made by the temporary brigade commanders on the blank forms used for the preparation of efficiency reports of officers. Similar reports will be made upon the brigade commanders and division staff officers by the temporary division commanders. These reports will be forwarded at the conclusion of the maneuvers to The Adjutant General of the Army. (*C. A. R., Nos. 1, 4, 23, 33, and 53.*)

829½. In order that suitable data may be available in making details for detached service and for duty in the several staff corps and departments in which vacancies are filled by details from the line, particular care will be taken in preparing efficiency reports to enter thereon a statement as to the peculiar fitness of the officer reported on for detail in any of the staff corps or departments, or other detached service to which officers may be assigned, notation being made of the corps or department, or other duty, in the order of apparent fitness. Intermediate commanders through whom these reports are forwarded will indorse thereon their opinions as to the qualifications of the officer reported on. (*C. A. R., No. 20.*)

830. Each officer who makes the annual inspection of the military department of any civil institution of learning will, immediately after the inspection, forward to The Adjutant General of the Army, through the department commander, an efficiency report respecting the senior Army officer on duty at the institution. Officers who inspect the National Guard under the provisions of paragraph 892½ will make similar reports respecting inspector-instructors on duty with the National Guard inspected by them. (*C. A. R., Nos. 48 and 53.*)

831. The Inspector General will forward to The Adjutant General of the Army extracts of all inspection reports that relate in any way to the efficiency of an officer. Extracts respecting officers of the staff corps or departments will be sent through the respective chiefs of bureaus. (*C. A. R., No. 4.*)

832. In preparing efficiency reports, reporting officers will exercise the greatest care to set forth all facts concerning each officer and his record which may aid the department in forming a true estimate of standing, ability, and special fitness for any military duties.

833. Chiefs of staff corps and departments will note the correctness of the reports received and will add any data known to them which will contribute to the completeness of the record in each case. All efficiency reports will be transmitted to The Adjutant General of the Army as soon as practicable after their receipt, verification, and completion. (*C. A. R., No. 4.*)

ARTICLE LXV.

PENALTY ENVELOPES.

834. Official communications and other mailable matter relating exclusively to the public business will be transmitted through the mails free of postage, if covered by the "Penalty envelope." Where an officer writes to a private party on official business he may inclose with his letter an official penalty envelope, properly addressed to himself, to cover the reply.

835. Information which is intended to be used in the performance of official duty only is official information, while that which is intended to be used for "the

furtherance of private interest, ends, or business in any way whatever, though called for by a public officer, is private information. The official envelope may be used to give or obtain the former, but not the latter.

836. Envelopes for official mail matter for the War Department will have "War Department," the designation of bureau or office, and "Official Business," printed in three or four lines, as may be required, in the upper left corner, and in the upper right corner the following: "Penalty for private use, \$300." Envelopes for the use of the headquarters of a territorial department, for a post, station, armory, arsenal, depot, or school of instruction, will be of the same form, with the proper substitution for the designation of the bureau or office, and with the address when necessary. Envelopes required for the transmission of printed matter may also have printed thereon "Printed matter." Other printing or ruling on such envelopes at public expense is prohibited unless printed at the Government Printing Office. For the official business of officers not embraced in the foregoing classes, and officers on the retired list, the heading "War Department," "Official Business," will be placed across the left end of the envelope, with the officer's official signature written immediately below it, and with the penalty clause in the upper right corner.

837. Packages of public property partaking of the characteristics of fourth-class mail matter, weighing not more than 4 pounds and not greater in size than 84 inches in length and girth combined, may be sent through the mails under cover of the penalty envelope. Packages weighing more than 4 pounds which conform to the limit of size indicated and which do not exceed 50 pounds in weight when sent to the first or second zone or 20 pounds in the other zones, are transmissible in the mails provided postage is paid thereon at the appropriate rate. Penalty envelopes with return address may be furnished to any person from whom official information is desired, but will not be furnished to merchants or other dealers to cover the transmission of public property or the return of official vouchers. (*C. A. R., No. 54.*)

838. The use of freight or express lines for transmitting letters or packages that can be sent under penalty privilege in accordance with section 11, act of May 18, 1916, is forbidden; packages that can not be so sent may be shipped by express when that method is more economical than shipment by mail. (*C. A. R., No. 54.*)

839. The penalty envelope will not be used for foreign correspondence

ARTICLE LXVI.

THE RECRUITING SERVICE.

840. Recruiting for the Army will be conducted by—

1. An officer for each regiment, post, or detachment, detailed by the proper commanding officer to enlist for the regiment, post, or detachment, or, when authorized by the department commander, for any troops in the department, or, when authorized by the War Department, for any organization in the Army.

2. An officer detached from any organization by its commander, with the approval of the War Department, to make enlistments for that organization and, when authorized by the War Department, for any organization in the Army.

3. Officers detailed on recruiting service by the War Department. The regular details will be ordinarily for four years. (*C. A. R., No. 38.*)

841. General recruiting stations are places at which applicants for enlistment are examined and from which, if found to be qualified for service, they are forwarded to recruiting depots for final examination and enlistment.

Recruiting depots are of two classes, viz, general recruit depots and recruit depot posts. General recruit depots are depots at which applicants for enlist-

ment are finally examined, enlisted, and retained for instruction, and from which recruits are distributed to the Army. Recruit depot posts are the designated military posts to which are sent, from general recruiting stations, for final examination, enlistment, and distribution to the Army, such applicants for enlistment as are not sent to general recruit depots.

In all matters of police and discipline recruits at recruit depot posts are under the command of the post and department commanders, but in all other matters, including discharges for disability, they are directly under the orders of the War Department. All records pertaining to recruit administration at recruit depots and depot posts will be so kept that a change may, without interference, be made at any time in the post personnel.

842. Recruits at general depots will be organized for instruction into recruit companies as may be directed by the War Department, the instruction being given by officers detailed and noncommissioned officers appointed for that purpose. Commanding officers of all recruit depots and depot posts will forward directly to The Adjutant General of the Army trimonthly reports of recruits.

843. All enlisted men prior to their assignment to general recruiting duty will be transferred to the general service, Infantry. The recruiting officer in charge of each general recruiting station, having first satisfied himself of the soldiers' fitness for the positions, will announce in orders from his station, and muster from the date of such announcement, one member of his recruiting party as sergeant and one as corporal. Such orders will be entered in the records of the recruiting station and a copy of each order will be forwarded to The Adjutant General of the Army; a copy will also be furnished to each soldier concerned.

844. Members of recruiting parties announced and mustered as sergeants or corporals will not be reduced while performing such duty without the approval of The Adjutant General of the Army. Their appointments as sergeants or corporals will, however, terminate whenever they are relieved from recruiting duty, or when the stations at which they are serving are discontinued, unless they shall be assigned to other recruiting stations at which there are vacancies in their respective grades. The recruiting officer will in every case announce in orders the date of the termination of an appointment as sergeant or corporal and furnish copies of each order, as indicated in paragraph 843.

845. All assignments of enlisted men to the general recruiting service will be as privates, first class, the question of their promotion as sergeants or corporals being for determination after their fitness and capacity shall have been demonstrated. Individual applications for transfers to the general recruiting service will be forwarded, whenever practicable, through the proper commanding officers, who will indorse thereon their recommendations, based upon service and merit, and also a statement of the soldier's fitness for recruiting duty especially as regards clerical ability and knowledge of Army papers. The transfers will be made from time to time, as the interests of the service require, in orders from the War Department. (*C. A. R., No. 55.*)

846. Any male citizen of the United States or person who has legally declared his intention to become a citizen, if under the age of 35 years, able-bodied, free from disease, of good character and temperate habits, may be enlisted or accepted for enlistment under the restrictions contained in this article. In regard to age or citizenship this regulation shall not apply to soldiers who have served honestly and faithfully a previous enlistment in the Army. (*C. A. R., No. 55.*)

847. With the exceptions indicated in paragraph 859, the date on which the enlistment or reenlistment of any man is actually completed, by administering the oath, is the date of that enlistment and must invariably be shown on the

enlistment paper, above the signature of the officer who administers the oath, and thereby enlists the man. (*C. A. R., Nos. 51 and 55.*)

848. Applicants for original enlistment and men who apply to reenter the Army after an interval of more than three months from date of discharge will be required to furnish evidence of good character. To determine an applicant's fitness and aptitude for the service and to give him an opportunity to secure testimonials of character he may, after having signified his intention to enlist and passed the required examination, be retained and provided for not to exceed six days before being accepted or rejected. At recruiting stations at which no medical officer or recruiting officer is on duty an examination by the senior noncommissioned officer on duty at the station will be sufficient to determine whether the applicant may be retained for the period named, but such examination will not take the place of that to be made by the recruiting officer under paragraph 847.

849. The enlistment or acceptance with a view to enlistment of persons of any of the following classes is prohibited: Insane or intoxicated persons; deserters from the naval service of the United States; persons who have been convicted of felony or who have been imprisoned under sentence of a court in a reformatory, jail, or penitentiary, but the fact that an applicant for enlistment has been confined in an institution for the education and control of minors will not debar him from enlistment, provided that he was not confined therein because of the commission of any crime or misdemeanor; for original enlistment, persons over 35 years of age; for first enlistment in time of peace, any person (except an Indian) who is not a citizen of the United States or Porto Rico, or who has not made legal declaration of his intention to become a citizen of the United States, or who can not speak, read, and write the English language; and, except as provided in paragraph 861, a former soldier whose service during the last preceding term of enlistment has not been honest and faithful, or whose discharge certificate from the last preceding enlistment bears the notation "is not recommended for reenlistment," and deserters from the military service of the United States. (*C. A. R., Nos. 14 and 55.*)

850. Recruiting officers will be very particular to ascertain the true age of every applicant for enlistment. If any doubt exists as to the applicant's statement regarding his age, his oath will not be taken as conclusive evidence of the fact, and if he can not furnish competent proof to support his statement, he will be rejected. A minor under 18 years of age may be enlisted or accepted with a view to enlistment with the written consent of the father, only surviving parent, or legally appointed guardian to the minor's enlistment, but no person under 16 years of age will be enlisted or accepted without special authority from The Adjutant General of the Army. When a minor under 18 years of age presents himself for enlistment or acceptance under the provisions of this paragraph, his parents or guardian, should he have any, will be found and informed of the application; should he be without parents or guardian, the recruiting officer must reject him unless the applicant shall procure the legal appointment of a guardian and obtain his written consent. (*C. A. R., No. 55.*)

851. Recruiting officers will be held to a rigid accountability for accepting and forwarding men who may be found unfitted for the service, and officers who enlist such applicants will be held to a like accountability. If a man after having been enlisted at a military post, or accepted at a general recruiting station and forwarded to a depot or depot post for enlistment, be discharged or rejected, and it appear that the enlistment or acceptance was carelessly made or in violation of these regulations, the expenses incurred in consequence

of the enlistment or acceptance of the man may be stopped against the pay of the officer responsible.

852. The enlistment or reenlistment of married men for the line of the Army is to be discouraged, and will be permitted only for some good reason in the public interest, the efficiency of the service to be the first consideration. Applications for such enlistments or reenlistments will be finally determined by the regimental commander, or other proper commanding officer if there be no regimental organization.

853. Rescinded. (*C. A. R., No. 55.*)

854. Recruiting officers will not allow any man to be enticed into the service by false representations, but will, in person, explain to every man before he signs the enlistment paper the nature of the service, the length of the term, the amount of pay, clothing, rations, and other allowances to which a soldier is entitled by law.

855. Rescinded. (*C. A. R., No. 55.*)

856. The Articles of War enumerated in the one hundred and tenth article of war will be read and explained to each applicant just before administering to him the oath of enlistment. (*C. A. R., No. 55.*)

857. Enlistment papers and recruiting returns will be made on printed forms furnished by The Adjutant General of the Army, and will be executed and disposed of in accordance with directions thereon.

858. Rescinded. (*C. A. R., No. 55.*)

859. An enlistment will not be antedated so as to allow a soldier additional pay for reenlistment who applies after the period of three months from date of discharge has expired, nor does an application for reenlistment, made within three months, entitle the soldier to such increase. The benefit granted by law to soldiers who reenlist within three months from date of discharge can be obtained only by actual reenlistment before the expiration of the three months' limit. Where, however, the reenlistment of a soldier, who has applied in person within the period of three months to a proper recruiting officer for reenlistment, is delayed beyond the period of three months, through no fault of the soldier, but for the convenience of the Government, the date of the soldier's reenlistment as shown on the enlistment paper will be that of his application for enlistment.

860. An officer who enlists or reenlists a man who has been discharged from the Army will immediately give notice of the fact to the commanding officer of the company from which the man was last discharged, stating, if practicable, designation of the organization to which he has been assigned. On receiving this notice the commander of the company from which the man was discharged will enter the fact of enlistment or reenlistment on the soldier's record. Should it appear that deception has been practiced he will report the case to The Adjutant General of the Army. The recruiting officer will enter the fact of enlistment or reenlistment, with date and place, upon the certificate of discharge from former enlistment, which the soldier should have in his possession.

861. Application to reenter the Army from persons of any of the following classes will not be granted without special authority from the Secretary of War:

1. Former soldiers who have been discharged before expiration of term of service, excepting those discharged by purchase or for the convenience of the Government.

2. Former soldiers who have been discharged with character other than good, or its full equivalent, or whose discharge certificates from their last preceding enlistments bear the notation "is not recommended for reenlistment."

3. Former soldiers over 40 years of age who were last discharged as privates and have failed to reenlist within three months thereafter. In such cases the applications must show that the enlistments will be for the interests of the service.

4. Former soldiers who can not pass the required examination in all respects. Applications of this nature should show that any existing defects will not prevent the performance by the applicant of full military duty.

5. Former soldiers who deserted the military service of the United States in time of peace and former soldiers whose service during the last preceding term of enlistment was not honest and faithful. Authority to enlist persons of either of these two classes will be granted only in view of the good conduct of the applicant subsequent to his desertion or last preceding service, as provided for in section 1908, Revised Statutes, as amended by the act of Congress approved August 22, 1912. (*C. A. R., No. 14.*)

862. An applicant will be subjected to the required examination before application is made for special authority for his enlistment or reenlistment. The result of the examination will be stated in the application. Commanding officers forwarding applications from men of their commands for permission to reenlist for some other organization will report in each case whether the applicant is married or single, what character will be given him on discharge, and whether or not he can pass the required examination.

863. Enlisted men of good character and faithful service who, at the expiration of their terms, are undergoing treatment for injuries incurred or disease contracted in the line of duty, may be reenlisted if they so elect, and if the disability prove to be permanent, they will subsequently be discharged on certificates of disability. An enlisted man not under treatment, but who has contracted in the line of duty infirmities that may raise a question of physical eligibility to reenlistment, but not such as to prevent his performing the duties of a soldier, may be reenlisted by authority of the War Department on application made through the surgeon and proper military channel in time to receive a decision before the date of discharge.

MEDICAL EXAMINATION.

864. The physical examination of applicants for enlistment will be conducted in accordance with the authorized rules for the examination of recruits.

865. An applicant for enlistment at a garrisoned post, camp, or arsenal, where there is no medical officer or contract surgeon, will be physically examined before enlistment by the civilian physician employed by the Medical Department, who will immediately vaccinate the man if he is accepted.

866. As soon as a recruit joins any organization, depot, post, or station he will be examined by the surgeon to ascertain whether vaccination is required. In all cases where there is not unmistakable evidence of successful vaccination within a reasonable period the operation will be performed immediately. Vaccinia virus is supplied by the Surgeon General.

867. Upon the arrival at a recruiting depot of an accepted applicant for enlistment he will be examined and enlisted or rejected with the least practicable delay.

If in the opinion of the surgeon or the commanding officer the disqualification in the case of any rejected applicant is of such a character that it should have been discovered by the recruiting officer who accepted and forwarded the applicant to the depot, the commanding officer will convene a board of three officers, one of whom shall be a medical officer if such officer is available, to examine

into the case and report whether the disqualification existed prior to acceptance, when, where, and by whom the applicant was accepted, and whether in the opinion of the board the disqualification should have been discovered by the recruiting officer. If the board is of the opinion that the recruiting officer was at fault in accepting and forwarding the applicant, it will, before making its report, communicate with him and give him an opportunity to be heard in the case, but if he fails to respond with reasonable promptness, the board will proceed with the case and render its report without further delay. In those cases in which the board finds that the recruiting officer was at fault the record of the proceedings of the board, together with the report of the surgeon and the original form for examining a recruit, will be forwarded directly to The Adjutant General of the Army with the recommendation of the commanding officer; but if the board finds that the recruiting officer was not at fault, it will so advise him, and no further action will be taken. If in the opinion of both the surgeon and the commanding officer the disqualification is not of such a character that it should have been discovered by the recruiting officer at the time of acceptance of the applicant, the case will not be referred to a board of officers. All military posts to which applicants for enlistment may be sent from general recruiting stations without previous medical examination will be regarded as depots within the meaning of this regulation.

Accepted applicants for enlistment who are found unfit for service on final examination at recruiting depots will be regarded as remaining under military observation until they have been returned to the recruiting stations at which they were accepted, or until they should have arrived at those stations after having been forwarded for them.

868. Every detachment of recruits ordered from a recruiting depot to any organization or post will, immediately preceding its departure, be critically inspected by the post commander and the senior medical officer present, and any sick or otherwise disabled will be held at depot. A recruit deemed unfit for continuance in the service will not be sent to an organization, but the necessary action will be taken by the commanding officer of the depot or depot post with a view to the discharge of the recruit on a surgeon's certificate of disability, or otherwise, as the case may require.

869. Before recruits are forwarded from a depot to organizations the post commander will cause the character of each recruit to be entered upon the service record; also the date and result of last vaccination. Officers in charge of detachments, if called upon, will exhibit the entries relative to vaccination to authorized inspectors of State boards of health. (*C. A. R., No. 55.*)

870. Upon arrival at a post each recruit who has not undergone examination by a medical officer, contract surgeon, or civilian physician will be examined, and defects will be recorded by the medical officer, with his opinion as to whether they existed prior to enlistment. A certificate of disability will be submitted if the recruit is disqualified for the service.

871. A monthly report of the medical examination of applicants for enlistment in the Regular Army will be made by the medical examiner for each garrisoned post or recruiting depot, and forwarded, not later than the sixth day of the month following that in which the examinations are made, directly to the Surgeon General of the Army, who will furnish blank forms for the purpose. (*C. A. R., No. 55.*)

RECRUITS SENT TO ORGANIZATIONS.

872. Recruits will be assigned to regiments and other organizations by The Adjutant General of the Army, under the direction of the Secretary of War, from recruit depots and depot posts. Recruits designated for assignment will

be borne on the rolls and returns of the depots and depot posts until the date of departure therefrom, when the assignment will take effect. Prior to that date they will not be taken up on the rolls of companies, regiments, or other organizations.

Correspondence between officers or enlisted men of the general recruiting service and other officers or enlisted men of the Army with a view to furnishing or obtaining recruits for particular organizations, either by the acceptance of applicants at general recruiting stations or by the assignment of recruits from recruit depots or depot posts, is prohibited.

872. Rescinded. (*C. A. R., No. 55.*)

874. Rescinded. (*C. A. R., No. 55.*)

875. An officer intrusted with the command of recruits ordered to regiments or other organizations will, on arriving at destination, forward the following papers:

1. To The Adjutant General of the Army, a report of date of arrival at the post, the strength and condition of the party when turned over to the commanding officer, and all circumstances worthy of remark which occurred on the journey.

2. To the commanding officer of the post or organization, the service records furnished him with the recruits, properly completed by noting in the column for remarks time and place of death, desertion, or other casualty that may have occurred. (*C. A. R., No. 55.*)

876. Rescinded. (*C. A. R., No. 55.*)

877. Soldiers enlisted by special authority for particular organizations will be sent to their proper stations without delay. An applicant will be subjected to the required examination before application is made for special authority for his enlistment.

ARTICLE LXVII.

INSPECTOR GENERAL'S DEPARTMENT.

GENERAL PROVISIONS.

878. The sphere of inquiry of the Inspector General's Department includes every branch of military affairs except when specially limited in these regulations or in orders. Inspectors general and acting inspectors general will exercise a comprehensive and general observation within the command to which they may be respectively assigned over all that pertains to the efficiency of the Army, the condition and state of supplies of all kinds, of arms and equipments, of the expenditure of public property and moneys, and the condition of accounts of all disbursing officers of every branch of the service, of the conduct, discipline, and efficiency of officers and troops, and report with strict impartiality in regard to all irregularities that may be discovered. From time to time they will make such suggestions as may appear to them practicable for the correction of any defect that may come under their observation.

879. Inspectors general or acting inspectors general assigned to a military command are under the immediate direction of its commanding general; when not so assigned, they are under the orders of the War Department. They will make the garrison and such special inspections as the commanding general may direct within the limits of his command, and will each be allowed the necessary clerks and one messenger, who will be assigned by the Secretary of War. (*C. A. R., No. 9.*)

880. Inspectors general and acting inspectors general will report by letter on arriving at their stations to the Inspector General of the Army. Thereafter they will furnish to him copies of all orders and written instructions received for tours of inspection or for investigations, giving the nature of the duty they are going to perform, the probable time they will be at each place to be visited during their tour, and the probable date they will return to their stations.

At the close of each fiscal year the inspector general assigned to a military command will submit to its commanding general a report covering the operations of the Inspector General's Department within the command during the preceding year, together with such recommendations for the improvement of the service as he may deem fit, and will forward a copy thereof, through military channels, to The Adjutant General of the Army, who will transmit it to the Inspector General of the Army.

881. Inspectors general or acting inspectors general will make known their orders or instructions to commanding and other officers whose troops and affairs they are directed to inspect, and these officers will see that every facility and assistance, including clerical aid, if requested, is afforded. When making inspections within the territorial limits of the command of an officer subordinate to the officer ordering the inspections, they will, prior to the inspections, furnish to the subordinate commander a copy of their orders and an itinerary of their route in so far as they relate to the inspection of parts of his command.

882. An inspector general or acting inspector general will not give orders unless specially authorized to do so, and then only in the name of the superior giving such authority. He will report with strict impartiality all irregularities. He should refrain from informal conversation or comment upon subjects under investigation.

883. An inspector general or acting inspector general will exercise the greatest care that he does no injustice to organizations or individuals. When investigating accusations prejudicial to the character of an officer, he will make known to the officer their nature, and give him an opportunity to make his own statement in writing, which will be appended to the report. Copies or extracts from an inspection report reflecting upon or commending the character or efficiency of an officer may be furnished him by the commander to whom the report is submitted.

884. An inspector general or acting inspector general detailed to investigate alleged attempts to defraud the Government, or any irregularity or misconduct of any officer or agent of the United States, has authority to administer oaths to witnesses.

SPECIAL DUTIES.

885. Inspectors general will, from time to time, designate the articles which, in their opinion, should be procured and kept for sale by the Quartermaster Corps to officers and enlisted men while in garrison or permanent camps and while in temporary camps or on active campaign. These recommendations will be submitted to the Secretary of War for his action.

CLASSIFICATION OF INSPECTIONS.

886. Inspections are classified as follows:

1. Annual tactical inspections of troops of the mobile army by department and brigade commanders.
2. Annual garrison inspections.
3. Inspection of the National Guard.
4. Special and miscellaneous inspections.

Inspections of the Coast Artillery troops will include the annual garrison inspection, the inspection to be made by the Coast Artillery district commander as prescribed in the Regulations for the Instruction and Target Practice of Coast Artillery Troops, and such other inspections as may be directed. (*C. A. R., Nos. 9 and 48.*)

ANNUAL TACTICAL INSPECTIONS.

887. The responsibility for the annual tactical inspections is imposed upon the department and brigade commander by paragraphs 193 and 194. As far as practicable, the assistants of these commanders will be inspectors general or acting inspectors general of the arm to be inspected. (*C. A. R., No. 9.*)

ANNUAL GARRISON INSPECTION.

888. The annual garrison inspection will be conducted by officers of the Inspector General's Department during the period of garrison training. When practicable the inspector will belong to the arm to be inspected. The object of these inspections is to determine the state of discipline and efficiency attained in garrison training and the degree of efficiency and economy exercised in garrison administration.

889. All garrisons and posts shall be inspected at least once in each fiscal year by the inspector of the department or by his assistants. Ungarrisoned posts will be inspected at such times as the department commander may direct, ordinarily once in two years.

Inspections of garrisons and posts will embrace the following subjects:

1. Officers present, those absent on detached duty or otherwise, and those permanently incapacitated for any duty from any cause; whether the number of enlisted men in ranks at inspection corresponds to returns, how absentees are accounted for, and how many appear under arms at inspection; the number of men in the band, and if any are not musicians.

2. Whether the post is adequately armed and supplied, and maps of the post and of the country in its vicinity are kept.

3. Whether the commanding officer observes the system of instruction and treatment of subordinates enjoined by the regulations and properly executes the laws relating to neutrality, quarantine, and the regulations concerning international courtesy, so far as applicable to his post; whether justice is promptly and legally administered; the zeal of the commanding officer and his ability to perform his duties; whether due attention has been given by the commanding officer to the tactical training of the command, and whether field efficiency is made subordinate to routine administration; amount of correspondence and whether matters of routine are disposed of by personal interview or by official correspondence.

4. Whether officers are efficient, including a report as to any intemperance or immorality, and mentioning any officer or soldier who has distinguished himself or shown special efficiency in any department of study or duty.

5. The manner in which chaplains perform their duties.

6. The efficiency of administrative and staff officers, the correctness of their accounts; whether payments and issues are made in accordance with law and regulations; whether surplus supplies are taken up on returns and deficiencies accounted for.

7. Proficiency of troops in drill in the use of the bayonet as a fighting weapon, and the use of the saber in mounted and dismounted exercises and in mounted and dismounted fencing; proficiency in riding of officers of the staff corps and mounted officers of infantry; proficiency of officers and men of mounted organi-

zations in jumping hurdles, ditches, fences, and other obstacles, simulating those ordinarily found in cross-country riding; discipline and appearance of troops; state of arms, equipments, and accouterments of all kinds, and their fitness for field service; economy exercised by organization commanders in care and preservation of arms and equipment of all kinds; the character of recruits received, sources from which obtained, dates of arrival, and number received for each consignment; sufficiency, uniformity, and fit of clothing; the sufficiency of shoes for fitting and equipping enlisted men and the suitability of the place provided by the quartermaster for fitting purposes; failures of organization commanders to secure proper shoes for their commands or proper facilities for fitting and the causes for same; whether the schools for enlisted men are held as prescribed and properly conducted; nature and amount of drills, target practice, and gymnastic exercises; the amount of guard duty required and whether it is deemed excessive; efficiency in signaling; regularity of payment of troops, their health, and whether the sick are properly cared for; the number and percentage of desertions from each organization during the 12 months preceding the inspection and, if abnormal, special inquiry as to the cause therefor will be made and the result briefly reported.

73. Whether the annual obstacle ride for Cavalry and Field Artillery officers is held as prescribed, reporting all officers who fail to take it and giving reasons therefor.

74. The extent and thoroughness of the instruction of the troops will be tested by tactical problems or exercises appropriate to the size of the command and to the available terrain.

8. Police and sanitation of the post; cleanliness, state of repair, and sanitary condition of all buildings; the number, character, and cost of buildings constructed since last annual inspection; economy exercised in care and preservation of public property.

9. Whether there are suitable rooms for use, respectively, as a library, reading room, chapel, and school; sufficient quantities of newspapers and periodicals, schoolbooks, stationery, and school material for the use of enlisted men whether the newspapers, periodicals, and schoolbooks are solely used by enlisted men; whether the library rooms are used at all by officers, and, if so, whether it interferes with their use by enlisted men; the attendance and progress of pupils and the system of instruction. See also paragraph 337.

10. System of messing; sufficiency, variety, and preparation of food.

11. Whether labor of the supply departments is performed by troops or civilians; if by the latter, their number, cost attending and reasons for their employment, and kind of labor performed by them.

12. Means of transportation, its condition and fitness for field service; training, grooming, shoeing, suitability, veterinary treatment and condition of public animals, and number unserviceable; also the suitability for military purposes of horses owned by officers.

13. Condition of all public property, and whether used for private purposes; whether buildings and property are properly secured against fire, theft, and damage.

14. Whether sales of subsistence stores are made to enlisted men according to regulations; whether there are damaged stores, and, if so, in what quantities and how damage was caused.

15. Water supply, facilities for laundry work, bathing, and swimming; system and condition of sewerage and drainage, and means of extinguishing fire.

16. Management and success of post exchange, and whether properly supplied and conducted according to regulations; extent, necessity for, and kind of gardens, success attending, and number of men employed therein.

17. Management and application of the regimental, company, mess, and post exchange funds, and whether the provisions of Article XXXIII are complied with.

18. Whether regimental, post, and company books, papers, and files, and those of the post staff departments, including chaplain's records, are properly kept, and the prescribed rolls and returns are properly prepared and promptly forwarded.

19. Condition of post cemetery and its records.

20. Efficiency of enlisted men, Medical Department, in ambulance and litter-bearer's drill, and methods of rendering first aid to the wounded. (*C. A. R., Nos. 9 and 55.*)

890. Inspectors while inspecting a command will call upon post, coast defense, regimental, battalion, and company commanders and the surgeon for a report by name of any officer under their immediate command who is incapacitated for service, either mentally, morally, or physically. When any officer is so reported the inspector will thoroughly investigate the case and submit his conclusions thereon to the officer ordering the inspection.

891. Inspectors will especially inquire into and report by name, affirmatively or negatively as the case may be, whether the field officers of the commands they inspect are believed to be physically fit to perform all their duties in the field. The words "field officers" include all officers of the line and staff below the grade of brigadier general and above the grade of captain. (*C. A. R., No. 55.*)

892. The written reports of inspectors will set forth a correct return of the troops, the number present at and absent from the station and the absentees from inspection, and whether irregularities, etc., reported at last inspection have been remedied, after which will follow a statement of the results of the inspection, dealing only with defects, deficiencies, irregularities, recommendations, and commendations whereof the various items will be paragraphed and stated separately. These items will be grouped under the department within whose sphere the responsibility for the conditions stated falls, viz: Commanding officer, Quartermaster Corps, Corps of Engineers, etc. Brief statement will be made of the various drills and exercises held for the inspector and the report concluded with an exposition of the conclusions arrived at as to the state of discipline and efficiency attained in garrison training and the degree of efficiency and economy exercised in garrison administration.

893. On completion of an inspection of a garrison, post, or other command of troops, the inspector will furnish its commanding officer a written statement of all irregularities and deficiencies observed, which will be kept on file for the information of commanding officers and inspectors. The commanding officer, as soon as practicable, will submit to the next higher commander a copy of this statement, with a report showing what remedies he has applied or will apply to correct each of the irregularities or defects found, and will recommend the proper action with regard to those that he has not power or authority to remedy. These reports and statements will be promptly forwarded, through military channels, to The Adjutant General of the Army, by whom they will be transmitted to the Inspector General.

At arsenals, depots, and stations not under the supervision of department commanders inspectors will furnish like statements, and commanding officers will forward copies thereof, with their replies, to The Adjutant General for file with the inspection reports to which they pertain.

INSPECTION OF THE NATIONAL GUARD.

894. (a) Inspections of the National Guard will be made at least once each year by inspectors general and, if necessary, by other officers of the Regular

Army detailed by the Secretary of War, or department commanders acting under instructions from the Secretary of War, to determine whether the amount and condition of the property in the hands of the National Guard are satisfactory; whether the National Guard is organized as prescribed by the act of Congress approved June 3, 1916; whether the officers and enlisted men possess the physical and other qualifications prescribed; whether the organization and the officers and enlisted men thereof are sufficiently armed, uniformed, equipped, and being trained and instructed for active duty in the field or coast defense, and whether the records are being kept in accordance with said act. The reports of such inspections shall serve as the basis for deciding as to the issue to and retention by the National Guard of the military property provided for by said act, and for determining what organizations and individuals shall be considered as constituting parts of the National Guard within the meaning of said act. Blanks and memoranda for use in making these inspections will be furnished by the Inspector General of the Army.

(b) Inspectors will inquire into and report upon the character and amount of work done by officers and enlisted men of the Regular Army on duty with the National Guard; the manner in which they perform their duties; their fitness for their positions; and whether the inspector-instructors comply with the War Department regulations and instructions relating to their duties.

(c) Inspectors general will inquire into and report upon the necessity, economy, and propriety of all disbursements of the National Guard property and disbursing officers for the United States, their strict conformity to the law appropriating the money, whether these officers comply with the law in keeping their accounts and making their deposits, and whether their property records are complete and properly kept, and the required reports and returns rendered.

(d) The inspector will verbally inform the organization commander of all irregularities and deficiencies noted in connection with the subject of organization, armament, and equipment, and will at the same time offer such assistance, advice, or suggestions as may be practicable looking to their correction.

(e) Reports of these inspections will be forwarded to the department commander, who will examine them with a view to the detection of errors and incompleteness, and correction of the same by the responsible inspectors, and then forward them to The Adjutant General of the Army. (*C. A. R.*, No. 48.)

SPECIAL AND MISCELLANEOUS INSPECTIONS.

893. Special inspections and investigations within the limits of a command (territorial or tactical) may be made under orders of the commander thereof; but in all cases involving travel his selection of officers to perform such duty shall be restricted to inspectors general, acting inspectors general, or officers of the General Staff Corps on duty as such, at his headquarters under War Department assignment.

894. The annual inspection of the Soldiers' Home in the District of Columbia will be made by the Inspector General of the Army, in person, as required by law; and that of the National Home for Disabled Volunteer Soldiers, its records, disbursements, management, discipline, and condition, will be made by an officer of the Inspector General's Department under the provisions of the act of Congress approved August 18, 1894, who will report in writing, through the Inspector General of the Army, to the Secretary of War, the results of such inspection.

895. All armories, arsenals, depots, general hospitals, general recruiting stations, the proving ground at Sandy Hook, N. J., and the military prisoners in the United States penitentiary at Leavenworth, Kans., will be inspected annually and all national cemeteries once in two years. These inspections and the in-

spections of accounts of officers disbursing funds under the Secretary of War, and such special inspections of posts and commands as may be deemed advisable, will be directed by the Secretary of War to be made by officers recommended by the Inspector General of the Army, with a view to their special fitness for the work enjoined.

896. Inspections of the military departments and business methods of the Military Academy and of the service schools will be made annually by the Inspector General or officers recommended by him under specific instructions of the War Department.

896½. Inspections of the United States Disciplinary Barracks or any branch thereof will be made annually by an officer on duty in the Office of the Inspector General of the Army. (*C. A. R., No. 24.*)

897. The inspection of disbursements and money accounts of disbursing officers required by act of April 20, 1874, will be made by officers of the Inspector General's Department or by others detailed for that purpose, and, as far as practicable, at irregular intervals, but no officer so detailed shall be in any way connected with the corps or staff department making the disbursement. The inspection of the accounts and records of the National Guard property and disbursing officers of the United States, required by section 67 of the act of June 3, 1916, will be made at least once each year by officers of the Inspector General's Department. The frequency of these inspections will be regulated by the Secretary of War. (*C. A. R., No. 48.*)

898. Just prior to the departure of an Army transport from a terminal port, and immediately upon its arrival at such port, it will be minutely inspected by an officer of the Inspector General's Department, or, if no officer of that department is available, by an officer previously designated for the performance of this duty. In making this inspection all irregularities and deficiencies found by the inspector or mentioned in the report of the commanding officer of the troops, required by paragraph 234, Army Transport Service Regulations, will be investigated.

899. The Inspector General of the Army will keep the inspectors of the several military departments informed, through the proper channels, of such inspections of accounts of disbursing officers and of places not under the immediate command of the department commander as the Secretary of War desires shall be made by them. Department commanders in issuing orders for inspections involving travel will consider the most advantageous and economical plan.

REPORTS.

900. Reports of prescribed inspections of troops, stations, and accounts of disbursing officers under the authority of the department commanders will be forwarded, through military channels, to The Adjutant General of the Army and transmitted to the Inspector General of the Army. In case irregularities, deficiencies, or misconduct are reported, a commander in forwarding a report will state what remedies he has applied or will apply to correct them, adding any recommendations that he may desire to make. Unusual delays in forwarding a report will be explained. When a report contains any item requiring prompt administrative or disciplinary action beyond the power or authority of the department commander, an extract thereof will be forwarded at once by him. All other reports of inspectors will be forwarded directly to the Inspector General of the Army, except when otherwise specially directed, and all inspection reports not confidential will be filed in his office. The Inspector General will submit to the Chief of Staff all reports that contain matters requiring correction. (*C. A. R., No. 55.*)

DISBURSEMENTS AND ACCOUNTS.

901. Inspectors general and acting inspectors general will inquire as to the necessity, economy, and propriety of all disbursements, their strict conformity to the law appropriating the money, and whether the disbursing officers comply with the law in keeping their accounts and making their deposits. A statement of receipts and expenditures and of the distribution of funds, with lists of outstanding checks, on forms furnished by the Inspector General of the Army, will be submitted by the disbursing officer to the inspector, who should immediately transmit the lists of outstanding checks to the several depositaries. Upon return from a depositary balances will be verified and noted on the inspection report, which will then be forwarded to the Inspector General, with a copy of each list of outstanding checks and the indorsements thereon. The original lists will be retained by the inspector to be used at the next inspection of the officer's accounts and then sent to the Inspector General.

902. When an officer ceases to act as a disbursing officer, or for any reason closes his accounts, he will prepare a closing statement of his money accounts from date of last inspection to and including the closing of his accounts, with a separate list of outstanding checks. If he is under the command of a department commander, or his accounts are assigned for inspection to the department inspector, he will forward the statement and list of checks to department headquarters, through military channels, for the usual action. If disbursing under the direction of the Secretary of War without such assignment, he will forward his papers directly to The Adjutant General of the Army, who will transmit them to the Inspector General of the Army. He will also comply with the requirements of paragraphs 588 and 630.

PROPERTY FOR CONDEMNATION.

903. Except as provided in paragraph 717, inspections having in view the condemnation of property will be made by inspectors general or acting inspectors general; but in cases of emergency, such as when a station is abandoned or when troops change station, such inspections may be made by officers specially designated by the commander of a department, or the commander of a division, or army in the field, or higher authority.

904. Officers will prepare and sign in duplicate, on blank forms furnished by the Inspector General of the Army, inventories of public property requiring inspection, and present them, with the property, to the Inspector General or Acting Inspector General at the time of his visit. In the case of rapidly deteriorating subsistence stores or of unserviceable public animals, or of pressing emergency, such inventories will be prepared whenever necessary, and one copy will be forwarded to the commander having authority to appoint an inspector. Public animals will be inventoried singly, with a brief description of color, sex, age, and distinguishing marks. Public buildings which have become unserviceable and can not be kept in repair at reasonable cost, or which occupy ground required for new buildings or other improvements, will be entered upon a separate inventory and brought before an inspector for his action.

905. For inspection the property will be arranged in the order of enumeration in the inventory, every article will be examined by the inspector, and the officer responsible will accompany him and be prepared to give all necessary information in regard to it.

906. Inspectors will examine all property presented for condemnation. When all property presented has been destroyed, the two copies of the inventory and inspection report will be delivered by the inspecting officer to the accountable officer. In cases in which the inspector recommends the sale of any property, or its transfer to another use, he will forward both copies of the inventory

and inspection report to department or division headquarters, and if the inspector's action is approved by the department or division commander, both copies will be returned to the accountable officer; and, in similar cases, when the accountable officer is not serving under the department or division commander and all the property has been destroyed, both copies of the inventory and inspection report will be forwarded to the accountable officer, or if sale or transfer of the property is recommended, the inspecting officer will forward both copies of the inventory and inspection report to the Inspector General of the Army, who will forward them to the Chief of Staff through the chief of the bureau concerned; both copies will be returned to the accountable officer.

907. Inspectors will exercise great care in examining property submitted to them for condemnation and in making recommendations regarding its disposition. Articles "to be continued in service" are such as are still serviceable. Those "to be dropped" from the returns are such as can not be sold at the post and are not worth cost of transportation to an arsenal or depot for repair. If worthless, they must be so far destroyed as to prevent any possibility of future presentation. Such articles as can not be destroyed will, when practicable, be marked "I. C." (inspected—condemned), or will be broken up and the serviceable parts retained. Condemned animals will be branded "I. C." on the neck under the mane. Should the inspector's recommendation be disapproved in regard to articles marked "I. C." the marks will be canceled and a certificate of the fact given to the responsible officer. Suitable brands and stencils will be kept for use of inspectors at posts and depots. Articles "to be sold at post" are such as are of no further public use or not worth cost of transportation to a depot. Those "to be turned in to depot" are such as can not be repaired at the post and are worth cost of transportation. Small arms found to be unfit for service and hand arms and personal and horse equipments ordered turned in to depot will first be turned in to the post ordnance officer, who will, when sufficient stores have accumulated to make an economical shipment, send them to an arsenal designated by the Chief of Ordnance. As unserviceable surveying, reconnaissance, or drafting instruments have generally some salable value and can usually be repaired or utilized in part, such property will be submitted to an inspector with a view to being turned in to an engineer depot for repair or for final disposition under the provisions of this paragraph. Property will not be turned in to depots without authority from the head of the staff department to which the property pertains, except in the Philippine and Hawaiian Departments, where such authority may be given by the commanding generals of those departments. The authority herein referred to, of heads of staff departments, will usually be given in general terms in the form of approved memoranda indicating the most advantageous method of disposing of various classes of unserviceable property, which memoranda will serve as guides to department and higher commanders and inspectors, or surveying officers. When property ordered "to be turned in to depot" on the recommendation of an inspector or surveying officer is found, upon receipt at the depot, to be in such condition that it can not be made suitable for issue, it may be destroyed or broken up under such instructions as may be given by the head of the department concerned, or by the commanding generals, Philippine and Hawaiian Departments, so far as pertains to property turned in to depots at Manila, Philippine Islands, and depots in Hawaii Territory.

When property is turned in to an arsenal or depot suitable reference will be given on the invoice to the authority for turning it in; when property is turned in to a depot to be sold on the recommendation of an inspector the invoice will be accompanied by extract copies of the approved inventory and inspection reports. (*C. A. R., Nos. 6, 30, and 37.*)

908. Public property in use will not be reported as unserviceable nor condemned by an inspector merely because worn or shabby in appearance when really strong and serviceable.

909. Great care will be taken to prevent property once condemned and ordered dropped from the returns from being again presented for inspection. When public property is presented to an inspector for condemnation, the officer responsible will certify on the inventory that the property has not been previously condemned.

910. Inspectors will, when practicable, cause the destruction, in their presence, of all property found to be worthless and which is without money value at or near the place of inspection, except small arms, and will state in their reports that "the articles recommended to be destroyed have no money value at or near the post." The action of an inspector on property of this character will be final, and his report will be a valid voucher for the responsible officer. Inspectors will be held responsible for their action in this particular. When property thus condemned is not destroyed in the presence of the inspector or a disinterested officer representing the inspector, the responsible officer will certify to the fact of subsequent destruction in his presence.

911. An inspection report on damaged clothing will set forth the amount of damage to each article; also a list of such articles as are fit to issue to prisoners, or, at reduced prices, to enlisted men willing to receive them.

912. Department commanders may give orders, on the reports of authorized inspectors, to make such disposition of condemned property as the case may require, except public buildings, for which the order of the Secretary of War is required. If the property be of considerable value and there be good reason to suppose that it can be more advantageously applied or disposed of elsewhere than within the command, the report will be forwarded for the action of the War Department.

913. The following-mentioned property will not be presented for the action of an inspector without the authority of the Secretary of War:

1. Cannon and their carriages, machine and automatic guns with their carriages and mounts, but not including spare parts, accessories, implements, and equipments required in their maintenance and operation; also ammunition for cannon.

2. Electrical and mechanical installations and appliances furnished to the Coast Artillery Corps by the Engineer Department, the Signal Corps, or the Torpedo Depot, and forming part of the permanent seacoast defenses, including submarine mine cable, but not including supplies such as wiring, tools, clamps, and battery fluid, fragile articles like battery jars and carboys, or spare parts and accessories not essential to the operation of the installation, such as battery syringes and hydrometers.

All of the copies of the inventory and inspection report on such property will be forwarded by the department commander directly to the chief of the bureau concerned for the final action of the Secretary of War. (*C. A. R., No. 55.*)

914. Orders for the final disposition of condemned property will be indorsed by the proper authority on the inspection reports, each copy being made complete in itself. Both copies will be forwarded, through military channels, to the accountable officer, who will forward one with his accounts and file the other with his retained papers.

ARTICLE LXVIII.

JUDGE ADVOCATE GENERAL'S DEPARTMENT.

915. The Judge Advocate General is the custodian of the records of all general courts-martial, courts of inquiry, and military commissions, and of all

papers relating to the title of lands under the control of the War Department, except the Washington Aqueduct and the public buildings and grounds in the District of Columbia. The officers of this department render opinions upon legal questions when called upon by proper authority.

916. The judge advocate of each department, or the officer acting as such, will, as soon as practicable after June 30 of each year, render to the Judge Advocate General a report for the year terminating on that date, giving the number and character of cases tried by courts-martial in the department during the period, with his recommendations and remarks touching the administration of military justice. This report will also contain such data and information as may from time to time be directed by the Judge Advocate General.

917. Rescinded; see M. C. M., paragraphs 367 and 474. (*C. A. R., No. 55.*)

918. Judge advocates and acting judge advocates will forward to the Judge Advocate General, on June 30 each year, with the reports prescribed in paragraph 916, lists of the law books for which they are responsible.

919. Applications of officers, enlisted men, and military prisoners for copies of proceedings of general courts-martial, to be furnished them under the one hundred and fourteenth article of war, will, when received by post or other commanders, be forwarded directly to the Judge Advocate General.

920. Communication between department commanders and the Judge Advocate General in respect of proceedings of military courts received and filed in the office of the Judge Advocate General will be direct. Judge advocates, under the terms of section 1201, Revised Statutes, are required to perform their duties under the general direction of the Judge Advocate General. In routine matters judge advocates and the Judge Advocate General may correspond directly. (*C. A. R., No. 9.*)

921. The reports which the Judge Advocate General of the Army may render upon cases received by him, and which require the action of the President, will be transmitted to The Adjutant General of the Army for record and for submission to the Chief of Staff for the consideration of the Secretary of War and the President. After final action is had by superior authority in such cases, all the papers will be returned to The Adjutant General of the Army, who, before publishing the action taken, will refer the papers to the Judge Advocate General of the Army for further scrutiny.

ARTICLE LXIX.

ARREST AND CONFINEMENT.

922. Only commanding officers have power to place officers in arrest, except as provided in the sixty-eighth article of war. An officer is placed in arrest by his commanding officer in person or through another officer, by a verbal or written order or communication, advising him that he is placed in arrest, or will consider himself in arrest, or words to that effect. (*C. A. R., No. 55.*)

923. An officer arrested will repair at once to his tent or quarters, and there remain until more extended limits have been granted by his commanding officer. Close confinement will not be enforced except in cases of a serious nature. (*C. A. R., No. 55.*)

924. Officers will not be placed in arrest for light offenses. For these the censure of the commanding officer will generally answer the purpose of discipline. Whenever a commanding officer places an officer in arrest without preferring charges, he will make a written report of his action to the brigade or Coast Artillery district commander, stating the cause. The brigade or Coast Artillery district commander, if he thinks the occasion requires, will call on the

officer arrested for any explanation he may desire to make, and take such other action within his authority as he may think necessary, forwarding the papers, with his recommendation, to the officer exercising general court-martial jurisdiction, who will, in case a trial is not deemed advisable, forward the papers to The Adjutant General of the Army for file with the officer's record, or for further action, stating the reasons why he deems trial inadvisable. In the case of officers belonging to organizations not attached or belonging to a brigade or Coast Artillery district, the report will be sent directly to the officer exercising general court-martial jurisdiction. (*C. A. R., No. 55.*)

925. In ordinary cases where inconvenience to the service would result from it, a medical officer will not be placed in arrest until the court-martial for his trial convenes.

926. An officer in arrest can not exercise command of any kind. He will not wear a sword nor visit officially his commanding or other superior officer, unless directed to do so. His applications and requests of every nature will be made in writing. (*C. A. R., No. 55.*)

927. On the march, field officers and noncommissioned staff officers in arrest will follow in the rear of their respective regiments, and company officers and noncommissioned officers in arrest in rear of their respective companies, unless otherwise specially directed.

928. Enlisted men against whom charges have been preferred will be designated as "awaiting trial;" enlisted men who have been tried will, prior to the promulgation of the result, be designated as "awaiting result of trial;" enlisted men serving sentences of confinement, not involving dishonorable discharge, will be designated as "garrison prisoners." Persons sentenced to dismissal or dishonorable discharge and to terms of confinement at military posts or elsewhere will be designated as "general prisoners."

929. Noncommissioned officers will not be confined in company with privates if it can be avoided. When placed in arrest they will not be required to perform any duty in which they may be called upon to exercise authority or control over others, and when placed in confinement they will not be sent out to work. (*C. A. R., No. 55.*)

930. Except as provided in the sixty-eighth article of war, or when restraint is necessary, no soldier will be confined without the order of an officer, who shall previously inquire into his offense. It is proper, however, for a company commander to delegate to noncommissioned officers of his company the power to place enlisted men in arrest as a means of restraint at the instant when restraint is necessary, but such action must be reported to the company commander at once. (*C. A. R., No. 55.*)

931. The arrest or confinement of an enlisted man will be reported, as soon as practicable, to his company or detachment commander by the officer authorizing the arrest or confinement.

932. Prisoners awaiting trial by, or undergoing sentence of, general court-martial and those confined for serious offenses, will be kept apart, when practicable, from those confined by sentence of an inferior court, or for minor offenses. General prisoners will not be confined with other prisoners except in cases of necessity. Enlisted men in confinement for minor offenses, or awaiting trial, or the result of trial for the same, will ordinarily be sent to work under charge of unarmed overseers instead of armed sentinels, and will be required to attend drills unless the commanding officer shall direct otherwise. (*C. A. R., No. 55.*)

933. An officer charged with crime or with a serious offense under the Articles of War shall be placed in arrest by the commanding officer, and in exceptional cases an officer so charged may be placed in confinement by the

same authority. A soldier charged with crime or with a serious offense under the Articles of War shall be placed in confinement, and when charged with a minor offense he may be placed in arrest. Any other person subject to military law charged with crime or with a serious offense under the Articles of War shall be placed in confinement or in arrest, as circumstances may require; and when charged with a minor offense such person may be placed in arrest. Any person placed in arrest as hereinbefore specified shall thereby be restricted to his barracks, quarters, or tent, unless such limits shall be enlarged by proper authority. (*C. A. R., No. 55.*)

924. In the absence of special instructions, the old officer of the day will, at guard mounting, release all garrison prisoners whose sentences expire that day. If there are any prisoners with no record of charges against them, the old officer of the day will report that fact to the commanding officer, who will give the necessary instructions. (*C. A. R., No. 55.*)

925. Prisoners will not be placed in irons except in the extraordinary case of a prisoner who, in the judgment of the commanding officer, is a desperate or dangerous character, in which case report of action and the circumstances will be immediately made to the department or tactical division commander. When a prisoner is removed from irons a report of that action will be made to the department or tactical division commander. A prisoner may be shackled or handcuffed while being transported from one post to another, or from a post to a penitentiary when, in the judgment of the officer in charge, the escape of the prisoner can not otherwise be prevented. (*C. A. R., No. 51.*)

926. Special rules and regulations will be promulgated by the Secretary of War to govern the enforcement of discipline, the methods of guarding, and the treatment of general prisoners confined at posts; also the measure of labor to be imposed and the character of clothing and diet to be furnished them.

927. The commanding officer at posts where general prisoners are confined will forward, on the last day of every month, directly to The Adjutant General of the Army and to the department commander, a return of general prisoners. Blank forms for this return will be furnished by The Adjutant General's Department. General prisoners will be reported under the following headings: (a) General prisoners under sentence for purely military offenses alone. (b) General prisoners under sentence for statutory or common-law crimes or misdemeanors either alone or in connection with purely military offenses.

928. Prisoners will not be transferred from places of trial to places at which they are sentenced to confinement except on orders of department commanders or higher authority. The strength of guards to accompany them will be limited to the necessities of safe delivery. Orders detaching guards in charge of prisoners will provide for the return journey of the guard and for commutation of rations when such commutation is necessary. The commanding officer of a place from which a prisoner is transferred will send, under seal, to the commanding officer of the place to which the prisoner is transferred the following papers in his case, namely: Service record (in case of a garrison prisoner); orders promulgating and modifying sentences; statement of conduct while under sentence to date of transfer; complete inventory of personal property, with signature of prisoner acknowledging its correctness, and list of clothing in possession of the prisoner when forwarded. Personal property not accompanying the prisoner will be assembled, carefully identified, and securely packed before shipment. In case of a general prisoner (who is not under suspended sentence of dishonorable discharge) transferred from a place in the United States the commanding officer will send the discharge papers of the prisoner, together with all the other papers hereinbefore described except the

service record. In lieu of the service record the commanding officer will send a certified copy of the prisoner's record as recorded on the form furnished by the Adjutant General's Department for keeping such records. In case a prisoner convicted of purely military offenses is transferred to the United States from the Philippine or Hawaiian Department, China, the Canal Zone, Alaska, or from any other place outside the continental limits of the United States, his service record, completed to date of transfer if the prisoner is under a suspended sentence of dishonorable discharge, or to date of dishonorable discharge if he has been dishonorably discharged, will be sent, under seal, in addition to the other papers hereinbefore described. (*C. A. R., No. 55.*)

939. All serviceable clothing which belongs to a prisoner, and his blankets, will accompany him to the place designated for his confinement, and will be fully itemized on the clothing list. The guard in charge of the prisoner during transfer will be furnished with a duplicate of this list and will be held responsible for the delivery, with the prisoner, of all articles itemized therein. At least one serviceable woolen blanket will be sent with every such prisoner so transferred. (*C. A. R., No. 55.*)

940. The personal effects of military prisoners who have escaped from confinement, except such as possess some special value as keepsakes, may be disposed of by sale as in the case of effects of deceased soldiers, and the proceeds thereof, together with any money left by the prisoner in the hands of the company commander, be turned over to a quartermaster, who should account for the same in the manner provided for quartermasters' collections. The officer will take the quartermaster's receipt for the amount paid him and forward the same to the Auditor for the War Department.

941. No general prisoner will be released from confinement except on an order communicated by the commanding officer, who, before giving such order, will verify the date of expiration of the prisoner's sentence by examining all orders fixing or modifying his term of confinement.

941. All orders from the War Department remitting or mitigating the sentences of general prisoners, except in cases where remission is granted in connection with honorable restoration to duty, will be signed by an officer of The Adjutant General's Department, will bear the seal of the War Department, and will be recorded in and issued from The Adjutant General's Office. Whenever the custodian of a general prisoner is in doubt as to the authenticity of an order for the remission or mitigation of the sentence of such prisoner, he will, before carrying the order into effect, make telegraphic inquiry of The Adjutant General's Office as to the authenticity of the order. In cases where the remission is granted in connection with honorable restoration to duty, the action of the Secretary of War will be published in a special order of the War Department bearing the seal of The Adjutant General's Office. (*C. A. R., No. 55.*)

942. General prisoners, other than those confined in penitentiaries, will be allowed in abatement of their terms of confinement when serving sentences of over three months, and not over 12 months, five days for each complete period of 25 days during the whole of which their conduct has been good; but the abatement of five days so authorized shall not have the effect in any case of reducing the confinement below three months. On sentences exceeding one year they will be allowed the foregoing abatement for the first year of the sentence including abatement, and thereafter 10 days for each complete period of 20 days during the whole of which their conduct has been good. Abatements thus authorized may be forfeited, wholly or in part, by subsequent misconduct, such forfeiture to be determined by the commanding officer of the post where the

prisoner is confined. A general prisoner serving sentence in a penitentiary will be allowed the abatement authorized for convicts in that penitentiary.

Garrison prisoners will be allowed in abatement of their terms of confinement when serving sentences of one month five days for good conduct. On sentences exceeding one month they will be allowed the foregoing abatement for the first month of the sentence, and thereafter 10 days for each complete period of 20 days during the whole of which their conduct has been good. Abatements thus authorized may be forfeited, wholly or in part, by subsequent misconduct, such forfeiture to be determined by the commanding officer of the post where the prisoner is confined.

In order to secure uniformity in computing abatement of terms of confinement the following method of computation will be used:

A general prisoner or garrison prisoner will be credited at the beginning of his confinement with all the good-conduct time that can be earned in his case during the entire period of his sentence. All months will be assumed to consist of 30 days. When forfeitures of good-conduct time are imposed, they will be deducted from the amount of the prisoner's credit, but care will be taken not to impose or deduct a forfeiture in excess of the amount of good-conduct time that has actually been earned at date of forfeiture.

Where a prisoner is serving two or more sentences the whole of all the sentences will be added together and treated as one sentence for the purpose of the computation of good-conduct time. (*C. A. R., Nos. 3 and 55.*)

942. After a garrison prisoner has served one-half of his sentence he may, if his enlistment has not expired, submit to the commander of the post where the sentence is being executed a request to be put on probation for the remainder of the term of confinement adjudged. If the conduct of the garrison prisoner has been good in all respects, this request will be granted by the commander of the post; and, if it be granted, the soldier will be restored to duty upon condition that if his conduct is not good while on probation he will be required to serve such part of his sentence as remained unexecuted at the time that he was put on probation.

After a general prisoner who is serving sentence at a post has served one-half of his sentence, he may submit to the commanding officer of the post an application to be placed upon parole during working hours for the remainder of the term of confinement. Such application will contain a pledge on the part of the applicant to comply with all general conditions under which general prisoners may be paroled, and also with any special requirements that may from time to time be made of him. Upon receipt of such an application the post commander may, in the exercise of his discretion, parole the prisoner during working hours for work upon condition that if the prisoner's conduct is not good the parole status will be forfeited. The granting of the qualified parole here authorized does not constitute a release of the prisoner from military custody or control, but merely authorizes a relaxation of the strict rule which would otherwise require the presence of a guard whenever the prisoner is outside of the guard-house.

In determining what constitutes one-half of a sentence the calculation will be based upon the prisoner's term without deduction for good conduct.

The abatement for good conduct authorized in paragraph 942 will continue to accrue during the good conduct of a garrison prisoner on probation or of a general prisoner on parole.

The parole of garrison prisoners is authorized in the discretion of the post commander, and he may also authorize certain garrison prisoners to leave the

guardhouse, not under charge of a sentinel, for the purpose of working outside under such surveillance and restrictions as he may impose. (*C. A. R., Nos. 12 and 39.*)

944. Rescinded; see M. C. M., pars. 381, 382, and 402. (*C. A. R., No. 55.*)

ARTICLE LXX.

COURTS-MARTIAL.

945. Rescinded; see M. C. M., pars. 7 and 12. (*C. A. R., No. 55.*)

946. Rescinded; see M. C. M., par. 81. (*C. A. R., No. 55.*)

947. Rescinded; see M. C. M., par. 89. (*C. A. R., No. 55.*)

948. Rescinded; see M. C. M., par. 86. (*C. A. R., No. 55.*)

949. Rescinded; see M. C. M., pars. 91 and 99. (*C. A. R., No. 55.*)

SUBPŒNAS TO WITNESSES.

950. Rescinded; see pars. 95, 160, and 161. (*C. A. R., No. 55.*)

951. Rescinded; see A. R., 996½. (*C. A. R., No. 55.*)

952. Rescinded; see M. C. M., par. 168. (*C. A. R., No. 55.*)

953. Rescinded; see M. C. M., pars. 333 and 336. (*C. A. R., No. 55.*)

954. Rescinded; see M. C. M., par. 75. (*C. A. R., No. 55.*)

955. Rescinded; see M. C. M., pars. 35 and 76. (*C. A. R., No. 55.*)

956. Rescinded; see M. C. M., par. 75. (*C. A. R., No. 55.*)

957. Rescinded; see M. C. M., pars. 43, 44, and 351. (*C. A. R., No. 55.*)

958. Rescinded; see M. C. M., pars. 43 and 349. (*C. A. R., No. 55.*)

959. Rescinded; see M. C. M., par. 351. (*C. A. R., No. 55.*)

960. Rescinded; see M. C. M., pars. 350 and 358. (*C. A. R., No. 55.*)

TRIALS.

961. Rescinded; see M. C. M., pars. 108 and 109; (*C. A. R., No. 55.*)

962. Rescinded; see M. C. M., par. 306. (*C. A. R., No. 55.*)

SENTENCES.

963. Rescinded; see M. C. M., par. 348. (*C. A. R., No. 55.*)

964. Rescinded; see M. C. M., par. 345. (*C. A. R., No. 55.*)

965. Rescinded; see M. C. M., par. 394. (*C. A. R., No. 55.*)

966. Rescinded; see M. C. M., pars. 396, 397, and 398. (*C. A. R., No. 55.*)

967. Rescinded; see M. C. M., par. 389. (*C. A. R., No. 55.*)

968. Rescinded; see M. C. M., par. 386. (*C. A. R., No. 55.*)

969. Rescinded; see M. C. M., par. 401. (*C. A. R., No. 55.*)

970. Rescinded; see M. C. M., par. 401, and A. R. 1371, as amended. (*C. A. R., No. 55.*)

971. Rescinded; see M. C. M., par. 389. (*C. A. R., No. 55.*)

972. Rescinded; see M. C. M., par. 401. (*C. A. R., No. 55.*)

973. Rescinded; see M. C. M., par. 401. (*C. A. R., No. 55.*)

974. Rescinded; see M. C. M., par. 320. (*C. A. R., No. 55.*)

975. Rescinded. (*C. A. R., No. 12.*)

976. Rescinded; see A. R. 1370½. (*C. A. R., No. 55.*)

977. Rescinded; see A. W. 50. (*C. A. R., No. 55.*)

978. Rescinded; see A. R. 1370. (*C. A. R., No. 55.*)

THE RECORD.

- 979. Rescinded; see M. C. M., pars. 354, 358, and 363. (*C. A. R., No. 55.*)
- 980. Rescinded; see M. C. M., par. 117. (*C. A. R., No. 55.*)
- 981. Rescinded; see M. C. M., pars. 366 and 370. (*C. A. R., No. 55.*)
- 982. Rescinded; see M. C. M., par. 367. (*C. A. R., No. 55.*)
- 983. Rescinded; see M. C. M., pars. 352 and 364. (*C. A. R., No. 55.*)
- 984. Rescinded; see M. C. M., par. 400. (*C. A. R., No. 55.*)

REPORTERS, CLERKS, INTERPRETERS.

- 985. Rescinded; see M. C. M., par. 105. (*C. A. R., No. 55.*)
- 986. Rescinded; see M. C. M., pars. 112, 113, 115, and 116. (*C. A. R., No. 55.*)
- 987. Rescinded; see M. C. M., par. 118. (*C. A. R., No. 55.*)
- 988. Rescinded; see M. C. M., par. 119. (*C. A. R., No. 55.*)

ARTICLE LXXI.

CIVILIAN WITNESSES.

- 989. Rescinded; see M. C. M., par. 184. (*C. A. R., No. 55.*)
- 990. Rescinded; see M. C. M., par. 185. (*C. A. R., No. 55.*)
- 991. Rescinded; see M. C. M., pars. 172 and 193. (*C. A. R., No. 55.*)
- 992. Rescinded; see M. C. M., par. 186. (*C. A. R., No. 55.*)
- 993. Rescinded; see M. C. M., par. 187. (*C. A. R., No. 55.*)
- 994. Rescinded; see A. R. 996½. (*C. A. R., No. 55.*)

ARTICLE LXXII.

EMPLOYMENT OF CIVIL COUNSEL; SUMMONS BY CIVIL COURT.

995. The employment of counsel at the expense of the United States is under the direction of the Department of Justice.

996. When a necessity arises for an attorney or counselor to defend or advise officers and others connected with the military service in cases connected with their public duties, request, with report of the facts, will be made to The Adjutant General of the Army through the regular military channels, but in cases which will not admit of delay the request may be sent direct. The Adjutant General will promptly submit all such requests to the Secretary of War for reference to the Department of Justice. Officers and others in the military service employing an attorney or counselor without being specially authorized to do so will be required to pay the expenses attendant upon such employment.

996½. An officer or enlisted man who receives a summons to attend as a witness before any civil court, or other civil tribunal competent to issue subpoenas, will, before starting to obey the summons, request authority from his commanding officer to obey the same. (*C. A. R., No. 55.*)

996¾. Compensation to civilians in or out of Government employ for attendance upon civil courts is payable by the civil authorities. (*C. A. R., No. 55.*)

997. Rescinded; see M. C. M., par. 478. (*C. A. R., No. 55.*)

998. Rescinded; see M. C. M., par. 478. (*C. A. R., No. 55.*)

999. Rescinded; see M. C. M., par. 479. (*C. A. R., No. 55.*)

ARTICLE LXXIII.

QUARTERMASTER CORPS.

NOTE.—Regulations for the government of the Quartermaster Corps, prepared and published under the authority of the Secretary of War, are distributed to its officers by the Quartermaster General. Only such regulations are herein given as are general in their nature or affect other branches of the service. (*C. A. R., No. 9.*)

GENERAL DUTIES.

1000. The Quartermaster Corps is charged with the duty of providing means of transportation of every character, either under contract or in kind, which may be needed in the movement of troops and material of war. It furnishes all public animals employed in the service of the Army, the forage consumed by them, wagons and all articles necessary for their use, and the horse equipments for the Quartermaster Corps. It furnishes clothing, camp and garrison equipage, barracks, storehouses, and other buildings; constructs and repairs roads, railways, bridges; builds and chartered ships, boats, docks, and wharves needed for military purposes; supplies subsistence for enlisted men and others entitled thereto; supplies articles for authorized sales and issues; furnishes lists of articles authorized to be kept for sale; gives instructions for procuring, distributing, issuing, selling, and accounting for all quartermaster and subsistence supplies; has charge of the supply and distribution of and accounting for funds for the payment of the Army, and such other financial duties as are specially assigned to it; and attends to all matters connected with military operations which are not expressly assigned to some other bureau of the War Department. (See par. 1498.) (*C. A. R., No. 46.*)

1001. The Quartermaster Corps transports to the place of issue and provides storehouses and other means of protection for the preservation of stores supplied for the Army by other departments.

1002. General depots for the collection, manufacture, and preservation of quartermaster stores, until required for distribution, are under the immediate control of the Quartermaster General. (*C. A. R., No. 10.*)

1003. The Quartermaster General will announce from time to time the depots from which requisitions for quartermaster supplies—issuable under Army Regulations—will be filled.

The commanding officers of the depots so designated will fill, as soon as possible after their receipt, all requisitions approved by competent authority. (*C. A. R., No. 10.*)

1004. Department commanders will take final action on all requisitions for supplies furnished by the Quartermaster Corps issuable under Army Regulations or general orders and send them for supply to the depots designated by the Quartermaster General. (*C. A. R., No. 10.*)

1005. Requisitions for quartermaster supplies not covered by Army Regulations or general orders will be forwarded to the Quartermaster General for his action. (*C. A. R., No. 10.*)

1006. Rescinded. (*C. A. R., No. 7.*)

1007. Emergency purchases of quartermaster stores payable from appropriations for incidental expenses, Army transportation, and regular supplies, not exceeding \$200 in any one case, may be made under the authority of the department commander, but purchases under this authority should be avoided as much as possible by timely requisitions.

1008. Estimates for funds required to discharge accrued liabilities, or liabilities to become due within the month for which the funds are to be supplied,

will be submitted by quartermasters at posts under the jurisdiction of department commanders to their respective department quartermasters; by recruiting officers (for funds pertaining to appropriation Subsistence of the Army) to the disbursing officers designated to settle their accounts, and by depot quartermasters and quartermasters of independent stations directly to the Quartermaster General, sufficient time in advance of the period for which required to insure the funds being available when payments become due. (*C. A. R., No. 10.*)

1000. 1. The enlisted members of the Quartermaster Corps will consist of such number and grades as the President may from time to time authorize under the provision of law.

2. Quartermaster sergeants, senior grade, quartermaster sergeants, and sergeants, first class, will be appointed by the Secretary of War on the recommendation of the Quartermaster General. Sergeants will be appointed by the Quartermaster General, and corporals, cooks, and privates, first class, will be appointed by the commander of a territorial department, division, or separate brigade in the field, on the recommendation of the department, division, or brigade quartermaster. Before appointment quartermaster sergeants, senior grade, quartermaster sergeants, sergeants, first class, and sergeants must pass, under the direction of the Quartermaster General, a satisfactory examination, to be conducted by the quartermaster of the station at which the applicant may be serving, or elsewhere, as the Quartermaster General may direct.

Quartermaster sergeants, senior grade, quartermaster sergeants, and sergeants, first class, though liable to discharge for inefficiency or misconduct, will not be reduced, except by sentence of a court-martial. Sergeants may be reduced by sentence of a court-martial or by the Quartermaster General, and corporals, cooks, and privates, first class, may be reduced by sentence of a court-martial, by the Quartermaster General, or by the commander of a territorial department, division, or separate brigade in the field, on the recommendation of the department, division, or brigade quartermaster. Cooks may not be reduced by sentence of summary or special courts.

3. Within his command the commander of a territorial department, or of a field army, division, or separate brigade in the field, on the recommendation of the department quartermaster, chief quartermaster, division or brigade quartermaster, may transfer enlisted men of the line of the Army as privates to the Quartermaster Corps, and he may transfer enlisted men of the Quartermaster Corps, except quartermaster sergeants, senior grade, and quartermaster sergeants, from duty at one post or with one organization to another where their services are required, reporting such transfer to the Quartermaster General. The assignment to station of quartermaster sergeants, senior grade, and quartermaster sergeants, except as may be provided in Field Service Regulations, will be made by the War Department or by commanders of territorial departments, under the special authority, in each case, of the War Department.

Applications for transfer from the line of the Army to the Quartermaster Corps will state the age, character, special qualifications, physical condition, date of expiration of current enlistment, previous service, and whether made for an existing or prospective vacancy, and will originate with the quartermaster of the post or organization and be forwarded through military channels.

4. All enlistments for the Quartermaster Corps will be made in the grade of private. Quartermaster sergeants, senior grade, quartermaster sergeants, sergeants, first class, sergeants, corporals, cooks, and privates, first class, who have completed an authorized enlistment period, none of which has been passed in the reserve, may be reenlisted in their respective grades and their warrants or appointments continued in force provided they reenlist on the day following

that of discharge. Any noncommissioned officer enlisted on or after the first day of November, nineteen hundred and sixteen, furloughed to the reserve upon the completion of three years in the active service with an excellent character, shall be permitted to reenlist in the organization from which furloughed with the rank and grade held by him at the time of his furlough if he reenlists within 20 days after the date of such furlough. In each case the soldier will reenlist at the place where his organization is stationed. If, however, the quartermaster under whom the soldier may be serving should not deem the continuing in force of the warrant or appointment to be for the best interest of the service, he will communicate through military channels his reasons in detail to the authority competent to appoint or promote to the grade for which reenlistment is desired, in order that a decision may be had before the date of the soldier's discharge. Each reenlistment and continuance will be noted on the warrant or appointment by the quartermaster.

Commanding officers of posts or stations, upon the recommendation of the quartermaster, may authorize enlistments; including the enlistment or reenlistment of married men, to fill vacancies within the allotment of enlisted men, Quartermaster Corps, made to such posts or stations.

5. When a man is enlisted for, reenlisted in, or transferred to the Quartermaster Corps, the quartermaster who first receives the soldier will forward a copy of his service record directly to the Quartermaster General, except in the case of a man stationed in the Philippine or Hawaiian Department, when the copy will be sent through the department quartermaster.

Quartermasters will make monthly returns of their detachments on a form to be furnished by the Quartermaster General. The returns will be forwarded to the Quartermaster General through department quartermasters, and will show the date and nature of any change affecting the status of the soldier.

6. Accounts of pay and clothing and all records pertaining to enlisted men of the Quartermaster Corps will be kept by the quartermaster under whose immediate direction they are serving. All members casually at a post, camp, or other station are under the immediate orders of the quartermaster, except prisoners and those sick in hospital, who will, however, be borne on the muster rolls, morning report, and returns of the Quartermaster Corps detachment. If discharged, their final statements will be prepared by the quartermaster.

7. A quartermaster sergeant at any ungarrisoned post or station will be responsible for the property of his own corps, and for such other property as may be intrusted to him for safe-keeping. For all public property committed to his charge he will account to the heads of the staff departments or corps concerned, and if the means at his disposal are insufficient for its preservation he will report the facts.

8. The military control of quartermaster sergeants serving at posts not occupied by troops is vested in the commander of the territorial department in which they are serving. All matters relating to them as soldiers subject to military command, as distinguished from the administrative duties imposed upon them by regulations and orders, will, except in cases of reenlistment, be determined at department headquarters, where their service records will be kept. When they are discharged a copy of the service record, upon which will be noted the fact of discharge, with the date, place, and cause, and the character given on the discharge certificate, will be forwarded to the Quartermaster General of the Army. A copy will also be forwarded to The Adjutant General of the Army.

9. The number of noncommissioned officers, except quartermaster sergeants, senior grade, and quartermaster sergeants, and privates of the Quartermaster

Corps to be apportioned among departments and independent posts and stations will be determined by the Quartermaster General. Department commanders, on the recommendation of the department quartermaster, will make suitable allotments of enlisted men of the Quartermaster Corps, except quartermaster sergeants, senior grade, and quartermaster sergeants, to the several posts and stations of their command, but the aggregate thus allotted must not exceed the total number apportioned to the department.

10. Quartermaster Corps enlisted personnel, except quartermaster sergeants, senior grade, and quartermaster sergeants, is classified as follows:

(a) That portion attached to mobile organizations, except those organizations pertaining to the Quartermaster Corps.

(b) That portion assigned to organizations pertaining to the Quartermaster Corps.

(c) That portion assigned to the service of the interior. Civilian personnel of the Quartermaster Corps will, as far as practicable, be assigned to classes (b) and (c).

All men of the Quartermaster Corps will be carried on muster rolls of the Quartermaster Corps, under "Remarks," as attached to a definite mobile organization, or as belonging to a unit of class (b) or to class (c). Similar notation will be made on returns of the Quartermaster Corps. Department commanders will determine, on recommendation of the department quartermaster, the number of men at each post or station to be assigned to each class, within the limits prescribed in Tables of Organization, and the individual men will be assigned to their respective classes and those of class (a) attached to organizations of mobile troops by the post commander on recommendation of the quartermaster. Service records of men of the Quartermaster Corps of classes (a) and (b) will be kept in duplicate at posts, and all other papers required when Quartermaster Corps personnel accompanies troops to which attached will be prepared in advance so far as practicable. Mobile organizations will carry attached Quartermaster Corps troops in red ink on their muster rolls and returns.

11. On receipt of orders directing a movement of mobile organizations with attached Quartermaster Corps troops, the personnel of class (a) attached to those troops will be directed to report for duty to the organization commander, and, while absent, will be carried as on detached service, unless another status is specified in orders. When the troops again come under the jurisdiction of a post commander, the attached Quartermaster Corps personnel will be directed to report to the quartermaster of the post for garrison duty.

12. Property pertaining to the individual equipment of the Quartermaster Corps personnel, class (a), including mounts and mounted equipment, will be transferred to the regimental supply officer or commander of the organization to which attached on memorandum receipt if the organization is only temporarily detached from its station, otherwise by regular invoices and receipts. These transfer papers will be kept prepared in advance, except as to quantities.

13. All men of the Quartermaster Corps of class (a) who are authorized in Tables of Organization to be mounted will be furnished with mounts and appropriate mounted equipment by the Quartermaster Corps. (*C. A. R., Nos. 3, 10, 18, 30, 34, 51, and 55.*)

1000. Commissioned officers of the Quartermaster Corps will be designated by the War Department, upon the recommendation of the Quartermaster General, for duty with the technical and administrative staff of divisions and higher units, and of the line of communications; and by the Quartermaster General for duty with division supply trains, with supply columns of the line of communications, and with depots thereof. (*C. A. R., No. 34.*)

1009. Whenever troops are ordered to field duty or to maneuver camps, department commanders will designate the proper pro rata number of bakers to accompany such troops from the detachments of bakery companies stationed at the posts from which the troops are ordered, or from such other bakery personnel as may be available for the purpose, together with the necessary bakery equipment. The procedure outlined for class (a) personnel in section 11, paragraph 1009, will be followed on the receipt of orders directing the movement of mobile organizations with attached bakery personnel of the Quartermaster Corps. (C. A. R., No. 47.)

BARRACKS AND QUARTERS.

1010. When buildings are about to be occupied, allotted, or vacated, an inspection of them will be made by the quartermaster, who will make and file a statement of their condition, reporting to the commanding officer any damage apparently due to carelessness or neglect. Damages will be promptly repaired if possible.

1011. Neglect by any officer or soldier to take proper care of rooms or furniture used by him is a military offense. In case of damage, such officer or soldier may be allowed to pay cost of necessary repairs if the commanding officer deem such payment sufficient. Commanding officers will report, through prescribed channels, to the War Department their proceedings in all cases under this regulation.

1012. The annual inspection of all public buildings, structures, and systems at every post and station will be made prior to March 1 each year by the commanding officer and the quartermaster, after which the latter will prepare annual estimates on the prescribed forms, showing the nature and cost of the repairs to be paid for out of the appropriations for the ensuing fiscal year. He will omit from the estimates for repairs all work for which funds have been allotted or supplied for the current year. All estimates for new construction and betterments will be prepared separately and forwarded to the department commander, who will carefully consider and revise them as may be necessary and forward them, with an express statement of his approval or disapproval, through military channels for the consideration of the Secretary of War in connection with the preparation of the next estimates to be submitted to Congress.

He will also state the condition of each building, structure, or system, and will properly enter under the indicated headings the amounts expended during the preceding fiscal year. (C. A. R., No. 44.)

1013. Estimates for repairs to public buildings will include repairs to the buildings, and to all fixtures, systems, and apparatus pertaining to the buildings and permanently installed therein.

Annual estimates for repairs will also be prepared for all structures and systems exterior to buildings, including target ranges, drainage, dredging, and improvement to grounds.

Estimates for necessary new construction, extensions, alterations, additions, or new installations will be prepared annually and forwarded at the same time and in the same manner as the estimates for annual repairs, stating fully the necessity for each item of work called for.

Where blanks are furnished especially for the purpose these estimates will be submitted thereon; in cases where no special blank is furnished estimates will be submitted on Form No. 160, Q. M. C.

In submitting requests for new buildings or additions to existing buildings, the following information should accompany the estimates therefor:

1. Size of proposed building or addition.
2. The material of which it is proposed to construct it.
3. The purpose for which the building is to be devoted described in detail. If a barrack building, the number of men to be accommodated. If a stable, the number of animals to be provided for, etc.
4. The particular necessity for the building or addition requested, stating fully the existing accommodations at the post of the character asked for, and how accommodations are now being provided for the purposes for which building is desired.
5. The size of the garrison, including the number of officers, men, and civilian employees authorized at the post, also the post allowance of animals and means of transportation. (*C. A. R., No. 55.*)

1014. Post commanders will carefully examine these estimates and will forward them not later than April 1 with their recommendations to the department commander.

The commanding generals of departments and commanding officers of places excepted from the control of department commanders will carefully examine these estimates and will forward them with their recommendations to The Adjutant General of the Army not later than April 15 of each year.

Estimates in the Philippine Department will be forwarded in like manner to the department commander for his action.

1015. (Changed by *C. A. R., No. 10, W. D., 1914.*) Based upon the estimates and recommendations received, the Quartermaster General, with the approval of the Secretary of War, will make apportionments from which department and other commanders will make allotments for repairs.

The department commander in making allotments for repairs for the various posts in his department will specify a total amount approved under each appropriation involved for all the work at that post. All commanding officers will comply with the provisions of paragraph 707.

After allotments for repairs shall have been made by the department commander the annual estimate will be sent to the post to which it pertains. All three copies will be retained at the post until June 30 of the fiscal year concerned. The commanding officer will then indicate in red ink figures on the three copies of the estimate, opposite the amount estimated for, the amount actually expended for each item of work on each building or each set of quarters, also for all other items of work, etc., so that the Quartermaster General's Office will have knowledge of the actual cost of repairs, etc., of each item when the estimates are returned to that office. When this shall have been accomplished one copy of the estimate will be retained at the post; the other two copies will be forwarded to department headquarters, one copy to be retained there for record and the other to be forwarded to The Adjutant General of the Army.

After all repairs, etc., shall have been completed, commanding officers of depots and independent stations will forward one copy of the annual estimate to The Adjutant General of the Army, one copy being retained at the depot or station for record there. The same regulations will govern, so far as applicable, for depots and independent stations with reference to retaining and completing the estimates as stated in section three above, as apply to posts under the jurisdiction of department commanders. (*C. A. R., Nos. 10 and 44.*)

1016. Post and department commanders will carefully examine into the methods that are being pursued in making repairs with a view to utilizing to the fullest extent all facilities that are available at the post for such a purpose.

In the preparation of estimates for repairs available post labor will be fully considered with a view to its use wherever practicable.

Post transportation and prison labor, when available, will be used in making repairs to roads, walks, and wharves, and in improving grounds, and all posts should be supplied with the machinery necessary for making such repairs.

1017. No extensions, alterations, or additions to buildings, structures, or systems will be made at military posts or stations without proper authority from the War Department, nor will funds apportioned for repairs to these buildings, structures, or systems be used in making extensions, alterations, or additions thereto.

When extensions, alterations, or additions to any buildings, structures, or systems at a post or a station are required, a statement showing the necessity therefor accompanied by detailed information relative thereto and estimates of cost on the prescribed form, with map or drawings to illustrate, will be submitted to the War Department, through military channels.

1018. When private buildings occupied as barracks or quarters or lands occupied as encampments are vacated, the commanding officer and quartermaster will make an inspection of them, and the latter will report, through the prescribed channel, to the Quartermaster General, their condition and any injury which has resulted to them by reason of such occupancy. (*C. A. R., No. 10.*)

1019. At each post there will be kept a book (Record Barracks and Quarters—supplied by the Quartermaster Corps) in which will be entered a record of every permanent building, under its proper numerical designation. The number originally given a building will be retained as a permanent record and will not be altered to conform to the post directory nor to any changes therein.

On the record of each building all expenditures of any kind will be entered, whether annual or special.

This book will be totalled annually on June 30th, and the total amount expended on that building for annual repairs only during the preceding 12 months will be reported on the annual estimate for the ensuing fiscal year.

At the close of each fiscal year unexpended balances not held by post quartermasters for authorized payments under contract will be returned to the department quartermaster.

This book will be so kept as to show at all times an accurate record of expenditures for all repairs, additions, alterations, etc., that the total cost of the building to date may at any time be determined. The entries should be made so as to show the cost of the annual repairs separately. (*C. A. R., No. 44.*)

1020. Permanent heavy furniture will be assigned to officers' quarters by the Quartermaster General under the direction of the Secretary of War. All articles of such furniture will be marked with the number of the quarters to which they may be assigned, will be considered a part of such quarters, and will not be removed therefrom (except for repair or storage, or when the quarters are abandoned for use as officers' quarters) without authority of the Secretary of War. A memorandum receipt will be given by an officer to whom quarters have been assigned for the furniture therein supplied by the Quartermaster Corps, and he will be responsible for its proper care and will be charged with the amount of any damage thereto other than that incident to fair wear and tear.

The quartermaster will include in the report called for by paragraph 1010 a statement of the condition of furniture placed in officers' quarters. (*C. A. R., No. 10.*)

1021. The Quartermaster Corps will provide in all permanent barracks a trunk locker for each enlisted man for his uniform and extra clothing.

1022. Barracks will be supplied with chairs, at a rate not exceeding one for each noncommissioned officer and one for every two of the other enlisted men quartered there. Cuspidors, with suitable mats on which to place them, will be supplied in all barracks and other buildings occupied or used by enlisted men.

1022. China and glass ware belonging to mess outfits and bunks, mattresses, pillows, benches, chairs, tables, and other articles of furniture provided for soldiers' barracks will not be removed therefrom without the order of the post commander, nor will they be removed from a post or station except by order of the War Department.

In emergencies post commanders may authorize the quartermaster to issue to officers, on memorandum receipt, such quartermaster supplies as may be absolutely necessary during the emergency. The regular issue of tableware will not be sold to officers.

In all changes of station of organizations, trunk lockers, mattress covers, pillowcases, bed sheets, blankets, overcoats, ponchos, slickers, sweaters, and barrack bags will be transferred with them. In all changes of station of all individual enlisted men, trunk lockers, blankets, overcoats, ponchos, slickers, and sweaters will be transferred with them, the fact being noted on the soldier's service record. None of those articles, except blankets, overcoats, ponchos, slickers, and sweaters will be taken into the field.

Previously to the execution of an order for change of station of an organization the commanding officer of the post or station will appoint a surveying officer, if possible an officer belonging to an organization other than that changing station, who will survey all china and glassware of the outgoing organization. He will render a report as to the serviceability or unserviceability of the articles surveyed, and that report, when approved by the commanding officer, will be final. All china and glassware found to be serviceable will be turned in to the quartermaster for reissue. All china and glassware found to be unserviceable after the authorized allowance of 5 per cent a quarter on account of breakage shall have been deducted will be destroyed and the money value thereof charged against the officer who is responsible for the property. (*C. A. R., Nos. 6 and 55.*)

ALLOWANCE AND ASSIGNMENT OF QUARTERS.

1024. At each post and station where there are public quarters in buildings belonging to the United States, the quartermaster, under direction of the commanding officer, will allot to each officer the quarters to which his rank entitles him.

1025. At all posts, where, in the opinion of the department commander, the barracks and quarters are sufficient for the purpose, the following regulations will govern their assignment and occupation:

1. Permanent quarters will be assigned to the field and staff officers of the garrison.

2. Quarters for the captain and lieutenants of each company will be designated as appertaining to each set of barracks, having reference to convenience of location. Where bachelor quarters are provided at a military post it is proper, when necessary, that they be assigned to officers without families. The post commander's decision with respect to the necessity for such assignment will govern in each case.

3. On arrival of troops each company will be assigned by the commanding officer to appropriate vacant barracks and quarters. Quarters thus regularly assigned will not be subject to choice, but any not occupied may be chosen for temporary occupancy by an officer, in accordance with existing regulations, subject, however, to removal whenever an officer entitled to them arrives. The original assignment of quarters at any post or station will be made by a board of officers consisting of the commanding officer, the two senior line officers present, the surgeon, and the quartermaster. Upon the department com-

mander's approval of the board's action, its recommendations will be carried into effect as soon as practicable, the department commander causing the assignments to take effect as changes occur in the stations of officers and troops without removing any officer from quarters occupied by him under other existing regulations.

1026. At posts or stations where the provisions of paragraph 1025 can not be applied officers may make selection of quarters in accordance with their rank, but the commanding officer may direct that they confine their selection to buildings located near their troops. An officer may select quarters occupied by a junior, but will not displace a junior if there be quarters suitable to the rank of the senior available, with equal conveniences and accommodations. When an officer has made his choice he must abide by it, and shall not again displace a junior unless he himself is displaced by a senior. The particular rooms which constitute a set of quarters will be designated by the quartermaster, under the direction of the commanding officer. Attics are not counted as rooms. Officers will not choose rooms belonging to different sets.

1027. An officer reporting for duty at a post will, immediately upon his arrival, make written application to the commanding officer for quarters. If in command of troops, he will apply for quarters for himself, for his subordinate officers, and the enlisted men of his command. The application will be accompanied by a copy of the order directing him to report at the station, and will be referred to the quartermaster for proper action under such instructions as the commanding officer may indorse thereon.

1028. An officer will not occupy more than his proper allowance of quarters, except by permission of the commanding officer when there is an excess of quarters at the station. The allowance will be reduced pro rata by the commanding officer when the number of officers and troops present makes it necessary. The commanding officer will exercise such personal supervision over the matter of assignment of quarters as will conserve the interests of the United States, within the meaning of preventing, so far as possible, claims for commutation of quarters arising in the cases of officers who are on duty at places where there are public quarters. (*C. A. R., No. 28.*)

1029. Officers on duty with troops at stations where there are public quarters will be furnished them in kind. (*C. A. R., No. 28.*)

1030. At a military post where the headquarters of a department are or may be established the department commander may set aside quarters for the staff, but will not disturb assignments made under paragraph 1025 if it can be avoided. Quarters thus reserved will not be open to selection, but will be subject to assignment independent of choice.

1031. An officer's right to quarters is solely one of occupancy. When he and his family cease to occupy them, except in case of temporary absence, they are open to selection by, and reassignment to, some other officer on duty at the post.

1032. When assigned to duty without troops or awaiting orders for the convenience of the Government, officers will be entitled to quarters, but in no case will they be furnished with quarters at two stations at the same time.

1033. The allowance of quarters to which an officer is entitled when on duty may be continued in kind, at his proper station, during the period for which the law permits him to be absent, without reduction of pay and allowances. An officer under suspension has the same right to quarters as when on duty's status, if present at the post.

1034. At a post a sufficient number of rooms may be set aside for a mess when a majority of its officers unite in a mess, but never when the officers to be accommodated are less than three in number.

1035. An officer on sick leave is entitled to public quarters at his station during the period of sick leave, not exceeding six months, provided he or his family occupy them. (C. A. R., No. 28.)

FUEL AND STOVES.

1036. Each officer or enlisted man entitled to and occupying public quarters will be furnished at the expense of the United States with the quantity of fuel required to do the necessary heating, cooking, and heat the necessary water in the building to which assigned at a military post, in accordance with allowances published from time to time. The allowances are cumulative for the entire fiscal year, or such portion thereof as an officer or organization may serve at the same post or station. At the end of the fiscal year, or when officers or organizations change station, fuel accounts shall be closed and excess issues paid for. Savings on allowances are not transferable to another post or station.

Where an officer or enlisted man is occupying quarters other than public, the Quartermaster Corps will pay commutation to such officer or enlisted man for the heat actually necessary for the number of rooms actually occupied, but not exceeding the number to which the rank of the officer or enlisted man entitles him as specified in paragraph 1044, and in no case exceeding the maximum allowances set forth in the following table for the zones of equal temperature in which serving, charts showing zones of equal temperature to be published in orders from time to time.

Commutation rates for officers and enlisted men not occupying public quarters will be as follows:

Rates per month for the actual number of rooms occupied within the allowances given for each grade in paragraph 1044.

[Values per month for number of rooms actually occupied.]

| Number of rooms. | Months of— | | | | | | | | | | | | |
|---------------------|-------------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|----------------------------|--|----------------------------|
| | December, January, and February. | | | | March and November. | | | | April, May, and October. | | | June, July, August, and September. | |
| | Zone 1, 0° to 20°. | Zone 2, 20° to 30°. | Zone 3, 30° to 40°. | Zone 4, 40° to 60°. | Zone 5, 10° to 25°. | Zone 6, 25° to 35°. | Zone 7, 35° to 45°. | Zone 8, 45° to 65°. | Zone 9, 35° to 40°. | Zone 10, 40° to 50°. | Zone 11, 50° to 70°. | Zone 12, 45° to 55°. | Zone 13, 55° to 75°. |
| 10..... | \$26.50 | \$24.50 | \$22.50 | \$20.50 | \$26.50 | \$23.50 | \$21.50 | \$18.00 | \$21.00 | \$20.08 | \$6.00 | \$19.00 | \$6.00 |
| 9..... | 24.30 | 22.95 | 20.70 | 18.90 | 24.30 | 21.60 | 19.80 | 17.10 | 19.35 | 18.45 | 6.00 | 17.55 | 6.00 |
| 8..... | 22.40 | 21.20 | 19.20 | 17.60 | 22.00 | 20.40 | 18.40 | 15.60 | 18.00 | 17.20 | 6.00 | 16.40 | 6.00 |
| 7..... | 20.65 | 19.25 | 17.85 | 16.45 | 19.95 | 18.55 | 16.80 | 14.35 | 16.45 | 15.75 | 5.53 | 15.05 | 5.55 |
| 6..... | 18.60 | 17.40 | 15.90 | 14.70 | 18.00 | 16.80 | 15.30 | 12.90 | 14.70 | 14.40 | 5.52 | 13.50 | 5.50 |
| 5..... | 16.50 | 15.50 | 14.25 | 13.00 | 16.00 | 15.00 | 13.50 | 11.50 | 13.00 | 12.50 | 5.00 | 12.00 | 5.00 |
| 4..... | 14.40 | 13.40 | 12.40 | 11.60 | 14.00 | 13.00 | 11.60 | 10.00 | 11.20 | 10.80 | 5.00 | 10.40 | 5.00 |
| 3..... | 12.00 | 11.10 | 10.20 | 9.60 | 11.55 | 10.65 | 9.60 | 8.25 | 9.30 | 9.00 | 5.00 | 8.55 | 5.00 |
| 2..... | 8.90 | 8.30 | 7.80 | 7.30 | 8.70 | 8.10 | 7.30 | 6.40 | 7.10 | 6.90 | 5.00 | 6.70 | 5.00 |
| 1..... | 6.50 | 5.20 | 5.00 | 4.80 | 5.30 | 5.10 | 4.70 | 4.25 | 4.50 | 4.45 | 4.00 | 4.50 | 4.00 |

(C. A. R., Nos. 7, 21, and 28.)

1037. The Quartermaster Corps may issue or sell fuel in accordance with paragraph 1036 to contract surgeons, acting dental surgeons, and veterinarians. Fuel may be sold to retired officers at cost to the Government, delivered when they reside at places where it can be done conveniently. Fuel purchased upon its B. t. u. value will be sold at contract base price.

1038. The commanding officer of a post at or near which the immediate family of a Regular or Volunteer soldier resides may, if the residence and other conditions of such family make it proper, grant to the head thereof permits to purchase for cash at cost prices such quantities of fuel and mineral oil as in his

opinion may be reasonably needed for the sole use of the soldier's immediate family.

1039. Fuel will only be issued or sold to an officer upon his certificate that it is for his personal or family use; any sale, exchange, or transfer whatever of fuel issued or sold to an officer under this paragraph is forbidden.

1040. Anthracite coal having not more than 10 per cent of ash nor more than 10 per cent of volatile matter is the standard. The scale of equivalents to govern in the issue and sale of fuel will be published from time to time in general orders. (*C. A. R., No. 41.*)

1041. Rescinded. (*C. A. R., No. 28.*)

1042. Fuel issued to officers or troops is public property. Any portion not consumed by them when the quarterly inventory of fuel is made will be immediately taken up by the accountable officer on the prescribed form and posted to the property account as a debit. (*C. A. R., No. 42.*)

1043. As far as practicable issues of fuel will be made to all buildings at the beginning of each month. The cheapest fuel at the place of issue will, all things considered, be furnished. (*C. A. R., No. 42.*)

1044. (Changed by *C. A. R., No. 28, W. D., 1915.*) The following table shows the authorized number of rooms for which commutation of quarters is payable, the maximum number of rooms for which commutation of heat and light may be paid, and the allowances of cooking stoves and ranges for public quarters:

| | Rooms. | | For quarters. |
|---|--------------|------------|---------------------------|
| | As quarters. | As office. | Cooking stoves or ranges. |
| Lieutenant general..... | 10 | ..... | 1 |
| Major general..... | 9 | ..... | 1 |
| Brigadier general..... | 8 | ..... | 1 |
| Colonel..... | 7 | ..... | 1 |
| Lieutenant colonel..... | 6 | ..... | 1 |
| Major..... | 5 | ..... | 1 |
| Captain..... | 4 | ..... | 1 |
| First lieutenant..... | 3 | ..... | 1 |
| Second lieutenant..... | 2 | ..... | 1 |
| Army field clerks having service which entitles them to allowances heretofore prescribed by law for pay clerks, Quartermaster Corps..... | 2 | ..... | 1 |
| Field clerks, Quartermaster Corps..... | 2 | ..... | 1 |
| Aviator, Signal Corps..... | 1 | ..... | 1 |
| The Chief of Staff of the Army..... | ..... | 3 | ..... |
| The commanding general of a department, brigade, or district..... | ..... | 2 | ..... |
| An assistant to the Chief of Staff of the Army, the aids to the commanding general of a department, brigade, or district, and the general staff officers, serving therewith..... | ..... | 1 | ..... |
| A colonel or lieutenant colonel, Quartermaster Corps; a colonel, Medical Department; and the department quartermaster at the headquarters of a territorial department, each..... | ..... | 2 | ..... |
| The commanding officer of a regiment, post, or separate battalion, quartermaster and adjutant, each..... | ..... | 1 | ..... |
| An adjutant general, an inspector general, an acting inspector general, an engineer, ¹ and ordnance officer, ² a signal officer, a judge advocate or an acting judge advocate, and the senior medical officer, when stationed on duty at any place not in the field, ¹ each..... | ..... | 1 | ..... |
| Noncommissioned officers above grade No. 16, paragraph 9; color sergeants and firemen, Coast Artillery Corps, each..... | 1 | ..... | 1 |
| Noncommissioned officers and privates, when on detached service or assigned to special duty of such a nature as to necessitate the hiring or leasing of quarters, each..... | 1 | ..... | ..... |
| Superintendent, national cemetery..... | ..... | ..... | 1 |
| For a company: Cooking stoves or ranges sufficient to cook its food..... | ..... | ..... | 1 |
| Each hospital kitchen..... | ..... | ..... | 1 |
| For mess of civilian employees..... | ..... | ..... | 1 |

¹ Except at Military Academy.

² Battalion sergeants major, Philippine Scouts, battalion supply sergeants, Philippine Scouts, band leaders, Philippine Scouts, first sergeants, sergeants, first class, Corps of Engineers, band sergeant and assistant leader United States Military Academy Band, assistant band leaders, sergeant buglers, and color sergeants are entitled to separate quarters only when same are available.

Enlisted men below grade 15, paragraph 9, may be assigned to separate public quarters whenever the same are available after those noncommissioned officers of higher grades have been accommodated and when the conditions of service appear to the commanding officer to warrant such assignment.

In camp, the allowance of fuel is as follows: For cooking, one-twelfth cord per day for each authorized mess, as shown in camp diagrams, Field Service Regulations. When conditions require the issue of amounts in excess of this allowance authority will be obtained from the department commander or commanding general in the field. For heating (winter use only), such necessary amount as may be prescribed by the camp commander. For kitchen pits, one-twelfth cord per day per pit when garbage is destroyed in kitchen pits.

Heating and the issue of suitable apparatus therefor is authorized whenever necessary for any room, rooms, or building used by proper authority as quarters, storehouse, salesroom, office, shop, guardhouse, mess, board, school or instruction rooms, hospital (including veterinary hospitals) dispensary, dormitory, power or pumping plant, chapel, library, reading room, gymnasium, fire-control station, signal station, waiting rooms, dog kennels (in Alaska), switch board rooms, bathhouse, fire-apparatus house, or any other regular purpose.

For each employee of the Quartermaster Corps or Medical Department occupying public quarters, to whom subsistence in kind is issued by the Government, issue of fuel is authorized as follows: May 1 to August 31 (Tropics, year round), one-twelfth cord per month; September 1 to April 30, one-sixth cord per month; increased allowance, September 1 to April 30—between 36° and 43° north latitude, one twenty-fourth cord per month; north of 43° north latitude, one-eighteenth cord per month.

The allowance of fuel for heating, cooking, and heating water in barracks and quarters at military posts will be determined in accordance with allowances published from time to time. (*C. A. R., Nos. 28, 53, and 54.*)

1045. When on detached service or assigned to special duty in places where there are no public quarters available the allowance of quarters for each member of the Nurse Corps is fixed at two rooms, on which basis commutation of quarters will be paid. Commutation of heat and light will be paid for the number of rooms actually occupied, not exceeding two. When entitled to commutation of quarters or commutation of heat and light a member of the Nurse Corps will not be paid on pay rolls, but will be paid on War Department Form No. 369. (*C. A. R., No. 28.*)

1046. In addition to the number prescribed in the table, paragraph 1044, the headquarters of a department, brigade, or district will be allowed such number of office rooms (not more than eight) as may be necessary for clerks on duty thereat (the Quartermaster Corps excepted), which will be assigned by the commanding general. A heating stove for each room not otherwise heated will also be allowed. Office rooms will not be hired without the written authority of the Secretary of War, and no lease of such rooms will take effect until approved by him.

1047. The officers of the Quartermaster Corps may, when necessary, be allowed additional rooms, with a heating stove for each. The number of additional rooms so allowed will be regulated by the Quartermaster General. (*C. A. R., No. 10.*)

1048. Stoves will not be issued to officers who receive commutation of quarters.

1049. Rescinded. (*C. A. R., No. 17.*)

ILLUMINATING SUPPLIES.

1050. The Quartermaster Corps will provide supplies for interior and exterior illumination. The necessary lights will be supplied for all buildings for

which illumination is required in order to make proper use of the buildings. (*C. A. R., No. 41.*)

1051. The number of oil lamps and gas lights in use, both in public buildings and for exterior lighting, and the hours during which they may be used at a post commanded by a general officer will be fixed and announced by the post commander; at other posts, by the commanding officer, with the approval of the department commander. The number of such lights and the hours of use of each light must be limited to the smallest number consistent with proper lighting. The number and sizes of electric lights, interior and exterior, and the allowances of electric current shall be in accordance with instructions published in orders of the War Department. (*C. A. R., No. 41.*)

1052. If candle lanterns are used in stables, the candles will be issued by the Quartermaster Corps in such quantity as the commanding officer shall order as necessary. If oil lanterns are used, the issue of oil, wicks, and chimneys therefor will be made by the Quartermaster Corps.

1053. Mineral oil will be supplied for lamps and oil lanterns and issued in quantities as follows: For lamps used for exterior and interior illumination at the rate, for each burner, of 4 ounces avoirdupois for each hour of authorized illumination for lamps using wicks of about 1½ inches in diameter, 3 ounces an hour for lamps using wicks of about 1 inch in diameter, and 2 ounces an hour for lamps with smaller wicks; for all oil lanterns, such quantities as the commanding officer may order and certify as necessary. No volatile oils, except those authorized and supplied by the supply departments, will be used at military posts without the authority of the commanding general of the department in which the post is located.

Three gallons of mineral oil per month will be allowed to each company, troop, battery, and band for use in hand lanterns and for cleaning purposes in garrison. This allowance will be increased by 2 gallons per month for companies of the Coast Artillery Corps during the season for night drills. (*C. A. R., No. 29.*)

1054. Where quarters are lighted by mineral oil, the Quartermaster Corps will allow to each officer and to each noncommissioned officer entitled to and occupying separate quarters one lamp for each authorized room. For each lamp one wick and one chimney a quarter will be allowed. From September 1 to April 30, 4 gallons of mineral oil a month will be allowed for each authorized room. From May 1 to August 31, 3 gallons of mineral oil a month for each authorized room will be allowed. The oil allowance may be considered accumulative within the fiscal year, and any excess of allowance appearing as overdrawn by an officer at the end of a fiscal year will be paid for at contract price. An officer occupying as quarters a number of rooms less than his authorized allowance will be entitled to mineral oil for such number of rooms only as he actually occupies. Officers of the Army, contract surgeons, acting dental surgeons, and veterinarians may buy from the Quartermaster Corps, at contract prices, such moderate quantity of mineral oil, lamps, wicks, and chimneys as they may need in the rooms occupied by themselves and families as quarters, in excess of the allowances set forth herein.

1055. Civilians employed with the Army at remote posts or stations, where it is impossible to procure at reasonable rates such articles of clothing and other quartermaster supplies (except uniforms and subsistence stores), as they may need for their health and comfort, may be allowed to purchase same from the Quartermaster Corps in limited quantities for their own use, for cash at cost prices, with 10 per cent added to cover transportation. Such sales will, however, be made only upon the written approval of the commanding officer

setting forth the necessity for such action, this authority to be filed with the return of the officer making such sales. Subsistence stores may be sold as prescribed in paragraph 1245. (C. A. R., No. 41.)

1056. Mineral oil issued to officers or troops is public property and will be treated as provided in paragraph 1042 for fuel.

1057. 1. Each officer or enlisted man entitled to and occupying public quarters at a military post or station where gas, acetylene, or electricity is installed will be allowed annually at the expense of the United States the amounts of illuminant shown in the following table:

| Rank. | Electric current. | Gas. | Acetylene. |
|-------------------------|-------------------|--------------------|--------------------|
| | <i>K. W. H.</i> | <i>Cubic feet.</i> | <i>Cubic feet.</i> |
| Enlisted man..... | 300 | 28,500 | 2,650 |
| Second lieutenant..... | 400 | 35,300 | 3,530 |
| First lieutenant..... | 500 | 44,100 | 4,410 |
| Captain..... | 600 | 53,000 | 5,300 |
| Major..... | 700 | 61,800 | 6,180 |
| Lieutenant colonel..... | 800 | 70,600 | 7,060 |
| Colonel..... | 900 | 79,400 | 7,940 |
| Brigadier general..... | 1,000 | 88,200 | 8,820 |
| Major general..... | 1,100 | 97,000 | 9,700 |
| Lieutenant general..... | 1,200 | 105,900 | 10,590 |

For posts located in Alaska, above allowances will be increased 50 per cent. For posts located on the Isthmus of Panama or in the defenses connected therewith the above allowances will be increased 100 per cent.

If it is desired to ascertain the allowances for any month, the following per cents of the total annual allowances will be used: January, February, March, October, November, and December, each 10½ per cent of the annual allowance; the remaining months of the year, 6½ per cent of the annual allowance. For posts located in the Tropics, take 8½ per cent for all months. For posts located in Alaska, take 12½ per cent for January, February, March, October, November, and December and 4½ per cent for the remaining months.

2. At the end of the fiscal year, or when officers or organizations change station, light accounts shall be closed and excess consumption paid for at the cost or contract price at the station where such excess occurred. Charges for electricity and gas furnished by Government plants at which cost accounts are not available will be 6 cents per K. W. H. for electricity, 80 cents per M cubic feet for gas, and \$7 per M cubic feet for acetylene. Savings on allowances are not transferable to another post or station.

3. Where an officer or enlisted man occupies quarters other than public, the Quartermaster Corps will pay commutation of light to such officer or enlisted man for the number of rooms actually occupied, but not exceeding the number to which the rank of the officer or enlisted man entitles him as specified in paragraph 1044, at the following rates:

| Rooms. | April to September, inclusive, per month. | October to March, inclusive, per month. | Rooms. | April to September, inclusive, per month. | October to March, inclusive, per month. |
|--------|---|---|---------|---|---|
| 1..... | \$0.72 | \$1.08 | 6..... | \$1.98 | \$3.18 |
| 2..... | .90 | 1.44 | 7..... | 2.40 | 3.84 |
| 3..... | 1.26 | 2.04 | 8..... | 2.70 | 4.32 |
| 4..... | 1.44 | 2.28 | 9..... | 2.88 | 4.62 |
| 5..... | 1.62 | 2.58 | 10..... | 3.24 | 5.16 |

For stations located in the Tropics rates for each month of the year will be the amounts given in the preceding table for the months April-September, inclusive, increased by 30 per cent. For posts located in Alaska above amounts will be decreased 30 per cent for months April-September, inclusive, and increased 90 per cent for months October-March, inclusive. For stations in the South Temperate Zone the allowances shown in the preceding table will be reversed with respect to seasons.

4. In camp, allowances of light are as follows, except when candles are issued as authorized in paragraph 1215:

| | April to September, inclusive. | | | October to March, inclusive. | | |
|---|--------------------------------|-------------|----------|------------------------------|--------------|----------|
| | Electricity. | Mineral oil | Candles. | Electricity. | Mineral oil | Candles. |
| Each tent (except shelter tents) per day... | Watt hrs. 100 | Galls. 0.06 | Oz. 1 | Watt hrs. 160 | Galls. 0.096 | Oz. 1.6 |

For camps located in the Tropics or Alaska, the foregoing allowances will be modified by the percentages shown in section 3 of this paragraph.

For headquarters of organizations larger than a company, bakeries, depots of supply, guards, telegraph stations, assembly tents, and temporary buildings, such quantities as the camp commander may order as necessary. (*C. A. R., Nos. 19 and 28.*)

1058. Rescinded. (*C. A. R., No. 41.*)

1059. Each officer's quarters and each noncommissioned officer's quarters will be provided with a suitable meter to measure the amount of gas or electric current consumed. All meters shall be kept sealed with a lead seal to prevent tampering by unauthorized persons and these seals shall not be broken without the authority of the post quartermaster. The cost of installation and maintenance of electric lights, gas fixtures, or mineral oil lamps in all public buildings at posts will be borne by the department to which the construction and maintenance of the building pertain. (*C. A. R., No. 41.*)

1060. At each post supplied with a fortification electric plant sufficiently large for supplying necessary current for lighting buildings and grounds the plant may be used for that purpose by the Quartermaster Corps when authorized by the Chief of Engineers, provided that the needs of defense shall have precedence over post lighting or power supply in any case in which both uses are simultaneously desired.

For this purpose, when funds that are applicable can be spared, the Engineer Department will construct necessary conduits, service wires, etc., to deliver the current to the various buildings and to exterior lights, and the Quartermaster Corps will wire the buildings, furnish meters for officers' and noncommissioned officers' quarters, exterior lamps, etc., and will, in addition to the fuel, material, etc., required to be furnished by it to all fortification electric plants, supply for such plants as may be used for post lighting all material and funds necessary for their repair and preservation.

1061. The allowances of lamps and mineral oil are prohibited for buildings and grounds where gas or electric lights are installed, except that mineral oil may be issued for use in hand lanterns and for cleaning purposes as stated in paragraph 1053. (*C. A. R., No. 41.*)

STATIONERY.

1062. The issue of stationery for all military purposes shall be made on requisition approved by the commanding officer and receipted by the officer to

whom the issue is made. The material to be issued shall consist of typewriter supplies, writing and blotting paper, pads, pens, penholders, ink, mucilage, sealing wax, office tape, envelopes, and lead pencils. Officers approving requisitions will enforce economy in the use of stationery. But one issue a quarter will be made to officers not drawing for an office. (*C. A. R., No. 10.*)

1063. To each office desk or table is allowed 1 inkstand, 1 paper folder, 1 ruler, 1 steel eraser, and 1 piece of india rubber. A company commander is entitled to this allowance. Officers when relieved will transfer office stationery to their successors.

1064. The Quartermaster Corps is authorized to issue yearly to retired officers, upon proper requisition, 6 quires of writing paper, 100 official envelopes, and 50 letter envelopes.

1065. The yearly allowance of stationery to an ordnance sergeant, quartermaster sergeant, senior grade, or quartermaster sergeant, Quartermaster Corps, on duty at a post not garrisoned by troops is 2 quires of writing paper, letter size; 4 sheets of blotting paper; 100 envelopes, official size; 1 dozen steel pens; 2 penholders; 1 pint bottle of black ink; 1 small bottle of mucilage with brush; 1 inkstand; and 1 piece of office tape. (*C. A. R., No. 52.*)

1066. The purchase of public animals will be made by the Quartermaster Corps after their inspection by that corps, and, unless otherwise directed by the Secretary of War, by contract after due competition.

1067. Public animals shall, upon the day received, be branded with the letters "U. S." on the left fore shoulder. Horses assigned to organizations will also be branded on the hoof of one forefoot, $1\frac{1}{4}$ inches below the coronet, with the designation of the company. Branding irons of uniform size and design will be supplied by the Quartermaster Corps. Letters "U. S. N." to be 2 inches in height. Letters and numbers of hoof brands on the same line, to be three-fourths of an inch high, the letter to precede the number, and blocked so as to penetrate the hoof one-sixteenth of an inch. For example, the hoof brands on horses assigned to Band, Ninth Cavalry, would be CB9; to Troop A, Fifth Cavalry, would be A5; to the Band, Second Regiment, Field Artillery, AB2; to Battery B, Fourth Regiment, Field Artillery, would be BA4; to Company A, Battalion of Engineers, would be BEA.

1068. Manes and forelocks of public horses will be clipped only under orders of a regimental commander, or the commander of a separate squadron or battalion not forming a part of a regiment, prescribing a uniform method therefor. Docking and banging of tails are prohibited; they may be trimmed immediately below the hock, but will otherwise only be plucked to prevent shagginess of appearance. (*C. A. R., No. 55.*)

1069. A complete descriptive list of each animal will be made at the time of purchase, and will accompany him wherever he may be transferred.

1070. A file of descriptive cards of public animals will be kept with the records of every officer accountable for public animals. It will contain a description of every animal received, showing the kind, name, age, size, color, marks, brands, or other peculiarities of the animal, how and when acquired, the use to which applied, and what disposition, if any, was made of the animal.

1071. When public animals are issued or transferred, the person in charge of them will be provided with full and accurate descriptive cards, which he will deliver to the receiving officer.

1072. Public animals will be assigned to their riders or drivers, who will not exchange or surrender them to the use of any other person without the permission of the company commander, quartermaster, or other officer responsible. Public animals that are assigned to organizations of the Army for mounted purposes will not, while so assigned, be used in harness or for draft

purposes, except in the Field Artillery, where such animals may be used temporarily to take the place of disabled animals in authorized teams. (*C. A. R., No. 6.*)

1073. Public animals inspected and found unsuited for one branch of the service may be transferred to another for which they are fitted. When of no further use for any branch of the service they will be submitted to an inspector, and if condemned, sold at public auction or destroyed under the following circumstances: (1) To terminate suffering (from disease or other cause); (2) to prevent contagion; (3) on account of incurable disease or injury; (4) on account of old age, when to sell them for work in the hands of irresponsible persons would be cruel and cause suffering to the animals.

Horses assigned to troops of Cavalry, batteries of Field Artillery, companies of the Signal Corps, and mules assigned to the combat transportation of the Signal Corps will not be sold or turned in to the Quartermaster Corps unless previously acted upon by an inspector, except in the Philippine and Hawaiian Departments, where the sale of such horses may be made to mounted officers, as provided in paragraph 1095.

Public animals that die of sickness, or that it is necessary to kill because of contagious disease, or when incurably wounded, will be dropped by the accountable officer upon the certificate of the responsible officer and affidavit of the veterinarian, or, in the absence of the latter, the certificate of a disinterested officer and the affidavit of a disinterested person, approved by the commanding officer. In such case the action of a surveying officer is not required, unless it appears that the condition of the animal resulted from fault or neglect; and in such case the investigation by the surveying officer may follow the killing of the animal when its immediate destruction is made necessary to prevent contagion or to terminate suffering.

VETERINARY MEDICINES.

1074. Veterinary instruments, books, medicines, and supplies for the treatment of public animals and authorized private horses of mounted officers are furnished by the Quartermaster Corps. The supply table furnished by the Quartermaster Corps gives a list of the articles supplied. Requisitions will be limited to actual necessities. A special estimate for articles not in the table, with an explanation of the nature of the emergency or case rendering it necessary, will be forwarded, through the regular channel, for the action of the Quartermaster General. (*C. A. R., No. 10.*)

1075. The quartermaster will have charge of veterinary instruments, books, medicines, and supplies, and under the direction of the commanding officer will issue and expend such medicines and supplies in such quantities as may be necessary.

1076. At posts where there is a veterinary surgeon the quartermaster may, under the direction of the commanding officer, transfer to the veterinary surgeon upon memorandum receipts such veterinary instruments, books, medicines, and supplies as may be necessary; otherwise they will remain in the custody of the quartermaster, and will be loaned as needed in the public service.

FORAGE AND STRAW.

1077. (Changed by *C. A. R., No. 15, W. D., 1914.*) The forage ration for a horse is 14 pounds of hay and 12 pounds of oats, corn, or barley, and 3½ pounds of straw (or hay) for bedding; for a Field Artillery horse of the heavy draft type weighing 1,800 pounds or over, 17 pounds of hay and 14 pounds of oats,

corn, or barley, and 3½ pounds of straw (or hay) for bedding; for a mule, 14 pounds of hay and 9 pounds of oats, corn, or barley, and 3½ pounds of straw (or hay) for bedding. To each animal 8 pounds of bran may be issued in lieu of that quantity of grain.

The commanding officer may in his discretion vary the proportions of the components of the ration (1 pound of grain, 1½ pounds of hay, and 2 pounds of straw being taken as equivalents), and in the field may substitute other recognized articles of forage obtained locally, the variation or the substitution not to exceed the money value of the components of the ration at the contract rates in effect at the time of change. (*C. A. R., No. 21.*)

1078. Where grazing is practicable, or when little work is required of the animals, commanding officers will reduce the forage ration. When, on the other hand, conditions demand it, they are authorized to increase the ration, not in excess, however, of savings made. (*C. A. R. No. 21.*)

1079. Forage will be issued monthly or at more frequent intervals if required.

Quartermasters will show on their issue vouchers and monthly reports of issues only the forage actually issued, which will include extra issues from savings. The difference between the authorized quantities for a given period and the quantities actually drawn, representing savings, is to be accounted for as part of the regular stock on hand until issued as extra rations. No credit of forage savings will be carried from one fiscal year to the next. (*C. A. R., No. 21.*)

1080. A lieutenant general is allowed 4 mounts; a major general or a brigadier general, 3 mounts; other mounted officers, 2 mounts.

If any mounted officer should not own the full number of suitable serviceable mounts allowed, the number of forage rations furnished to him will be reduced accordingly.

Full forage rations are furnished to mounted officers up to the authorized number of their mounts, but this allowance is to be used only for the purpose of keeping the officer properly mounted.

This allowance continues at the officer's regular post of duty, when he is on leave of absence, or when he is on duty the nature of which necessitates temporary separation from his mounts. (*C. A. R., No. 21.*)

1081. Mounted officers will not use public horses and at the same time draw forage for those they own, except while on foreign service in countries from which horses are not allowed to enter the United States; nor will they use public animals except as authorized by regulations. Should circumstances render it necessary, an officer may be temporarily furnished with public horses.

1082. An officer may purchase forage for two horses kept for his own use, for which he will be charged cost, including transportation. This privilege may be extended to retired officers, provided such sales are limited to quartermaster depots or stations at which contracts for supply of forage are made and the deliveries under said contracts are in sufficient quantities to warrant the sale without detriment to the service, but no contracts shall be made for the sole purpose of procuring forage for sale to retired officers.

1083. An officer shall not sell, nor allow to be sold, the forage issued for his own horses or the public animals under his charge; nor shall he use or dispose of, or permit to be used or disposed of, such forage, or any portion thereof, except for the purpose for which it was issued. (*C. A. R., No. 21.*)

1084. Except for troops serving in the Tropics, when mattresses are not supplied, a bed sack and 30 pounds of straw a month for bedding will be furnished to each enlisted man in barracks or in a permanent or a maneuver camp, and to each prisoner in a guardhouse, and a bed sack and such quantity of straw

as the chief medical officer may certify to be necessary to each enlisted man in a field hospital. In the field, in cases not covered above, such quantity of straw or hay for the bedding of troops is authorized as the commanding officer, after advising with the medical officer of the command, may deem necessary to preserve the health of the troops. So far as practicable, an iron bunk will be furnished to each prisoner in a post guardhouse and prison room. (*C. A. R., No. 45.*)

1085. At posts where straw is not furnished hay will be issued and used for bedding. (*C. A. R., No. 21.*)

CARE AND ACCOUNTABILITY FOR PROPERTY.

1086. Unless otherwise specially directed by the Secretary of War, there will be at each military post or station but one accountable officer in the Quartermaster Corps, and he will account for all quartermaster supplies there in use or in store.

1087. When troops are assembled for field service, there will be but one accountable officer in the Quartermaster Corps for each regiment, separate battalion, or squadron, and he will account for all quartermaster supplies in the possession of the command of which he is quartermaster.

1088. At places requiring the services of more than one quartermaster, each one charged with the care and disposition of quartermaster supplies will account for the same.

1089. Officers commanding companies or detachments will be furnished by the quartermaster, on approved requisition, with the necessary authorized quartermaster supplies; and for all such, except those that may be properly dropped as expended, said commanding officers will give memorandum receipts to the accountable officer, who will continue to bear said supplies on his return until they have been transferred, expended, or otherwise disposed of and duly accounted for as required by regulations.

1090. Officers commanding companies or detachments temporarily absent from posts will continue responsible to quartermasters from whom supplies have been procured on memorandum receipts. Should the services of a quartermaster become necessary, one will be appointed for the command.

1091. When troops change station, only such quartermaster supplies as are authorized, or as may be directed to be transferred, will be removed from the station. Company and detachment commanders, prior to departure from a station, will have a settlement with the quartermaster for supplies held on memorandum receipt. For such supplies as must accompany troops, company and detachment commanders will give certificates to the quartermaster. Memorandum receipts that have been thus satisfied will be returned to the respective company and detachment commanders. The quartermaster will forward the certificates, accompanied by the requisite papers for transferring the accountability, to the quartermaster at the destination of the troops. The commanders of incoming organizations upon arrival will report the supplies in their custody and give memorandum receipts therefor to the quartermaster, who will then return to the respective commanders their certificates.

1091½. Whenever troops are detached from posts for duty in the field for an indefinite period, or when their absence on such duty is prolonged for an extended period and they have taken with them quartermaster property held on memorandum receipt, the commander of the territorial department from which the troops are detached may direct that such property be invoiced to the regimental, battalion, squadron, or other quartermaster of the troops concerned. Upon return from detached service to the post from which detached,

or upon joining another post for duty, the property will be invoiced to the quartermaster of the post.

Whenever an officer, noncommissioned officer, or other person in the military service is detached from a post for duty in the field and has left quartermaster property for which he has signed a memorandum receipt, the quartermaster will take possession of such property upon request of the person concerned, carefully check same, and issue a credit slip (Q. M. C. Form 243) in duplicate, on which will be listed the article or articles taken in, the original of which will be sent to the person concerned and the duplicate retained by the quartermaster. Should damage not the result of fair wear and tear in the service or a shortage be found to exist, the quartermaster will communicate with the person concerned with a view to securing an adjustment before taking steps toward collecting the value of the article or articles short or damaged. (*C. A. R., No. 30.*)

1092. Certificates given for supplies accompanying troops and memorandum receipts given by officers for supplies issued or loaned for their individual use, or for use of the organizations under their command, will be made in the prescribed form, and should any officer, when called upon by proper authority to produce any of the supplies enumerated therein, fail to do so, or to furnish proper evidence that deficient or damaged supplies have been accounted for as required by regulations, the name of the officer delinquent will be reported to the Secretary of War by the Quartermaster General, and said officer's pay to the extent of the deficiency or damage will be stopped, in conformity with paragraphs 702 and 703. The accountable officer may drop from his return the articles deficient, forwarding the memorandum receipt or certificate as a voucher therefor. (*C. A. R., No. 10.*)

1093. A forage master or wagon master shall not be concerned, directly or indirectly, in any means of transport employed by the United States, or in the purchase or sale of any property procured for or belonging to the United States, except as agent for the Government.

1094. Every officer accountable for quartermaster supplies will keep himself accurately informed, by personal examination, of the quantities and condition of the property on hand, and will be held strictly responsible that they are correctly reported on his returns. The commanding officer will see that a complete, detailed, and accurate inventory of such property, except that held on memorandum receipts, is taken by the accountable officer in person at least once each year, and as much oftener as he may deem necessary for the interests of the Government. At each transfer of such property both the invoicing and receipting officer will attend in person, and each will satisfy himself, by personal count and examination, that all property invoiced is on hand and in condition as stated in the invoices. When loss, damage, or deficiency is discovered upon taking any of these inventories, a surveying officer will at once investigate and ascertain the cause thereof, which he will report with his conclusions as to the responsibility for the same.

HORSES OF MOUNTED OFFICERS.

1095. In the field, at posts, or in active service, horses held in the Quartermaster Corps unassigned, other than those at remount depots, may be sold to mounted officers on the authority of the department or division commander, except that no disposition will be made of any public animals pertaining to the Mounted Service School without the express authority of the War Department. An application to purchase a horse at a remount depot will be for-

warded to the Quartermaster General by the officer desiring to make the purchase. An application to purchase a horse at a post will be forwarded through military channels for the action of the department commander. In his application the officer will state what horses he has purchased from the Government during the past 10 years and what disposition has been made of them; also what number of mounts he owns. The price to be paid for a horse purchased by an officer will be the price paid by the Government for the horse, but will not be less than the average price paid by the Government for horses for the mounted service during the preceding fiscal year. Purchase and payment will be completed within 30 days from the date of receipt of the authority for the sale and the purchase money at once deposited to the credit of the current appropriation. Horses thus sold will not be exchanged or returned.

When an officer of Infantry or of the Coast Artillery Corps is relieved from mounted duty, or when a mounted officer is ordered to duty beyond the seas or to make a change of station in the United States, in which the cost of transportation for the private horses which he is required to keep exceeds \$100 for each horse, including the cost of attendant, if any, the Quartermaster Corps may, upon the request of such officer, purchase such private horse or horses as he may not desire to take with him upon the following conditions: An officer desiring to dispose of his horse will request the necessary authority from the department commander, who will convene a board to be composed of not less than three commissioned officers to examine the animal with a view to determining its fitness for service or for sale to an officer, and if it be found serviceable to appraise its value. Horses that are unsound in any respect or that exceed the age of ten years will not be purchased. The proceedings of the board should indicate the condition and age of each animal examined. The price found by the board shall not exceed the average price paid by the Government for horses for the mounted service during the preceding fiscal year, except that in case of horses purchased from the Government the price shall not exceed that for which the animal was purchased. The proceedings of the board, when approved by the department commander, will be returned to the applicant and will authorize the payment of the appraised price upon the delivery of the animal to an officer of the Quartermaster Corps, who will be designated by the department commander to receive it. The purchase of a horse made under the authority conferred herein will be reported to the Quartermaster General by the department quartermaster of the department in which the purchase has been made.

When a mounted officer stationed at a post which is not under the jurisdiction of a department commander desires to dispose of his mount in view of the circumstances stated in the preceding section of this paragraph, the commanding officer of the post is authorized to convene a board in accordance with the provisions stated in the foregoing section, and the proceedings of the board, when approved by the post commander, will be returned to the applicant and will authorize the payment of the appraised price upon the delivery of the animal to an officer of the Quartermaster Corps, who will be designated by the post commander to receive it. The quartermaster at the post where the horse is bought will report the purchase to the Quartermaster General.

Horses assigned to organizations in the Philippine Islands, Hawaii, and the Canal Zone may be sold to mounted officers on authority of the commanding generals of the territorial departments concerned, provided that the horses can be spared. The price to be paid for a horse purchased by an officer will be the price paid by the Government for the horse, but will not be less than the average price paid by the Government for horses for the mounted service during the preceding fiscal year.

When a mounted officer purchases a horse under the provisions of this paragraph he shall not be permitted to sell him to private parties, but may sell him to another officer at a price agreed upon between seller and buyer, or back to the Government, at a price to be determined in the manner indicated above; this rule to govern subsequent owners.

If, however, the board should find that a horse purchased from the Government by a mounted officer, and offered for sale by him, exceeds the age of ten years, or is no longer fit for an officer's mount nor for the military service by reason of unsoundness or defects, the owner may dispose of the horse at private sale. (*C. A. R. Nos. 45 and 49.*)

1006. For their own headquarters and otherwise, except as provided in this paragraph, the use of public horses by officers will be regulated by department commanders in conformity with the necessities of the public service.

Officers below the rank of major who are required to be mounted will be furnished with one mount by the Quartermaster Corps in case they do not elect to provide themselves with suitable private mounts. Such public mounts will ordinarily be assigned one to the exclusive use of each officer and will be foraged, stabled, shod, groomed, fed, watered, and furnished with veterinary treatment and medicine at Government expense. Authorized private mounts of officers will similarly at Government expense be stabled, shod, foraged, and supplied with veterinary treatment and medicine. Should the circumstances of service at a particular station cause the number of Government mounts available for use under this paragraph to fall below the number of officers entitled to such mounts under the law, the post commander will regulate the use of the public mounts actually on hand with due consideration for the service and the rights and duties of the individual officers concerned.

1007. The Quartermaster Corps will provide and issue horse and mule shoes, nails, smith's tools, and materials required for the service, except the forges and tools for field service of Cavalry, Field Artillery, and machine-gun platoons. The animals of a troop of Cavalry or battery of Field Artillery will be shod by the organization.

1008. The Quartermaster Corps will transport for officers changing station, and for graduates of the United States Military Academy assigned to mounted organizations upon first assignment to station, the number of horses for which they are legally entitled to forage, and an attendant to accompany the horses when necessary, subject to the following restrictions:

1. That the expense to the United States shall not exceed \$100 for each horse transported. The entire cost of such shipment may be paid by the Quartermaster Corps, but if the entire cost exceeds \$100 for each horse, including transportation of attendant, if any, the excess must be refunded to the Quartermaster Corps by the owner. The expenses of the attendant other than his transportation will not be paid by the Quartermaster Corps, except that when an enlisted man is ordered to be such attendant there may be paid also commutation of rations when necessary.

2. That the shipment shall be made at a valuation of not to exceed \$100 per animal, unless the owner pays, under the regulations of the Quartermaster Corps, the cost incident to increased valuation.

3. That the horses are owned by the officer and are intended to be used by him at his new station in the public service.

4. The horses of deceased or retired officers or officers ordered to their homes to await retirement, or of officers effecting a voluntary transfer, will not be transported at public expense.

5. When horses are purchased by officers at points other than their station the Quartermaster Corps will transport them from points of purchase to the

station of the officer, provided the officer is entitled to have and has not had his authorized private mounts shipped from his old to his new station, and provided, when the cost of shipment from point of purchase to new station exceeds the cost from old to new station on last change of station, the officer will deposit the excess cost with the shipping officer when shipment is made by the Quartermaster Corps.

6. Officers detailed on service in a foreign country and required to be mounted should furnish their own mounts, such mounts to be transported to and from their foreign stations at the expense of the United States, the limitation in the cost of transportation, as prescribed in section 1 of this paragraph, being waived in such cases. However, if an officer below the rank of major so desires, a public mount may be assigned to him and transported as hereinbefore provided, or, if it be to the interest of the United States, a mount may be purchased for him in the vicinity of his foreign station. Such officers should advise the War Department by which method they desire to be furnished with mounts. (Under present regulations of the Treasury Department, animals are not allowed to be returned from the Philippine Islands to the United States.)

7. Private mounts of officers in excess of the authorized number of mounts may be shipped on the same Government bill of lading with authorized mounts, upon deposit with the shipping officer, prior to shipment, of a sum equal to the commercial freight charges on the excess mount or mounts, to be ascertained from or through the agent of the carrier at point of shipment, and cost of exchange for remittance to the officer who will settle the transportation charges. The excess mounts will not be shipped on Government bill of lading unless such deposit be first made.

8. Officers making application for shipment of mounts will in all cases specify the last change of station, referring to orders under which it was made, and also the number of private mounts previously transported, if any, on last change of station. (*C. A. R., Nos. 9 and 55.*)

1099. Rescinded. (*C. A. R., No. 55.*)

MILITARY ATTACHÉS.

1100. An officer of the Army serving as military attaché abroad will be entitled to the following allowances: A suitably furnished office when needed, or an unfurnished room with one desk or table, six chairs, one book or file case, the articles allowed for an office desk by regulations, and the stationery required in the performance of public duty, to be furnished by the Quartermaster Corps, and in either case the regulation allowance of fuel for one office fire. Mounted officers will be allowed forage if horses are actually kept, and officers not mounted, or mounted officers not drawing forage, the hire of a horse when necessary for mounted duty. Necessary funds for these allowances and blank forms for reports and returns will be procured by requisition on the Quartermaster General. Money accounts will be rendered quarterly. Items for necessary cost of exchange will be entered on accounts current, the entries of each being supported by the certificate of the officer that current rates of exchange were paid and that other vouchers are not obtainable. (*C. A. R., No. 10.*)

TRANSPORTATION, GENERAL PROVISIONS.

1101. For wagon and pack transportation mules will generally be employed, but horses may be used for saddle purposes by wagon masters, messengers, expressmen, and employees or enlisted men having similar occupation which require them to be mounted. For draft purposes, except at depots or posts in or

near large cities where little transportation is needed, horses will not be used, unless specially authorized by the War Department.

1102. The allotment of draft and pack animals to each military department will be made by the Quartermaster General under the direction of the Secretary of War. (*C. A. R., No. 10.*)

1103. The allowance of spring wagons, exclusive of the prescribed ambulance for the sick, is fixed at one to each post, except when otherwise authorized by the War Department. All four-wheeled passenger wagons (except ambulances) having springs under the body shall be considered spring wagons.

1104. Spring wagons will be used only by direction of commanding officers and for the purpose for which they are supplied, viz, for the transportation of officers and enlisted men travelling on duty when other means are not available.

1105. The Quartermaster Corps will provide the necessary ambulances for transporting the sick and wounded upon the requisition of the proper medical officer. It will purchase, hire, operate, maintain, and repair such harness, wagons, carts, drays, and other vehicles as are required for the transportation of troops and supplies, and for official, military, and garrison purposes.

1106. All means of public transportation at a post will be accounted for by the quartermaster, and will be under his charge except as provided in paragraph 1427. Commanding officers will cause mounted organizations to be provided daily with the proper facilities for policing stables and hauling forage.

1107. Commanding officers will give timely notice to the proper officers of the Quartermaster Corps of all contemplated movements of troops and supplies that proper and sufficient transportation may be in readiness.

1108. The duty of furnishing transportation at any post, station, or depot will be intrusted to one officer of the Quartermaster Corps, on whom requisitions will be made therefor. In the performance of their official and military duties officers of the Army are authorized to use the means of transportation provided by the Quartermaster Corps in accordance with law.

1109. The Quartermaster Corps is charged with the transportation of troops and supplies between the United States and such over-sea garrisons and military commands as shall be authorized. Those officers and employees who are detailed to carry out the work constitute the Army Transport Service. All necessary expenses incident to that service will be paid from the appropriations made for the support of the Army. The Army Transport Service is governed by special regulations promulgated by the Secretary of War.

TRANSPORTATION OF PERSONS.,

1110. When troops are moved, suitable transportation will be provided; proper orders and an exact return of the command will be furnished to the quartermaster who is to provide the same.

1111. A person requiring transportation will exhibit an order from competent authority. The quartermaster will indorse on the original order, over his signature, the fact that transportation has been provided, its kind, the place from and to which it has been furnished, and the number of pounds of extra baggage transported, if any. The original order will be retained by the person who receives the transportation, and, in case of a soldier entitled to commutation of rations while traveling, will be disposed of as directed in paragraph 1232. (*C. A. R., No. 42.*)

1111½. When transportation is issued to a soldier under conditions which require that the whole or any part of the cost of such transportation is to be charged against the soldier, the officer issuing the transportation will report by letter, in duplicate, to the soldier's immediate commander, through the dis-

bursing officer designated to pay the account for rail or steamer transportation, giving the name, rank, and organization of the soldier, the serial numbers of transportation requests issued, together with any expenditures for subsistence or other purposes that may have been incurred which should be charged against the soldier. The disbursing officers will forward these letters to the soldier's immediate commander, indorsing thereon the actual amount that will be paid for rail, sleeping car, or steamer transportation. On receipt of this information the commanding officer will enter the charge against the soldier and return one copy of the letter immediately to the disbursing officer from whom received, stating thereon, by indorsement, the month and year of the pay rolls on which the charge has been or will be made. When transportation is issued under the provisions of paragraphs 110 or 127, the officer issuing the request will take the action outlined above and in the case of a soldier on furlough will, in addition, enter on the furlough a statement showing the transportation that has been furnished. (*C. A. R., No. 42.*)

1112. When transportation is furnished for the entire journey, the route, if not designated in the order, will be determined by the Quartermaster Corps, in accordance with existing rules.

1113. A quartermaster who provides the transportation for troops will notify, by mail or telegraph, the quartermasters at places where changes of route are to be made, or means of transportation are to be changed, of the day on which the troops will start, their route, destination, the number of officers, enlisted men, and animals, and the quantity of public property and baggage for which transportation will be required.

1114. The quartermaster who provides the transportation, or a duly authorized representative, will be present at the embarkation of the troops, and will see that the accommodations contracted for have been provided. A similar course will be pursued, where practicable, at places where changes of route or important connections are to be made. If delay is necessary in either case in order to complete the arrangements for transportation, the commanding officer of the troops will be duly notified.

1115. The Quartermaster Corps will furnish transportation to accepted applicants for enlistment from general recruiting stations to designated recruiting depots (including recruit depot posts) and return transportation to such of the applicants as are rejected on final examination.

TRANSPORTATION REQUESTS.

1116. Transportation for persons over the lines of any common carrier will be obtained by the issuance of a transportation request, a separate request being issued for the rail transportation involved, another for the sleeping or parlor car accommodations to be furnished, another for the travel on commercial steamer, and still another for the transportation of excess baggage, where authorized.

A request for transportation issued by a quartermaster, or by an officer to whom transportation requests are supplied on memorandum receipt, should set forth the following information, the entries pertaining thereto being made by the officer issuing the request:

On the face thereof, date and place of issue; time for which it will be valid; name of company required to furnish transportation; name of the person, or, if a party, of the person in charge and the number of others in the party; organization to which the person belongs, if an officer or enlisted man; the points between which transportation is to be furnished; the initial letters of each road or line to be used on the journey; class or character of the trans-

portation to be furnished; authority; nature of journey; officer designated to settle the account; and the appropriation. The transportation requested should be specifically and fully described in the spaces provided therefor in the block at the right of the request, and, if the travel is by commercial steamer, the request should further show whether meals or meals and berth are included.

On the back thereof the name, rank, and organization of the soldier, if any, to whom the cost of transportation should be charged; the number of officers, enlisted men, and civilians, when two or more travel on the same request; and the organization, if any. (*C. A. R., No. 41.*)

1117. Requests should be properly receipted by the party named therein presented to the agent of the initial carrier, and tickets procured before commencing the journey, as conductors are not, in all cases, authorized to accept transportation requests. In those instances where it becomes necessary, owing to unforeseen conditions, to obtain transportation varying from that called for on the face of the request, a notation should be made by the traveler, in the space provided for this purpose on the back of the request, showing the actual transportation furnished and explaining the variation, and should be signed by him; in such cases the receipt on the face of the request will have added thereto the words "except as stated on back hereof." The transportation furnished must not, in any case, be in excess of that called for on the face of the request, unless the difference is collected from the traveler. In no case will a receipt be given for transportation of more persons or extra baggage than the request calls for. A receipt for transportation furnished, including signature of the traveler, will be filled in with ink, and names and places will be written in full. If the person receipting can not write his name he will make his mark, which will be witnessed. (*C. A. R., No. 41.*)

1118. Rescinded. (*C. A. R., No. 41.*)

1119. No portion of a request above the signature of the issuing officer will be changed in any particular. If explanations are required, they will be made on the back of the request.

1120. All unused transportation requests will be returned without delay to the officer issuing same for cancellation. All unused tickets or parts of tickets procured on a transportation request will be returned to the officer who issued them, and by him forwarded to the officer who pays the account for the service. The value of such ticket or parts of tickets will be deducted from any money due or to become due the company for transportation over whose line they were obtained. On the collection of the value of such unused tickets they will be returned to the company by which they were issued.

1121. When transportation to any given point and return is required, the request for return transportation should be obtained at the destination, provided it can be there procured, except in cases where round-trip tickets can be obtained at reduced rates and made available for the journey; otherwise the quartermaster will issue two sets of requests, one to the place of destination, the other for return transportation.

1122. An officer traveling on a mileage status is not entitled to transportation at public expense of any baggage which may accompany him on the journey.

1123. When an officer under orders for temporary duty or permanent change of station certifies that it is necessary for his field allowance of baggage to be transported to his temporary or permanent station, the Quartermaster Corps will furnish transportation for the same by freight, unless in cases of emergency transportation by express is authorized by the Secretary of War. The total amount of baggage transported at public expense will in no instance exceed the allowance provided by paragraph 1136. Transportation for 250 pounds of baggage, including 150 pounds usually carried free by railroads, is

authorized for Army nurses when they join for duty under the first order, upon permanent change of station, and on return to their homes upon annulment of contract.

Receipts covering an excess of baggage will contain certificates as to whether transportation for such excess has been furnished.

1124. For enlisted men and applicants for enlistment traveling under orders without troops, each ticket furnished by the Quartermaster Corps will usually cover 150 pounds of baggage free. Where this is not the case, as on stage lines, the Quartermaster Corps will provide for the transportation of sufficient excess baggage to make a total of free and excess as follows:

| | Pounds. |
|---|---------|
| Noncommissioned officers..... | 100 |
| Privates of the Medical Department..... | 100 |
| Other privates | 50 |

(C. A. R., No. 55.)

1125. Quartermasters, in issuing requests for transportation of officers and others traveling under orders, will not include therein public property of any description, nor the allowance of personal baggage carried free by the various transportation lines.

FERRIES, TURNPIKES, AND BRIDGES.

1126. Whenever it shall be necessary for troops, teams, or employees in the military service to pass on public duty over a legally constituted toll bridge, ferry, or turnpike, the officer or person in charge of the party will apply to the nearest quartermaster for a request for such passage. If he can not obtain it he will give to the keeper of the bridge, ferry, or turnpike a certificate stating the number of persons and whether mounted or on foot, number of loose animals, teams and animals to each team for which toll or ferriage is due, and showing that the travel is on public duty. Accounts for such service, accompanied by the request, or certificates duly receipted, will be presented to the nearest disbursing quartermaster for settlement, who, before payment, will satisfy himself that the rates charged do not exceed those authorized, or paid by private individuals, and that the indebtedness was necessarily incurred for the public service. Payment may be made at the authorized or usual rates, unless more favorable terms can be obtained.

STREET CAR AND FERRY TICKETS.

1127. For the transportation of officers, enlisted men, applicants or rejected applicants for enlistment, and employees of the United States in the transaction of public business, street car, electric railway or ferry tickets will be supplied by the Quartermaster Corps, when this form of transportation is preferable in convenience and cost to other forms of transportation. This will not apply to an officer traveling under orders covering mileage. Travel between place of residence and office or place of employment is not travel in the transaction of public business within the meaning of this paragraph. The tickets when purchased will be taken up on the property account and expended solely in the performance of public duty. (C. A. R., No. 5.)

PARLOR AND SLEEPING CAR ACCOMMODATIONS.

1128. The following-named persons, when traveling under orders, are entitled at public expense to a lower berth in a standard sleeping car, seat in a parlor car, or to the customary stateroom accommodations on steamers where

extra charge is made for the same: (1) Officers of the Army when traveling on duty with troops. (2) Noncommissioned officers above grade 17, paragraph 9, when traveling on duty without troops. (3) Army nurses. (4) Civilian employees in the military service, viz, architects, marine engineers, assistant engineers, chief packer, chief cutter, clerks, civil engineers, draftsmen, electricians, electrical engineers, examiners, inspectors, stationary engineers, stenographers, superintendents of construction, typewriters, veterinarians, and employees of similar character. (5) Licensed officers of the transport service and of the harbor boat service of the Quartermaster Corps, viz, masters, mates, engineers, assistant engineers, and pilots. (6) Invalid soldiers when traveling under orders without troops, on the certificate of a medical officer showing the necessity therefor. (7) The enlisted attendants accompanying invalid soldiers are entitled to accommodations equal to those herein allowed to invalid soldiers.

Noncommissioned officers below grade 16, paragraph 9, when traveling under orders without troops, when the journey exceeds 12 hours and is scheduled to terminate after midnight, are entitled to a berth in a tourist sleeping car, upper if available, or to the customary stateroom accommodations on steamers where extra charge is made for the same. When tourist sleeping car accommodations are not available and the journey exceeds 12 hours, and is scheduled to terminate after midnight, an upper berth in a standard sleeping car may be furnished for that portion of the journey for which tourist sleeping cars are not available.

Enlisted men, other than noncommissioned officers, and civilian employees in the military service, not specified above, when traveling under orders without troops, when the journey exceeds 12 hours, and is scheduled to terminate after midnight, are entitled to a berth in a tourist sleeping car, upper if available, but, when the number is three or more, tourist car accommodations will be furnished on the basis of three men to a section. Standard sleeping car accommodations will not be furnished in any instance. Tourist sleeping cars will be provided for troops on the basis of three men to a section when the journey involves spending a night on the train; but when the number of troops is too small to justify the hiring of tourist sleepers, tourist sleeping car accommodations on the same basis, if available, may be furnished.

When the number of officers traveling with troops is too small to justify the hire by the Quartermaster Corps of a standard sleeping car for their accommodation, they will be furnished with such part of a tourist sleeping car, or other suitable sleeping car, properly curtained off for their accommodation, as the Quartermaster Corps may provide for their use during the journey, one lower berth to be furnished to each officer if practicable.

1129. Quartermasters providing parlor and sleeping car accommodations will issue requests therefor, and state therein the number of berths or seats required.

1130. When a journey is to be performed covering a route requiring change of sleeping or parlor car, through requests will be issued.

1131. Persons holding requests for sleeping or parlor car accommodations will, whenever practicable, present them to the proper agent and obtain tickets for the number of berths or seats required before commencing the journey. When not practicable to do so, berths or seats will be secured from the conductor of the car. They will receipt for the number of berths or seats furnished, naming the points between which they were furnished.

1132. Special sleeping or parlor cars will not be chartered when the expense exceeds the cost of the berths or seats authorized to be furnished.

1133. When it is impracticable for agents or conductors to furnish berths or seats in sleeping or parlor cars, the holder of the request will, on the term-

nation of his journey, return it to the issuing officer, with a statement of the reasons why it has not been used, and that officer will account for it on his return.

1134. An officer, traveling with troops, who incurs expense for authorized sleeping or parlor car accommodations when it is impracticable to obtain a request therefor, will be reimbursed by the Quartermaster Corps, upon application supported by a receipt for the amount paid by him and a copy of the orders under which the journey was performed.

TRANSPORTATION OF BAGGAGE.

1135. In changing station authorized allowances of baggage will be turned over to the quartermaster to be packed, crated, weighed, and marked for transportation as freight by ordinary freight lines. When necessary the packing, crating, weighing, and marking may be done by the Ordnance Department at arsenals, armories, or ordnance depots, or it may be done by the Engineer Department at places where labor and supplies are available, in which cases settlement will be made as provided in paragraph 619.

1136. The baggage to be transported at public expense, including mess chests and personal baggage, upon change of station will not exceed when packed and crated the following gross weights:

| Rank. | In the field or temporary change of station. | Permanent change of station. |
|---|--|------------------------------|
| | <i>Pounds.</i> | <i>Pounds.</i> |
| Lieutenant general..... | 1,500 | 15,000 |
| Major general..... | 1,000 | 10,500 |
| Brigadier general..... | 700 | 8,400 |
| Field officer..... | 400 | 7,200 |
| Captain..... | 200 | 6,000 |
| First lieutenant, contract surgeon, and acting dental surgeon..... | 150 | 5,100 |
| Second lieutenant and veterinarian..... | 150 | 4,500 |
| Noncommissioned officers above grade 17, paragraph 9..... | | 3,000 |
| Noncommissioned officers, grade 17, paragraph 9, upon change of station without troops..... | | 1,500 |
| Pay clerk, Quartermaster Corps..... | | 3,000 |
| Civilian employees of the classified service transferred for the good of the service..... | | 3,000 |

These allowances are in excess of the weights transported free of charge under the regular fare by public carriers. They may be reduced pro rata by the commanding officer, if necessary, and may in special cases be increased by the War Department on transports by water.

Invoices of household goods or personal effects turned over to the shipping officer will be accompanied by a certificate showing that the goods are the property of the officer, noncommissioned officer, or civilian employee requesting the shipment.

Baggage in excess of the foregoing allowances will be shipped upon the same bill of lading with the regulation allowance upon deposit with the shipping officer, prior to issue of the bill of lading, of a sum equal to the commercial freight charges on the excess, to be ascertained from or through the agent of the carrier at point of shipment, and cost of exchange for remittance to the officer who will settle the transportation charges. The excess will not be shipped on Government bill of lading unless such deposit be first made.

Bills of lading covering shipments of baggage will in all cases carry notation "Released valuation \$10 per 100 pounds," unless the owner files written authority with the shipping quartermaster to ship his entire baggage unreleased.

In the latter case bills of lading must carry the notation "unlimited valuation," provided the owner deposits with the shipping quartermaster a sum equal to the additional commercial cost of shipment at "unlimited valuation."

An officer detailed for duty in a foreign country as a military attaché is entitled to packing, crating, and transportation of professional books and papers and the number of pounds of personal baggage specified in the table above. The maximum money allowance for packing and crating for each grade, exclusive of professional books and papers, will be as follows, and will not be exceeded. When less than the maximum allowance for each grade is transported a proportionate decrease in the cost of packing and crating will be made.

| Rank. | Permanent change of station. |
|---|------------------------------|
| Lieutenant general..... | \$90.00 |
| Major general..... | 63.00 |
| Brigadier general..... | 50.40 |
| Field officer..... | 43.20 |
| Captain..... | 36.00 |
| First lieutenant, contract surgeon, and acting dental surgeon..... | 30.60 |
| Second lieutenant and veterinarian..... | 27.00 |
| Noncommissioned officers above grade 17, paragraph 9..... | 18.00 |
| Noncommissioned officers, grade 17, paragraph 9, upon change of station without troops..... | 9.00 |
| Pay clerk, Quartermaster Corps..... | 18.00 |
| Civilian employees of the classified service transferred for the good of the service..... | 18.00 |

The maximum tare weight of any of the foregoing allowances will not exceed one-fifth of the gross weight. Any saving in tare weight effects an increase in net weight. With this end in view, burlap and excelsior should be used as much as possible as a substitute for crating, and the use of lumber should be limited as much as possible. Should the owner desire lighter packing or crating than the quartermaster deems sufficient, the lighter crating or packing will be used only upon written request of the owner. (*C. A. R., Nos. 10 and 32.*)

1187. The Quartermaster Corps will pack, crate, and transport the authorized change of station allowance of baggage and professional books and papers for officers or enlisted men upon retirement, or who die in the service, from their last duty stations to such places within the limits of the United States as may be the homes of their families, or as may be designated by their legal representatives or executors; also 150 pounds of baggage, inclusive of the quantity carried free by transportation companies, for enlisted men below grade 17, paragraph 9, Army Regulations, who die in the service, from their last duty stations to such places within the limits of the United States as may be the homes of their families, or as may be designated by their legal representatives or executors.

An honorably discharged officer is not entitled to the transportation allowance mentioned in this paragraph, but he will receive 4 cents a mile for travel allowances from the place of his discharge to the place of his residence at the time of his appointment, or to the place of his original muster in to the service. (*C. A. R., No. 13.*)

1188. Packing, crating, and transportation of the authorized allowance of baggage for permanent change of station is authorized for officers of the Medical Reserve Corps when joining for duty under the order placing them upon active duty in the service of the United States, for officers of the Medical Corps appointed from officers of the Medical Reserve Corps on active duty in the service of the United States, from the place of their appointment to their first stations on joining for duty, and for such contract surgeons and acting dental surgeons

as may be employed when they join for duty under the first order, and also on return to their homes on the termination of their contracts, if provided for in the contracts. Packing, crating, and transportation for 1,500 pounds of baggage will be furnished to graduates of the United States Military Academy and officers promoted from the ranks on their first assignment to duty as commissioned officers. With these exceptions, transportation of baggage at public expense is not authorized when joining for duty on first appointment to the military or civil service, nor upon reinstatement or reappointment, nor to effect transfers from one station to another, at the request of those transferred. Officers on temporary duty are entitled only to the allowance for temporary change of station as authorized in paragraph 1136. In lieu of the allowance authorized for permanent change of station, an officer detailed as attaché or an officer, noncommissioned officer, or civilian employee entitled to an allowance of baggage under the provisions of paragraph 1136, under orders for extended service over the sea or for duty in Alaska is entitled to have his full allowance transported from the station he leaves to his home or to the nearest convenient place of storage, and, upon resuming duty in the United States, from such places to his post of duty, or, if he so desires, a portion of his allowance may be shipped abroad and the balance to such point as may be designated in the United States for storage. Officers, noncommissioned officers, and civilian employees desiring to make shipment of baggage under the preceding clause will furnish shipping officers with a certificate showing whether other shipments have been made or are contemplated at public expense to or from other points, and if so the weight of such property. In case of either permanent or temporary change of station of enlisted men under conditions that rendered it impracticable or inadvisable to take their personal effects with them at the time, subsequent transportation of the personal effects of such enlisted men, not to exceed 150 pounds for a man, is authorized, upon approval by department commanders, or by commanding officers of posts, stations, or commands that are exempted from the control of department commanders. (*C. A. R., No. 16.*)

1139. The Quartermaster Corps will pack, crate, and furnish transportation for the prescribed regimental and company desks, for the books, papers, and instruments of staff officers necessary to the performance of their duties, and for the medical chests of medical officers; also for the professional books, including standard works of fiction, of officers changing station, officers ordered home for retirement, graduates of the United States Military Academy, and officers joining on first appointment, which they certify belong to them and pertain to their official duties. Invoices of packages turned over to the shipping officer will be accompanied by the certificate of the officer as to character of books, and a certified copy will be attached to the bill of lading issued at the initial point of shipment.

Shipment of professional books will be made at released valuation except as provided for the baggage allowance in paragraph 1136. (*C. A. R., No. 10.*)

TRANSPORTATION OF SUPPLIES.

1140. Transportation of supplies within a department, from a department to a depot, or from a department to a station or mobilization or concentration point to which troops stationed within the department are ordered or have been sent, is accomplished under the authority of the department commander. Transportation of supplies from the place of purchase to a depot or to a station of troops, from one depot to another, or from any depot to a station of troops, is accomplished under the authority of the Quartermaster General. Officers turning over public property to a quartermaster for transportation will plainly

mark each package with the name and address of consignee, a list of its contents, its weight, and "U. S." (*C. A. R., No. 49.*)

1141. An officer who turns over supplies to another for transportation in the best condition in which it is possible to put them is relieved from any further responsibility therefor by the receipt of the officer to whom they are intrusted for transportation. Procedure in case of loss, damage, or deficiency found on arrival at destination will be as prescribed in paragraph 721.

1142. Transportation by express, when in excess of cost by ordinary freight, must be limited to emergencies and shipments of delicate instruments, public funds, and other public property of such small weight or dimensions as is likely to be damaged or lost when shipped by ordinary freight, vouchers in payment must show the emergency or the character of the package transported and authority for such transportation. In making shipments of funds a quartermaster will receipt only for so many sealed packages said to contain so much public money. When an absent disbursing officer sends his check to the order of the quartermaster, requesting him to express the amount named therein, the latter will receipt for the actual amount to be transported. In case of loss of funds by unavoidable accident the shipping officer will not be held responsible, and the officer accountable for the funds must seek relief through application to the Court of Claims or to Congress. (*C. A. R., No. 49.*)

1143. Supplies issued to the several States and Territories under the laws for arming and equipping the militia will be turned over to the Quartermaster Corps for transportation and delivery at the railroad depot or steamboat dock nearest to the point within the State or Territory designated by the governor thereof. Separate bills of lading will be used in shipping this property.

1144. A quartermaster is authorized to transport books and musical instruments purchased for, or donated to, post chapels or to post or company libraries, and gymnastic and athletic appliances purchased with regimental, exchange, or company funds, for the use of troops, from the nearest market to the post or station of the troops. Also to furnish transportation at public expense for reading matter donated for use of the enlisted men of the Army, or the United States Disciplinary Barracks at Fort Leavenworth, Kans., or any branch thereof, such transportation to be furnished from place of donation to the post, hospital, or barracks where intended for use. All such packages will be impersonally addressed and consigned to the proper commanding officer of troops or hospitals, or the commandant of the barracks. (*C. A. R., No. 55.*)

1145. The Quartermaster Corps is authorized to ship (under the regulations governing the transportation of military property, and on the same forms of bills of lading) articles donated to the Medical Museum at Washington, the library and museum of the Military Service Institution at Governors Island, N. Y., or the United States Military Academy at West Point, N. Y. Packages will be marked with the name of the institution, and sent in care of the depot quartermaster at Washington or New York, or the quartermaster at West Point.

CLOTHING AND EQUIPAGE.

1146. Tables showing the price of clothing and equipage for the Army, the allowance of clothing in kind to each soldier for each year of his enlistment, and his clothing money allowance for each year, month, and day, also the allowance of equipage to officers and enlisted men, will be published in orders from the War Department. (*C. A. R., No. 6.*)

1147. Estimates of clothing will be made quarterly, as follows: On January 1 for the quarter ending June 30; on April 1, for the quarter ending September

30; on July 1 for the quarter ending December 31; on October 1 for the quarter ending March 31.

1148. Based upon the minimum and maximum quantities of the various articles of clothing, as determined between which limits the stock of clothing will be maintained, and upon the probable necessities of the command to be supplied, as shown by previous issues, the quartermaster will prepare the quarterly estimates of clothing in triplicate and submit them to the commanding officer for his action.

These estimates will show the number of each article on hand (giving size) and the number probably required for the period for which the estimate is made. It will also show the number of each article surplus that can be spared for issue at other posts. When approved by the commanding officer, two copies will be forwarded to the department quartermaster.

1149. The department quartermaster, upon receipt of the several estimates, will carefully revise the same and note the articles reported as surplus and available for issue at other posts. He will then submit the estimates with his recommendations to the department commander. Surplus articles at any post in the department should be recommended for transfer to other posts where they are required. Articles that can not be supplied from a surplus should be recommended for supply from the depot designated to supply these articles.

1150. After approval by the department commander, the estimates amended to show the number of each article not filled from surplus at other posts will be disposed of as follows:

One copy will be retained in the office of the department quartermaster and the other one forwarded directly to the depot designated to supply these articles, so as to reach it not later than February 1, May 1, August 1, and November 1, respectively.

1151. Should the quantity of clothing and equipage supplied upon the quarterly estimates prove inadequate, a special requisition in triplicate, giving reasons therefor, should be made and forwarded to the department quartermaster, and after approval by the department commander one copy will be retained for record in the office of the department quartermaster and the remaining two copies forwarded directly to the supply depot, except requisitions for band instruments or parts thereof, which will be sent to the Quartermaster General directly. In case of absolute necessity, call for such articles as are urgently needed may be made by telegraph. (*C. A. R., No. 10.*)

1152. Officers of the recruiting service will forward special requisitions for such articles of clothing and equipage as may be needed directly to such depots of the Quartermaster Corps as may be designated by the Quartermaster General. Care will be exercised to prevent unnecessary accumulations of clothing and equipage and other supplies. Lists of such surplus property as may be on hand and not required will be submitted directly to the Chief of the Quartermaster Corps. (*C. A. R., No. 10.*)

1153. To enable post quartermasters to form an approximate basis as to the sizes required, each company or detachment commander will, whenever called upon, furnish that officer with a statement of the sizes of the various garments worn by the enlisted men composing said commands.

1154. All officers making estimates or requisitions for clothing and equipage will conform to regulations and orders fixing allowances. The sizes furnished require very little, if any, alteration, and estimates should be made as near the exact requirements of the men as possible.

1155. Should any of the sizes of clothing supplied prove inadequate, measurements stated upon prescribed blanks will be forwarded with the estimate

for the garments. A certificate that the enlisted man for whom such clothing is intended can not be fitted with the sizes of clothing furnished should accompany each requisition. Additional cost of manufacturing these special-measurement garments will not be charged against the enlisted man. (C. A. R., No. 4.)

1156. The clothing estimated for by each company or detachment commander should, as a rule, be held subject to its wants, but in case of need it may be otherwise issued, and the quartermaster will then call for a sufficient quantity to replace it if necessary.

1157. When clothing is required, issue will be made by the quartermaster either to the individual soldier or in bulk to the organization commander, or an officer representing him, for issue to the enlisted men of his command.

In either case the soldier will make request (single copy) on individual clothing slip to his organization commander. For this purpose the original and duplicate slips will be detached and used indiscriminately.

When the issue of clothing to the individual soldier is desired individual clothing slips in duplicate, numbered serially for the month or period and enumerating the articles needed, will be prepared by the organization commander by carbon process. The quantities and sizes desired will be entered by the organization commander, except that for men not yet fitted sizes may be filled in at the time of issue after proper size has been determined by try on.

Clothing issued to the individual soldier and removed from the quartermaster's storehouse will not be received back by the quartermaster.

If a large number of men of an organization are to draw clothing, individual clothing slips will be sent to the quartermaster in advance to permit the clothing to be prepared for issue.

At the time of issue the quartermaster or his representative will enter by carbon process the quantities, sizes, and unit prices of the articles issued, initial the slip in space "Issued by," and obtain the soldier's receipt on both copies. A line will be drawn through each blank space in column "Quantities issued" on original and duplicate by the quartermaster or his representative before the soldier signs the receipt. The "original" will be retained by the quartermaster and the "duplicate" returned to the organization commander or his representative at the time of issue or returned at the close of the business day in a sealed envelope to the organization commander. The original will be abstracted daily by the quartermaster on abstract of clothing issued. The duplicate, after having been returned by the quartermaster, will be retained by the organization commander, who will immediately determine the total money value and enter the transaction on abstract of clothing drawn, statement of clothing charged to enlisted men, and service record. The soldier's request will then be destroyed.

At the end of the month or whenever an organization leaves the vicinity of the issuing quartermaster for an extended period, the organization commander will compare his abstract of clothing drawn with the quartermaster's abstract of clothing issued. After satisfactory settlement of all differences an additional copy of the abstract will be prepared by the organization commander and delivered to the quartermaster not later than the fifth of the succeeding month. The quartermaster will note fact of signature on his retained copy. The organization commander will file his retained copy of the abstract with the corresponding duplicate individual clothing slips and statement of clothing charged to enlisted men.

The quartermaster will forward the copy of abstract signed by the organization commander to the Quartermaster General of the Army as a voucher to his property account and will retain the other copy.

When clothing is desired in bulk, the organization commander will prepare a requisition in triplicate on the prescribed form enumerating the articles and sizes needed and showing the total required. The three copies of the requisition will be sent to the quartermaster, who will prepare the items for issue, enter in columns "Issued" on all copies the quantities which can be actually supplied, and enter the unit prices. The quartermaster will send due notice to the organization commander when the clothing is ready for issue. After verifying the quantities of clothing entered in columns "Issued," the organization commander or an officer designated by him will sign on all copies a receipt to the effect that he has received the articles enumerated in columns "Issued." The quartermaster or his representative issuing the clothing will sign a statement on all copies to that effect. The articles will then be removed from the quartermaster's storehouse. One copy of the requisition will be turned over to the organization commander or his representative at the time of issue of clothing.

The organization commander or an officer designated by him will at once issue the clothing to the enlisted men. The issuing officer will enter on the request submitted by the soldier the quantities issued, initial the slip, and obtain the soldier's receipt at the time of issue.

All clothing not actually issued to enlisted men will be returned by the organization commander or an officer designated by him to the quartermaster within 24 hours after the clothing was drawn and the quantities so returned entered in columns "Returned to quartermaster" on the three copies of requisition. The officer will sign a statement on all copies that the articles enumerated in columns "Returned to quartermaster" were so returned, and the quartermaster or his representative will sign the receipt on all copies to the effect that the articles have been received. A line will be drawn through each blank space on all copies in columns "Returned to quartermaster" before signing. The difference between the quantities received and the quantities returned to the quartermaster will be entered in columns "Net issued" and total money value determined. The organization commander or his representative will sign certificate on the copy of the requisition retained by the organization, to the effect that the articles enumerated in columns "Net issued" have been duly issued, stating total money value of clothing issued to the enlisted men.

The organization commander will prepare the statement of clothing charged to enlisted men and enter the date and money value of clothing issued in the clothing account on the soldier's service record. The soldiers' requests, requisition, and the statement of clothing charged to enlisted men will be kept filed together by the organization commander.

The quartermaster will forward one copy of requisition to the Quartermaster General of the Army as a voucher to his property account and will retain the other copy. (*C. A. R., Nos. 26 and 55.*)

1158. In the case of a soldier serving at an ungarrisoned or isolated station the officer who keeps the soldier's service record will prepare the requisition and sign the receipt for the clothing. (*C. A. R., No. 55.*)

1159. Each soldier's clothing account will be kept by the company or detachment commander on the blank provided for that purpose. The account will show the money value of the clothing received by the soldier at each issue and his receipt therefor will be taken on the blank. Gratuitous issues will be entered separately, but their money value will not be deducted from the soldier's regular clothing allowance.

1160. Company and detachment commanders will settle the clothing account of every enlisted man of their commands on June 30 and December 31 of each year, without regard to date of individual enlistment. The entire amount found

due the United States will be charged to the soldier upon the pay rolls for the period embracing the date of settlement and on subsequent rolls until the whole amount is deducted.

1161. The clothing money allowance will consist of an initial allowance and a yearly allowance. The initial allowance is intended to cover the cost of all clothing required between date of enlistment and the date upon which the recruit is taken up for full duty, but will not be considered as fully earned by the soldier until he shall have completed six months' service. The yearly allowance and the initial allowance will be determined by the annual estimated value of the clothing. One-sixth of the initial allowance will constitute the monthly share, and one-thirtieth of the latter the daily share of the initial allowance actually accruing to the soldier. When the clothing account of a soldier is opened in the organization to which he has been assigned, he will be credited with the initial allowance. At the first settlement thereafter he will be credited with the portion of the yearly allowance accruing between date of enlistment and date of settlement as determined by the monthly and daily rates. At each succeeding settlement he will be credited with half the yearly allowance, and at the expiration of his term of service will be credited with the amount due from last settlement as determined by the monthly and daily rates.

1162. When a soldier is separated from the service during the first six months of his enlistment, any clothing allowance which may have been previously credited to him will be disregarded, and the allowance to be credited in the settlement of his clothing account will be determined from date of enlistment to date of separation from the service, the initial allowance according to the table of allowances in force at the date of enlistment, and the yearly allowance according to the table of allowances in force at the date of separation from the service; if, however, the service includes a June 30 settlement date, that part of the yearly allowance applicable to the service terminating on June 30 will be determined according to the table of allowances in force on that date, and the remainder of the service by the table of allowances in force at the date of the separation from the service. He will be given no credit for clothing not drawn in kind unless the total value of the clothing charged to his account shall be less than the amount of credit accruing between date of enlistment and date of separation from the service. This will be determined by adding to the allowance due at the yearly rate the portion of the initial allowance corresponding to the number of months and days of service. Thus, if such soldier has had three months and three days' service the allowance to be credited from date of enlistment to date of separation from the service would be the sum of three times the monthly allowance, three times the daily allowance, three times the monthly share of the initial allowance, and three times the daily share of the initial allowance. No deduction will be made from the initial allowance because of unauthorized absence prior to the date of separation from the service. Should the clothing charged to the soldier amount to less than this sum, the difference will be due him; but the final account of such soldier shall show no indebtedness to the United States for clothing overdrawn unless the total amount charged for clothing shall exceed the entire initial allowance increased by the portion of the yearly allowance accruing between date of enlistment and date of separation from the service, in which case the excess shall be charged as due the United States for clothing overdrawn. When a soldier is separated from the service at any time after the expiration of the first six months of an enlistment, he will be credited in the settlement of his clothing account with the allowance accruing between date of last settlement and date of separation from the service as determined by the monthly and daily rates. When for the convenience of the Government a soldier is retained in the service after the

expiration of his term of enlistment, his clothing money allowance at the regular rate will be credited for the period of such retention.

1163. The balance due the soldier at date of settlement will be credited to him upon his clothing account. It will not be placed upon the pay rolls, but the final balance due at date of discharge will be entered in words and figures upon his final statements. (*C. A. R., No. 55.*)

1164. The clothing account of a soldier who deserts should be settled in full to date of desertion. The balance due to him or to the United States will be entered on the next pay roll after date of desertion. In determining this balance, where the desertion occurs within the first six months of enlistment, any clothing allowance which may have been previously credited will be disregarded and the allowance to be credited will be the portion of the initial and yearly allowances accruing from date of enlistment to date preceding date of desertion as indicated in paragraph 1162. Where the desertion occurs after the first six months of enlistment, the settlement to last regular settlement date, June 30 or December 31, will not be disturbed, and in settling the account to date of desertion additional credit will be given for the portion of the yearly allowance accruing from date of last settlement to date preceding date of desertion as shown by the monthly and daily rates.

1165. A soldier in desertion or absent without leave is entitled to clothing allowance from the date of his return to military control if such date is prior to the expiration of his term of enlistment; if subsequently thereto, no clothing allowance will be due him unless he is retained in the service, in which case he will be entitled to clothing allowance for his actual service in making good the time lost, which, under paragraph 130, commences with the date on which he is restored to a duty status. Should the term of enlistment expire while the soldier is in confinement awaiting trial or serving sentence, his clothing allowance ceases on date of expiration of term of service and will not again accrue until he is restored to a duty status. In the foregoing cases the amount due the soldier will be obtained from the tables then and subsequently in force. In the case of a soldier against whom a charge of desertion is sustained by action of a court-martial, or who is restored to duty without trial on admitted desertion, a new clothing account will be opened without reference to the account of the soldier at date of desertion, but no portion of the initial allowance will be credited. In the case of a soldier who is charged with desertion and the charge is not sustained by the action of a court-martial, or in whose case the charge is removed as having been erroneously made, the clothing settlement made at commencement of the unauthorized absence will be ignored and his clothing account will be adjusted by simply omitting any credit for the annual allowance, as distinguished from the initial allowance, for the period of unauthorized absence and for any period subsequent to the expiration of term of enlistment during which he may have been in confinement.

1166. Clothing allowance accruing to a soldier after return to the service from desertion will not be used to reduce the amount of the soldier's indebtedness at date of desertion; the full amount of the soldier's indebtedness must be charged on the roll, to be deducted by the quartermaster when he settles the soldier's account.

1167. Articles of band uniforms, including music pouches, that do not form part of the annual clothing allowance may be issued, but not charged, except in case of loss or damage.

These articles will remain the property of the United States, and be accounted for upon the returns of the accountable officer. (*C. A. R., No. 3.*)

1168. There will be issued to troops stationed in extremely cold regions, when the necessity for such issue is certified by the post commander, blanket-

lined overcoats, winter caps, winter gauntlets, and arctic overshoes, but only to men performing guard duty or other necessary outdoor duty when exposure to weather would jeopardize life or limb by freezing. These overcoats, winter caps, and winter gauntlets will not be charged to the enlisted men, but will remain the property of the United States. In case of loss or damage, except by fair wear and tear incident to the service, they will be charged to the enlisted men at regulation prices. The arctic overshoes, however, will in all cases be charged at regulation price.

1168j. Gratuitous issues of field clothing will be made to troops whose field service has been of such a nature as to make the usual clothing allowances insufficient. Gratuitous issues will be made only under the following conditions:

1. Requests for gratuitous issues will be made by organization commanders to the department commander through military channels. Intermediate commanders will recommend action in each case.

2. Requests for gratuitous issues will not be submitted unless the clothing allowances, accrued from the beginning of the enlistment period up to the time of the request, have been entirely exhausted.

3. Requests for gratuitous issues will be accompanied by a statement as to whether or not previous gratuitous issues have been made to the same individuals. If such have been made, full details will be given to include the time, place, and amount of previous gratuitous issues.

4. Department commanders will approve gratuitous issues only when the evidence submitted clearly indicates that unusually severe conditions of field service have made the ordinary clothing allowances insufficient, and that due economy has been exercised by those concerned

5. On receipt of requisitions for gratuitous issues, approved under the preceding regulations by department commanders, field clothing will be issued without charge to enlisted men (C. A. R., No. 54)

1169. The Quartermaster Corps is authorized to pay from the appropriation for clothing and equipage a sum not to exceed \$1 50 per month for the laundry work of each recruit who has no funds of his own at recruiting stations, recruit depots, and recruit depot posts. The expenditure will be charged on the clothing account of the recruit and so noted on his service record. (C. A. R., No. 55)

1170. General prisoners will not be permitted to wear as an outer garment or have in their possession any clothing which is a distinctive article of the uniform worn by enlisted men. Commanding officers may order necessary issues of clothing to prisoners who have no clothing allowance from clothing specially provided for the purpose. The receipt of the officer in charge of the prisoners to whom the issues are made will be the quartermaster's voucher for such issue. The issue of articles of the uniform under this paragraph will be avoided if possible.

Upon the release of a general prisoner from confinement the Quartermaster Corps will issue to him a suit of citizens' outer clothing to consist of hat, or cap, coat, pair trousers, shirt, necktie, vest, collar, and overcoat (when required), cost not to exceed \$10, but any articles of outer uniform clothing (other than shoes) issued to a general prisoner while in the service or during confinement will be regarded as the property of the United States and will not be taken away with him upon his release. (C. A. R., No. 27.)

1171. The issue to general prisoners employed at outdoor labor in severe weather at military posts of such overcoats, overshoes, and woolen mittens as, in the judgment of the post commander, may be necessary to prevent suffering is authorized.

1172. Gratuitous issues of clothing may be made, under the provisions of section 1298, Revised Statutes, to replace articles destroyed to prevent the spread of contagious diseases, upon the certificate of an officer that the clothing was so destroyed upon the recommendation of the medical officer named.

1173. Should it become necessary to issue new clothing for use in the burial of a deceased soldier, as in the case of a man who dies away from his proper command and under circumstances rendering such issues imperatively necessary, the expense of the issue will be borne by the United States, and the clothing will be dropped from the returns of the issuing officer on the orders of the commanding officer, which must recite the necessity for the issue.

1174. Officers of the Army, members of the Officers' Reserve Corps, contract surgeons, and veterinarians may purchase from the Quartermaster Corps such articles of uniform clothing, clothing materials, and equipage as they need, provided the property is available. They will certify that the articles are for their personal use. (*O. A. R., No. 49.*)

1174½. A post exchange may purchase, upon the certificate of the officer in charge that they are for sale only to enlisted men of his post in such quantities as are needed by them, the following articles of uniform clothing:

Belts, waist.

Chevrans (all kinds).

Cords:

Hat.

Tying, for service hats.

Laces (all kinds).

Leggings, canvas.

Ornaments, cap and collar.

Stockings.

Post commanders will regulate the purchase and resale of such articles. Selling (except by the post exchange) or bartering these articles purchased or drawn from the Quartermaster Corps is forbidden.

1175. Officers' servants will not be permitted to wear clothing intended for troops, except underclothing and shoes, which may be purchased in limited quantities, if available, upon the officer's certificate that they can not be otherwise obtained.

1176. Quartermasters are authorized to drop from their property accounts tent pins, and ax, pickax, and hatchet helms, upon officers' certificates that the articles have been worn out in service.

1177. Estimates for tableware and kitchen utensils will be prepared and submitted to proper authorities not later than 30 days in advance of the quarter for which required. They will be limited to such articles as, with those on hand at the time an estimate is submitted, shall not exceed in kind and quantity the mess outfit as announced in the general orders prescribed in paragraph 301. Special estimates may be made when necessary to meet emergencies, and in such cases the circumstances constituting the emergencies will be stated.

1178. Commanding officers of posts and of all organizations supplied with tableware and kitchen utensils will exercise a rigid supervision and economy in the care and preservation of all such articles, and any damaged, broken, destroyed, or lost through the carelessness of enlisted men will be charged against their pay, as explained in paragraph 686, and a "statement of charges" on the prescribed form will be filed as a voucher with the property account from which the articles are dropped. Loss through breakage of china and glass ware, not due to carelessness, may be replaced at public expense on proper requisition, provided it does not exceed 20 per cent per annum, or 5 per cent per quarter, of the total value of china and glass ware to which the mess is entitled (value to be determined by the prices given in the annual price list), and the articles so replaced will be destroyed and dropped from property accounts in the manner prescribed in paragraph 1176. Any excess of breakage

will be replaced only under extraordinary circumstances, or when values have been charged as herein provided, and requisitions calling for such excess must show clearly the circumstances or the fact that charge has been made. Estimates calling for articles other than china and glass ware must show the necessity for them, and if to replace articles lost or stolen, must be accompanied by the report of a surveying officer, unless values have been charged as herein before directed.

1179. There will be furnished by the Quartermaster Corps to all duly authorized bands of the Army the following-named musical instruments, viz: Db piccolo, tenor and concert flutes, Eb and Bb cornets, Eb and Bb trumpets, Eb and Bb clarinets, Eb altos, Bb trombones (valve or slide), Bb baritones, Eb, Bb, and BBb basses, bass and snare drums; cymbals, triangles, music stands, and extra parts for the repair of the instruments; also batons with suitable cords and tassels for the use of drum majors of all dismounted bands. Mounted bands may be supplied with a pair of Kettledrums in lieu of the bass and tenor drums, cymbals, and triangles, and also with altos, trombones, and basses of helicon shape. A flügelhorn may be furnished in lieu of the Eb trumpet, a euphonium in lieu of one alto, one Eb alto saxophone and one Eb baritone saxophone in lieu of two cornets, and one tenor saxophone in lieu of any other authorized instrument; but under no circumstances will more than a complete instrumentation for the authorized number of musicians be supplied except to recruit bands. In making requisition for band instruments a statement showing the number and kind on hand and their condition should accompany the same. The commanding officer of the band will be responsible for all the property specified. When any instrument has become unserviceable it will be submitted to a surveying officer. A copy of his report will be forwarded to the department commander with a view to having the instrument repaired, if practicable, or otherwise disposed of. Instruments not worth the cost of repairs will be submitted for the action of an inspector. When an instrument needs minor repairs, involving only a slight expense, and the work can be done in a workmanlike manner in the vicinity of the post, it will not be necessary to submit the instrument to a surveying officer. Such repair may be secured upon the written order of the commanding officer. Requisitions for band instruments will be submitted to the designated supply depots through the department headquarters. (*C. A. R., Nos. 26 and 30.*)

1180. In addition to the B flat bugles with slings prescribed for field musicians in Equipment Tables, Quartermaster Supplies, published in War Department general orders, foot troops may use drums, or drums and fifes, if desired by regimental or district commanders. Bronze whistles with suitable chains will be furnished by the Quartermaster Corps for sale to officers at cost price and for issue to such sergeants, corporals, or musicians as are required to use them. The foregoing articles will conform to patterns in the office of the Quartermaster General and will be accounted for as equipage. (*C. A. R., Nos. 33 and 38.*)

1181. The allowance of corn brooms, scrubbing brushes, and mops will be as follows:

For each organization having an authorized maximum strength of 100 enlisted men or over, 9 brooms, 6 brushes, and 3 mops a month.

For each organization having an authorized strength of less than 100 enlisted men and over 60, 6 brooms, 4 brushes, and 2 mops a month.

For each organization having an authorized strength of 60 men or less, 4 brooms, 3 brushes, and 2 mops a month.

Three brooms and 2 brushes per annum for each non-commissioned officer entitled to a room as quarters and for each room occupied as quarters by

enlisted men, other than noncommissioned officers, entitled to a room as quarters.

Six brushes and 4 mops per annum to each post bakery.

Twelve brooms and 8 brushes per annum to each city recruiting station.

For cleaning casemates, storerooms, and loading rooms, 3 brooms a quarter.

To each troop of Cavalry for cleaning grain and saddle rooms, 3 brooms per quarter.

To each battery of Field Artillery for cleaning grain and saddle rooms and gun sheds, 9 brooms per quarter.

To each Cavalry and Field Artillery band (mounted) for cleaning grain and saddle rooms, 1 broom per quarter.

Commanding officers may, when necessary, order the issue of not to exceed 6 brooms and 6 mops per annum to each public office and building heated by the Government.

The necessity for and the fact of issue will in all cases be certified to by the officer commanding the organization or in charge of the office or building and be verified by the commanding officer.

The articles mentioned above will habitually be drawn quarterly but may be drawn when needed. If less than the maximum allowance be drawn in one quarter, credit can not be given in another quarter. (*C. A. R., No. 3:*)

1182. Commanding officers may, when necessary, order the issue of 4 cans of concentrated lye and 6 cakes of sapollo per month to each company, and one-half that quantity to each band, and the necessary quantity for buildings heated by the Government and not thus provided for. The use of concentrated lye upon the floors and woodwork in all modern barracks, kitchens excepted, is forbidden.

1183. The use of serviceable tents or other canvas for any purpose other than that for which such articles are furnished is prohibited, except in cases of emergency when necessary to protect public property. Any tent furnished for recreation purposes will be available for religious services by the chaplain on suitable occasions.

The prescribed allowance of tentage and equipage will habitually be kept in the hands of the organizations to which it is issued.

After use, and before being put away, tentage and equipage will be thoroughly aired, dried, and put in serviceable condition, so as to be ready for immediate use when again required. (*C. A. R., No. 23.*)

TELEGRAPHING.

1184. The telegraph and cable will be used only in cases of urgent and imperative necessity, in which the delay consequent upon transmission by mail would be prejudicial to the public interests. Day telegrams will not be sent when night telegrams would serve the purpose, consideration being given to the difference between eastern time and that of the zone to which the message is sent. Except in cases of great urgency, night telegrams will not be sent when the delivery can be made by mail the following morning. Night telegrams will be plainly indicated by the words "Night telegram" stamped thereon. Whenever practicable the consolidation into one message of several telegrams to be sent to a single officer in course of a day's business should be effected.

1185. The War Department Telegraph Code and all instructions relating thereto are issued by The Adjutant General of the Army.

The War Department Telegraph Code will be guarded with the greatest care and will never be out of the immediate possession or control of the officer to whom issued or his confidential agent. Care will be taken to prevent theft,

loss, use, or inspection, except by those whose duties require them to employ the code. Special pains will be taken to prevent the code from falling into the hands of unauthorized persons or of the enemy.

When issued, receipt of the code will be acknowledged by the officer to whom it is issued directly to The Adjutant General of the Army. All officers having the code in their possession will render a semiannual return therefor on January 1 and July 1 of each year in the form of a letter to The Adjutant General of the Army.

When the code is transferred from one officer to another, the officer to whom it is transferred will receipt in duplicate for the same to the officer making the transfer. Immediately upon the completion of the transfer the officer to whom it is transferred will notify The Adjutant General of the Army of the fact, and the officer making the transfer will forward the duplicate copy of the receipt to The Adjutant General of the Army. When military necessity causes it to be destroyed, it should be burned leaf by leaf. (*C. A. R., No. 40.*)

1186. Government blanks will be used when practicable in sending official telegrams by those in the service of the War Department authorized to send such telegrams, except in the Engineer Department, on river and harbor, or other civil business, and will be marked "Government paid"; in no case "Government collect." Commercial blanks, if used officially, should also be marked "Government paid." Accounts for telegrams on military business prepared on the prescribed form in the name of the telegraph company rendering the service, and accompanied by the original telegrams, will be paid by the Quartermaster Corps, with the following exceptions:

1. Accounts for reimbursement of amounts paid by officers for telegraphic service, which will be prepared upon prescribed forms.

2. Accounts for telegrams on public business of a confidential nature when in the opinion of the officer receiving or sending them it is improper that copies should accompany the accounts, or where copies can not be procured. When it is questionable whether the telegrams are on official business or that the telegraph should have been used, such accounts will be accompanied by full explanations from the officer who sends or receives the telegrams.

The accounts excepted in this paragraph except in the Engineer Department, on river and harbor, or other civil business, will be forwarded to the Quartermaster General for settlement.

In settling accounts for telegrams which pass over the lines of more than one company (bond-aided excepted), payment may be made on the original telegram to the initial company for the entire service. (*C. A. R., No. 3.*)

1187. Telegrams making application for leave of absence or extension of leave, or of inquiry whether leave has been granted, and the replies made thereto by telegraph, will not be sent or paid for as public dispatches.

1188. In framing telegrams and cablegrams all words not important to the sense will be omitted, addresses condensed, and the official title of the sender omitted or reduced to the minimum, thus bringing the message, so far as practicable, within the limit of 20 words. The last name of the officer addressed, or his title, and the last name of the sender are generally sufficient. Expressions such as "The Secretary of War directs," "By order of the Secretary of War," or "Reference your telegram of the — instant," and kindred expressions will be omitted. Telegrams sent within the limits of the United States, except those of an extremely confidential character, need not be coded or enciphered.

1189. All telegraph accounts pertaining to the War Department, except as may be otherwise directed, originating in the United States, which are payable

from funds of the Quartermaster Corps, will be paid in Washington, D. C., under the instructions of the Quartermaster General. (*C. A. R., No. 10.*)

1190. Blank forms for official telegrams will be furnished by the Quartermaster General. (*C. A. R., No. 10.*)

1191. Nothing is required of officers sending telegrams beyond the delivery of the message to the company. The proper quartermaster will receive from telegraph companies their accounts, with proofs of service (which should be original telegrams whenever practicable), and will prepare and certify vouchers for the same and pay them, or forward them for settlement, as is required in paragraph 1186. Information desired by telegraph companies in regard to military business will be obtained from the Quartermaster Corps.

1192. When telegrams are sent "collect" by private individuals, the nature of the telegrams should govern the action of the disbursing quartermaster. If strictly on Government business, payment will be made by the United States.

1193. Whenever special delivery is necessary to expedite the delivery of an official telegram, or where the place of delivery is located beyond the established free-delivery limits, the officer filing the telegram for transmission should mark it "special-delivery charges paid." The special-delivery charges, which should be included in the bill of the telegraph company for the transmission of the telegram, will be paid by the quartermaster designated to pay the telegraph accounts in the department in which the telegram originated.

If the addressee lives at such a distance from the telegraph office as to make the special-delivery charges excessive, and the delay will not be of a serious nature, the telegram should be marked: "By mail from——," indicating the name of the telegraph office from which the telegram should be mailed.

TELEPHONING.

1194. Where telephoning is practicable, accounts for the same may be paid from the appropriation for the payment of telegraphic service.

SUBSISTENCE STORES IN BULK.

1195. Subsistence stores consist of articles composing the ration, those for other authorized issues, and those furnished for sale to officers and enlisted men.

1196. Stores longest on hand, if in fit condition, will be first issued, sold, or shipped.

1197. Subsistence stores in good condition, but not required for use, will be disposed of under the direction of the Quartermaster General. In urgent cases, such as sudden abandonment of a post, liability to rapid deterioration, etc., they may be sold, or otherwise properly disposed of, on the recommendation of an inspecting officer, approved by a commanding general. (*C. A. R., No. 10.*)

1198. Subsistence stores will not be transferred gratuitously to another staff department, nor obtained, issued, sold, or otherwise disposed of except as authorized by regulations.

1199. Coal oil, gunpowder, quicklime, or other articles of like dangerous nature will not be kept in or near storehouses containing other public property.

FRESH MEATS.

1200. Fresh meats from the block will usually be provided for troops by contract. Beef cattle will ordinarily be purchased only when necessary for supplying beef to troops in campaign or on the march.

BAKERIES.

1201. Bakeries are operated by the Quartermaster Corps under the direction of the quartermaster. All accounts and supplies pertaining to the bakery are reported on the account current and the return of subsistence stores of the quartermaster. Bread is sold at cost price in the same manner and subject to the same regulations as are other articles of subsistence stores.

At posts or stations where a bakery is operated by the Quartermaster Corps the baking of bread by companies is prohibited. Enlisted men and others entitled to a ration who are allowed to mess separately from companies or organizations are not required to purchase bread from the Quartermaster.

Cost price.—The cost price of bread is determined in the following manner on the form provided for the purpose.

The cost of all flour and other ingredients used in the preparation of the bread baked as shown on the last day of the month, increased by the cost of power used in operating the bread-baking machinery, is divided by the total number of pounds of bread baked, and the result is the cost of 1 pound of bread.

When the baking of bread is commenced for the first time at any post or station by the Quartermaster Corps the price of 1 pound of bread is fixed until the close of the month at the price of 1 pound of flour, provided, however, that the price of bread for the succeeding month is fixed at the cost price of that baked in the preceding month and determined on the last day thereof.

Facilities for baking.—At all permanent posts a suitable building for baking bread, and in the field the tentage prescribed for the purpose, is provided by the Quartermaster Corps. Bake ovens and apparatus appertaining to the baking of bread are also provided by the Quartermaster Corps.

Personnel.—The necessary number of bakers, assistant bakers, and baker apprentices or laborers, not in excess of the numbers given in the following table, is furnished by the Quartermaster Corps.

| Average daily production of bread (pounds). | Bakers. | Assistant bakers. | Baker apprentices (or laborers). |
|---|---------|-------------------|----------------------------------|
| 200 or less..... | 1 | ..... | 1 |
| 200 to 500..... | 1 | ..... | 1 |
| 500 to 1,000..... | 1 | 1 | 1 |
| 1,000 to 1,500..... | 1 | 2 | 1 |
| 1,500 to 2,000..... | 1 | 2 | 2 |
| 2,000 to 2,500..... | 2 | 2 | 2 |
| 2,500 to 3,000..... | 2 | 2 | 3 |
| 3,000 to 3,500..... | 2 | 2 | 4 |

When the daily production is in excess of 3,500 pounds the number of bakers, assistant bakers, and baker apprentices or laborers is fixed by the Chief of the Quartermaster Corps, according to the necessities of the case. (*C. A. R., No. 4.*)

THE RATION.

1202. A ration is the allowance for the subsistence of one person for one day. The garrison ration is intended for troops in garrison, and, in time of peace, for troops in maneuver camps; the ration to be issued to troops on the march in time of peace will be prescribed by the commander, and will not exceed the allowances prescribed for the garrison ration; the travel ration is for troops traveling otherwise than by marching and separated from cooking facilities; the reserve ration is carried on the person of the men and in the

trains, and constitutes the reserve for field service; the field ration is the ration prescribed in orders by the commander of the field forces; the Filipino ration is for use of the Philippine Scouts; and the emergency ration for troops in active campaign for use on occasions of emergency or in the field for purposes of instruction.

In time of war when Philippine Scouts are serving in the field they will be subsisted the same as are regular troops. When impracticable for Philippine Scouts to use the Filipino ration while traveling otherwise than by marching, on account of the lack of cooking facilities or for other reasons, the travel ration may be prescribed. (*C. A. R., No. 8.*)

1203. Enlisted men, applicants for enlistment while held under observation, prisoners of war, military prisoners at posts, hospital matrons, and nurses in the Nurse Corps are each entitled to one ration a day, according to the station or the nature of the service; and when the rate of pay of a civilian employed with the Army does not exceed \$60 a month, if the circumstances of his service make it necessary and the terms of his engagement provide for it, there may be allowed him one ration a day, according to the exigencies of the case. Civilian employees traveling with organizations of troops will be rationed as are the organizations.

Members of the Regular Army Reserve, while at place of annual field training and when mobilized in the event of actual or threatened hostilities, shall be allowed one ration a day, based on the allowances as fixed by orders and regulations for troops of the Army. (*C. A. R., No. 51.*)

1204. Rations will be furnished to officers and men of the Marine Corps and to officers and seamen of the Navy when acting, or proceeding to act, in cooperation with the land forces of the United States, in conformity to the requirements of section 1143 of the Revised Statutes.

1205. The kinds and quantities of the component articles of the Army ration and the substitutive equivalent articles which may be issued in place of such components shall be as follows:

1. GARRISON RATION.

| Component articles and quantities. | | Substitutive articles and quantities. | |
|------------------------------------|----------------|--|-------------|
| Beef, fresh..... | 20 ounces.... | Mutton, fresh..... | 20 ounces. |
| | | Bacon ¹ | 12 ounces. |
| | | Canned meat, when impracticable to furnish fresh meat..... | 16 ounces. |
| | | Hash, corned beef, when impracticable to furnish fresh meat..... | 16 ounces. |
| | | Fish, dried..... | 14 ounces. |
| | | Fish, pickled..... | 18 ounces. |
| Flour..... | 18 ounces.... | Fish, canned..... | 16 ounces. |
| | | Turkey, dressed, drawn, on Thanksgiving Day and Christmas, when practicable..... | 16 ounces. |
| | | Soft bread..... | 18 ounces. |
| Baking powder..... | 0.06 ounce.... | Hard bread, to be ordered issued only when the interests of the Government so require..... | 16 ounces. |
| | | Corn meal..... | 20 ounces. |
| Beans..... | 2.4 ounces.... | Rice..... | 1.6 ounces. |
| | | Hominy..... | 1.6 ounces. |
| Potatoes ² | 20 ounces.... | Potatoes, canned..... | 15 ounces. |
| | | Onions, in lieu of an equal quantity of potatoes, but not exceeding 20 per cent of total issue..... | |
| | | Tomatoes, canned, in lieu of an equal quantity of potatoes, but not exceeding 20 per cent of total issue..... | |
| | | Other fresh vegetables (not canned) when they can be obtained in the vicinity or transported in a wholesome condition from a distance, in lieu of an equal quantity of potatoes, but not exceeding 20 per cent of total issue..... | |

¹ In Alaska, 16 ounces bacon, or, when desired, 16 ounces salt pork, or 22 ounces salt beef.

² In Alaska the allowance of fresh vegetables will be 24 ounces instead of 20 ounces, or canned potatoes, 18 ounces instead of 15 ounces.

1. GARRISON RATION—continued.

| Component articles and quantities. | | Substitutive articles and quantities. | |
|------------------------------------|---------------|---|---------------|
| Prunes..... | 1.23 ounces.. | Apples, dried or evaporated..... | 1.23 ounces. |
| | | Peaches, dried or evaporated..... | 1.23 ounces. |
| | | Jam, in lieu of an equal quantity of prunes, but not exceeding 50 per cent of total issue..... | |
| Coffee, roasted and ground.... | 1.12 ounces.. | Coffee, roasted, not ground..... | 1.12 ounces. |
| Sugar..... | 3.2 ounces.. | Coffee, green..... | 1.4 ounces. |
| Milk, evaporated, unsweetened | 0.5 ounce.. | Tea, black or green..... | 0.32 ounces. |
| Vinegar..... | 0.16 gill.... | Pickles, cucumber, in lieu of an equal quan- tity of vinegar, but not exceeding 50 per cent of total issue..... | |
| Salt..... | 0.64 ounce.. | | |
| Pepper, black..... | 0.04 ounce.. | | |
| Cinnamon..... | 0.014 ounce.. | Cloves..... | 0.014 ounces. |
| Lard..... | 0.64 ounce.. | Ginger..... | 0.014 ounces. |
| Butter..... | 0.5 ounce.. | Nutmeg..... | 0.014 ounces. |
| Syrup..... | 0.32 gill.... | Lard substitute..... | 0.64 ounces. |
| Flavoring extract, lemon..... | 0.014 ounce.. | Oleomargarine..... | 0.5 ounce. |
| | | Vanilla..... | 0.014 ounces. |

NOTE.—Food for troops traveling on United States Army transports will be prepared from the articles of subsistence stores which compose the ration for troops in garrison, varied by the substitution of other articles of authorized subsistence stores, the total daily cost per man of the food consumed not to exceed 25 per cent more than the current cost of the garrison ration, except on Thanksgiving Day and Christmas; when 50 per cent increase over the same current cost is authorized.

2. TRAVEL RATION.

| Component articles and quantities. | | Substitutive articles and quantities. | |
|------------------------------------|---------------|---------------------------------------|-------------|
| Soft bread..... | 18 ounces.... | Hard bread..... | 16 ounces.. |
| Beef, corned..... | 12 ounces.... | Hash, corned beef..... | 12 ounces. |
| Beans, baked..... | 4 ounces.... | | |
| Tomatoes, canned..... | 8 ounces.... | | |
| Jam..... | 1.4 ounces.. | | |
| Coffee, roasted and ground.... | 1.12 ounces.. | | |
| Sugar..... | 3.2 ounces.. | | |
| Milk, evaporated, unsweetened. | 0.5 ounce.. | | |

3. RESERVE RATION.

| Component articles and quantities. | | Substitutive articles and quantities. | |
|------------------------------------|---------------|---------------------------------------|--|
| Beans..... | 12 ounces.... | | |
| or meat canned..... | 16 ounces.... | | |
| Hard bread..... | 16 ounces.... | | |
| Coffee, roasted and ground.... | 1.12 ounces.. | | |
| Sugar..... | 2.4 ounces.. | | |
| Salt..... | 0.16 ounce.. | | |

One day in each alternate month of the season of practical instruction, not exceeding three days in each year, the use of the reserve ration with individual cooking will be required by all troops in the field for purposes of instruction.

4. FIELD RATION.

The field ration is the ration prescribed in orders by the commander of the field forces. It consists of the reserve ration in whole or in part, supplemented by articles of food requisitioned or purchased locally, or shipped from the rear, provided such supplements or substitutes correspond generally with the component articles or substitutive equivalents of the garrison ration.

5. FILIPINO RATION.

| Component articles and quantities. | | Substitutive articles and quantities. | |
|--|-----------------|---------------------------------------|------------|
| Beef, fresh..... | 12 ounces..... | Bacon..... | 8 ounces. |
| Flour..... | 8 ounces..... | Canned meat..... | 8 ounces. |
| Baking powder, when in field and ovens are not available..... | 0.32 ounce..... | Fish, canned..... | 12 ounces. |
| Rice, unpolished..... | 20 ounces..... | Fish, fresh..... | 12 ounces. |
| Potatoes..... | 8 ounces..... | Hard bread..... | 8 ounces. |
| Coffee, roasted and ground..... | 1 ounce..... | Soft bread..... | 8 ounces. |
| Sugar..... | 2 ounces..... | | |
| Vinegar..... | 0.08 gill..... | Onions..... | 8 ounces. |
| Salt..... | 0.64 ounce..... | | |
| Pepper, black..... | 0.02 ounce..... | | |

Scout organizations will be required to use the entire allowance of the meat component, and not more than 16 ounces of rice per day to be used for each ration. The purchase of 1.6 ounces of beans per ration in substitution of the portion of the rice ration not drawn will be made, and use of as large an extent as possible of native products, such as camotes, mongos, and squash will be required.

6. EMERGENCY RATION.

The emergency ration is furnished, in addition to the regular ration, as required for troops on active campaign or in the field for purposes of instruction, and will not be opened except by order of an officer or in extremity, nor used when regular rations are obtainable.

Ration returns upon which emergency rations are drawn will bear the certificate of the organization commander that such rations are required for the enlisted men of his organization and that the money value of any rations previously drawn by him, and improperly opened or lost, has been charged against the person responsible.

Company and detachment commanders are responsible for the proper care and use of emergency rations carried on the person of the soldier. (*C. A. R., No. 8.*)

1206. When it is contemplated to grow vegetables in a post garden, the post quartermaster, with the approval of the post commander, will notify the department quartermaster of the period during which the post garden may be relied upon to supply vegetables, and that period will be excepted from the operation of any contract that may be made for supplying vegetables to the post.

1207. In adjusting charges to be made against enlisted men or others on account of increased expense to the Government for their subsistence, the value of the garrison ration will be estimated at 30 cents, the Filipino ration at 20 cents, and the travel ration at 40 cents. (*C. A. R., No. 42.*)

LIQUID COFFEE.

1208. When an enlisted man or an applicant for enlistment, supplied with cooked or travel rations, travels unaccompanied by an officer, and it is impracticable to cook coffee en route, he may be supplied with funds for the purchase of liquid coffee in lieu of the coffee, milk, and sugar components of the travel ration, at the rate of 21 cents a day for the number of days that the travel is expected to cover, to be paid to each man on the order of the commanding officer who directs the journey, a copy of the order being filed with the voucher on

which payment is made. When an enlisted man or an applicant for enlistment, supplied with cooked or travel rations, travels under the command of an officer, and it is impracticable to cook coffee en route, funds at the rate of 21 cents a day for a similar purpose may be transferred to the officer to be disbursed and accounted for. At the end of the journey all money in excess of 21 cents a day for each man for the actual number of days traveled will be transferred to the nearest quartermaster. Should any part of the 21 cents a day for the actual number of days traveled be unexpended it will be transferred to company commanders pro rata, to be taken up by them as part of the company fund. When recruits en route to different organizations or corps serving at over-sea stations arrive at a recruit depot, however, the unexpended funds will be transferred to the mess officer and taken up by him as part of the mess fund. (*C. A. R., No. 53.*)

RATION RETURNS AND ACCOUNTS.

1209. Ration returns for troops and applicants for enlistment while held under observation will be signed by the immediate commanders of the organizations, and approved by the commanding officer. After approval they will be presented at the quartermaster's office for action. Single ration returns will be submitted for organizations, including persons permitted to mess separately, and will embrace all persons actually present. Individual "Ration and savings accounts" will not be opened for enlisted men or civilian employees permitted to mess separately. Company and detachment commanders will personally verify the additions and deductions of rations on the returns on account of men joining and leaving during the ration periods immediately preceding, and the proper authority before approving such returns will cause them to be verified.

In the field, during active operations, company officers, upon request, will be included by name on the ration returns of the organization to which they belong; field and staff officers who do not belong to organizations having messes, upon request, will be included by name on the ration returns of such organizations as may be designated by their commanding officer; the cost of the rations so obtained will be charged against the officers concerned. (*C. A. R., No. 34.*)

1210. The ration for the enlisted men of the Medical Department, hospital matrons, and others attached entitled to rations will be the same as that for the troops with which they serve. Their ration returns will be signed by the medical officer in charge and approved by the commanding officer. (*C. A. R., No. 55.*)

1211. The ration for civilians employed with the Army will be the same as that for the troops with which they serve. Their ration returns will be signed by the officers in charge of the employees and approved by the commanding officer.

1212. While sick in hospital, the ration of enlisted men, of applicants for enlistment, and of general prisoners will be commuted at the rate of 30 cents a ration, except that at the General Hospital at Fort Bayard, N. Mex., commutation at the rate of 50 cents a ration, and at other general hospitals 40 cents a ration, is authorized for enlisted patients therein; the ration of members of the Nurse Corps while on duty in hospital will be commuted at the rate of 40 cents a ration. The commutation herein referred to will be paid to the surgeon in charge by the post quartermaster or such officer of the Quartermaster Corps as may be designated.

1213. When any considerable detachment of enlisted men leaves a post or command, the detachment commander will be furnished by the quartermaster

with a ration certificate giving the number of men and the organization to which they belong, and setting forth the date to which, and by whom, their ration and savings account has been settled, which certificate will be presented to the commanding officer at the station where rations are next furnished. Civilian employees entitled to rations are, when detached, furnished with ration certificates.

1214. When a person entitled to rations leaves an organization the rations allowed for him for any period beyond the date of his leaving and not taken with him will be deducted on the next ration return of the organization.

EXTRA ISSUES.

1215. The following issues are authorized when necessary for the public service and, with the exception that vinegar and rock salt for public animals will be included in requisitions for forage, will be made on ration returns approved by the commanding officer, who will determine what quantities, within the limits prescribed below, shall be issued.

1. Soap:

To organizations of enlisted men—

For each ration, 0.64 ounce.

For use in bakeries, and for use of prisoners in guardhouses and military prisons—

Such quantities as the commanding officer may order as necessary.

For each ration issued to troops in the field, in active campaign only, in addition to the foregoing, 0.25 ounce hand soap to be issued in ounce cakes.

2. Candles, when other illuminants are not furnished by the Quartermaster Corps:

To organizations of enlisted men—

For each ration, except the Filipino ration, 0.24 ounce. In Alaska, 0.32 ounce.

For each Filipino ration, 0.12 ounce.

To headquarters in the field of organizations larger than a company, to hospitals, bakeries, depots of supply, guards, and telegraph stations—

Such quantities as the commanding officer may order as necessary.

3. Lantern candles:

For use in lanterns furnished to the Army by the Government and used in the public service—

Such quantities as the commanding officer may order as necessary.

4. Matches:

For lighting fires and lights, for which fuel and the illuminating supplies are issued—

Such quantities as the commanding officer may order as necessary.

5. Toilet paper:

For use of enlisted men stationed at military posts, camps, and rendezvous provided with modern water-closets, with sewer connections, or where sanitary conditions require its use.

To organizations of enlisted men—

One package or roll of 1,000 sheets for every 60 rations.

For use in water-closets of offices, post gymnasiums, guardhouses, bakeries, and post exchanges—

Such quantities as the commanding officer may order as necessary.

6. Salt, rock :

For each public animal, a day, 0.8 ounce.

7. Vinegar :

For each public animal, a day, 0.1 gill.

8. Flour :

For paste used in target practice—

For each troop or company, 50 pounds, and for each battery of field artillery, 100 pounds during the practice season.

9. Towels, buck :

For use in the offices of regimental headquarters when adjuncts of post headquarters, and in the offices of post and coast defense staff officers, in bakeries, and in offices of department and depot quartermasters, when the necessity for the issue is certified to by the commanding officer—

For each person whose employment therein is authorized, not to exceed two towels a year.

10. Ice :

To organizations of enlisted men, when practicable—

For each ration, 4 pounds, the maximum allowance to any organization or detachment of less than 100 men to be 100 pounds a day, and to organizations of 100 men or more to be 1 pound a day for each man.

To troops stationed north of the thirty-seventh parallel of north latitude and where from any cause it is impracticable to cut and store ice for their use, the allowance will be for seven months only, beginning April 1 and ending October 31, except in the States of Washington, Oregon, and Idaho, where during the remainder of the year one-half of such allowance may be issued, and in the State of California, where the full allowance may be issued for the entire year.

To troops stationed south of the thirty-seventh parallel of north latitude the full allowance may be issued for the entire year.

At posts where it is practicable during the cold season to cut and store ice required, no issues of ice will be allowed from funds of the Quartermaster Corps as long as such stored ice is available.

For the preservation of subsistence stores—

Such quantities as the commanding officer may order as necessary.

When ice plants are in operation the issue of ice therefrom will be made upon requisition approved by the commanding officer and not supplied by purchase.

11. Housewives :

To each squad annually, when the necessity for the issue is certified by the commanding officer, for service in the field, 1 housewife.

Department commanders are authorized to increase or decrease, without reference to the War Department, but with due regard to the interests of the service and existing law, the various allowances specified in this paragraph.

Whenever such action is taken the department quartermaster will be informed thereof and will submit a copy of the authority directly to the Quartermaster General. When issues are made under the increased or decreased allowances herein referred to, the issuing quartermaster will note on his return the letter of authority for the issue, but a copy of the authority will not be required with the return. (*C. A. R., Nos. 12, 17, 35, and 41.*)

1216. Such of the following-named articles as may be necessary, not to exceed in value 50 cents a month for each general prisoner confined at a military post or in the United States Disciplinary Barracks or a branch thereof

without pay or allowances, will be issued by quartermasters on the 15th day of each month to the officer in charge of prisoners, viz:

| | | |
|-------------------|------------------------|-----------------------|
| Beeswax. | Handkerchiefs, cotton. | Scissors. |
| Brooms, whisk. | blue. | Shoestrings, linen. |
| Brushes, hair. | Mugs, shaving. | Soap, shaving. |
| Brushes, shaving. | Needles. | Soap, toilet. |
| Brushes, shoe. | Polish, shoe. | Thread. |
| Brushes, tooth. | Powder, tooth. | Toweling, unbleached. |
| Buttons, bone. | Razors. | |
| Combs, medium. | Razor strops. | |

Requisitions for these articles will set forth the number of general prisoners present at the post and must be approved by the post commander. The receipt of the officer in charge will be the quartermaster's voucher for dropping the articles from his property account. No articles issued under this paragraph, except toothbrushes, tooth powder, combs, one needle, one towel, toilet soap, buttons, shoestrings, handkerchiefs, and thread, will be carried away by general prisoners when transferred or discharged. Towels used by general prisoners will be laundered by those who use them. When specially authorized by the Secretary of War, the Quartermaster Corps will supply to posts where 30 or more general prisoners are confined a sewing machine and other necessary tailors' utensils for use in mending their clothing.

When necessary, similar issues, in value not to exceed 50 cents per man per month, may be made, on requisitions approved by the post commander, to other prisoners without funds; the value of the articles so issued to be charged on the descriptive lists of such prisoners.

Articles issued in pursuance of this paragraph will not be accounted for on property accounts by officers receiving them, but will be continued in use until worn out. (*C. A. R., Nos. 23 and 43.*)

1217. The following-named articles will be issued gratuitously to each recruit upon his first enlistment at a recruiting depot or upon his arrival at his permanent station:

| | | |
|---------------------|-------------------|---------------------------|
| One razor. | One brush, shoe. | Two towels, huckaback. |
| One brush, shaving. | One broom, whisk. | One package polish, shoe, |
| One brush, hair. | One brush, tooth. | russett. |
| One comb, medium. | One housewife. | One cake soap, toilet. |

These articles will be issued by the quartermaster on requisitions submitted by the company commander and approved by the post commander, and when the issue has been made that fact will be entered upon the service record. The receipt of the company commander will be the quartermaster's voucher for dropping the articles from his property account. (*C. A. R., No. 55.*)

1218. A recruiting officer stationed elsewhere than at a military post is authorized to purchase such of the following-named articles as may be necessary for the use of applicants for enlistment, while held under observation at a recruiting station or a station subsidiary thereto, at an expense not exceeding 70 cents a month for each station:

| | | |
|--------------------|------------------------|------------------------------|
| Brooms, whisk. | Combs, medium. | Towels, huckaback. |
| Brushes, blacking. | Polish, shoe, russett. | Soap, laundry, white, float- |
| Brushes, hair. | Toilet paper. | ing. |

If the recruiting officer is supplied with funds under proper appropriation he will pay the vouchers. If not supplied with funds, he will send the duly

certified vouchers for payment to the officer of the Quartermaster Corps designated to settle his accounts.

At a recruiting station at a military post such of the above-named articles as may be necessary for use exclusively by applicants for enlistment while held under observation, and newly enlisted men awaiting transfer to permanent stations, will be issued to the recruiting officer at the post by the quartermaster upon requisition, approved by the commanding officer, at an expense not exceeding 70 cents a month for each station. The receipt of the recruiting officer will be the quartermaster's voucher for dropping the articles from his return.

Articles issued in pursuance of this paragraph will be accounted for on property accounts by officers receiving them. Shoe polish, toilet paper, and laundry soap will be expended when issued. The remaining articles will be continued in use until worn out by fair wear and tear in the public service, when they will be dropped upon the certificate of the accountable officer. The towels will be laundered at the expense of the Quartermaster Corps. (C. A. R., No. 2.)

ISSUES OF SUBSISTENCE STORES.

1219. Subsistence will not be issued to destitute persons except when the commanding officer assumes the responsibility of ordering the issue to relieve starvation or extreme suffering. In such cases the circumstances will be fully stated in a written order, specifying the articles and quantities to be issued. This order, bearing a certificate of an officer that the stores have been issued, will be filed by the quartermaster, with his return of subsistence stores as his authority for dropping them.

1220. All articles of the garrison, travel, or Filipino ration due a company, or other organization, will be retained by the quartermaster and credit given to the organization for the money value of these articles at the current price of the articles; and the quartermaster will pay as savings to the organization commanders any excess in value of the stores so retained over those purchased by the organization. Such savings shall be used solely for the purchase of articles of food.

When on the march in time of peace, a daily issue of rations will be made in the manner prescribed in the Field Service Regulations for time of war. The ration to be issued to troops on the march in time of peace will be prescribed by the commander, and will not exceed the allowances prescribed for the garrison ration.

In time of peace the ration savings privilege will be suspended for troops on the march, except that when so ordered by the commander, the savings privilege will be allowed on certain specified articles of the ration.

Upon arrival of troops at mobilization or concentration camps the ration savings privilege will be suspended and entirely replaced by issue of rations in kind. This same restriction also applies during the period of field operations.

The commanding officer will designate the periods for which ration returns are to be submitted. Immediately upon the receipt of a ration return by the quartermaster, duly signed and approved, he will enter it, together with the actual cost of the ration as computed on the back of the ration and savings account. The stores required will be purchased from the quartermaster on charge sales slips, in the name of the organization, against their credit shown on the account. At the end of the month, or whenever necessary, the organization commander will settle the account with the quartermaster, when the sav-

ings due the organization, or the amount due the quartermaster, as the case may be, will be paid and the account certified as required.

All articles of the ration required for the supply of troops will be obtained from the quartermaster when on hand, but if any article be not in stock, a temporary supply may be purchased elsewhere.

When necessary to renew reserve rations, or to avoid loss of ration articles that have accumulated, the quartermaster will report the facts to the commanding general or the commanding officer, as the case may be, who, if he considers it necessary to prevent loss, will give in writing the necessary orders looking to the issue of such supplies to troops. Such issues will not exceed the ration allowance, and will be continued until the surplus is exhausted, or until such other action as may seem advisable can be taken to protect the interest of the Government. (*C. A. R., No. 8.*)

1221. On the first of each month, or whenever necessary, the quartermaster will compute on the back of the ration and savings account the actual cost of the ration in use at his post at the following rates:

Garrison ration.

| | Per cent. |
|------------------------------------|-----------|
| Beef, fresh..... | 70 |
| Bacon, issue..... | 30 |
| Flour, issue..... | 100 |
| Baking powder..... | 100 |
| Beans..... | 50 |
| Rice..... | 50 |
| Potatoes, fresh..... | 70 |
| Onions, fresh..... | 20 |
| Tomatoes, canned..... | 10 |
| Prunes..... | 30 |
| Jam..... | 50 |
| Apples, evaporated..... | 10 |
| Peaches, evaporated..... | 10 |
| Coffee, roasted and ground..... | 100 |
| Sugar..... | 100 |
| Milk, evaporated, unsweetened..... | 100 |
| Vinegar..... | 50 |
| Pickles, cucumber..... | 50 |
| Salt..... | 100 |
| Pepper, black..... | 100 |
| Cinnamon..... | 100 |
| Lard..... | 50 |
| Lard substitute..... | 50 |
| Butter..... | 50 |
| Oleomargarine..... | 50 |
| Sirup..... | 100 |
| Flavoring extract, lemon..... | 100 |

For Thanksgiving Day or Christmas, when turkey costs more than the regular meat ration, the proper allowance will be made on the ration and savings account by adding to the amount due the organization the product of the number of men present on the holiday multiplied by the excess cost of turkey over the regular meat ration. Should a ration of turkey cost less than the regular meat ration the proper deduction will be made.

Travel ration.

| | Per cent. |
|--|-----------|
| Soft bread or hard bread..... | 100 |
| Beef, corned or hash, C. B..... | 100 |
| Beans, baked..... | 100 |
| Tomatoes, canned..... | 100 |
| Jam..... | 100 |
| Coffee, roasted and ground ¹ | 100 |
| Sugar ¹ | 100 |
| Milk, evaporated, unsweetened ¹ | 100 |

Filipino ration.

| | Per cent. |
|--|-----------|
| Beef, fresh..... | 70 |
| Bacon, issue..... | 20 |
| Fish..... | 10 |
| Or— | |
| Canned meat..... | 70 |
| Bacon, issue..... | 20 |
| Fish..... | 10 |
| Flour, or hard bread, or soft bread..... | 100 |
| Baking powder, when ovens are not available..... | 100 |
| Rice, unpolished..... | 100 |
| Potatoes..... | 80 |
| Onions..... | 20 |
| Coffee, roasted and ground..... | 100 |
| Sugar..... | 100 |
| Vinegar..... | 100 |
| Salt..... | 100 |
| Pepper, black..... | 100 |

When reserve rations or surplus ration articles are ordered used under paragraph 1220, any excess cost of such articles over that of the articles ordinarily used in computing the cost of the ration will be credited to the organization on the ration and savings account. Should any article so ordered be cheaper than that ordinarily used, a corresponding deduction will be made from the organization's credit. The manner of ascertaining the amount of the credit or deduction will be shown on the back of the ration and savings account, to which the order of the commanding officer directing the issue will be attached.

1222. If ration and savings accounts are not paid by a quartermaster in the month during which they accumulated, the proper organization will be furnished with an extract of the account showing the amount due, which voucher, duly certified by the quartermaster and approved by the commanding officer, will be presented for payment to any quartermaster having funds for the purpose.

COMMUTATION OF RATIONS.

1223. Commutation of rations may be allowed at the following rates, under the conditions mentioned, viz:

¹ When 21 cents coffee money is paid, the coffee, sugar, and milk components will not be included when computing the travel ration.

Commutation of rations.

| Conditions. | Rate per day each. | |
|---|--------------------------|--------------------|
| | Enlisted men and nurses. | Philippine Scouts. |
| 1. To enlisted men, Philippine Scouts, male or female nurses on the expiration of their furloughs or leaves, provided that on or before the last day thereof they have reported at their proper stations or have been discharged..... | \$0.30 | \$0.30 |
| 2. To ordnance sergeants, quartermaster sergeants, senior grade, and quartermaster sergeants, Quartermaster Corps (and enlisted men acting as such) on duty at forts and stations where there are no other troops..... | 1.00 | ..... |
| 3. To an enlisted man, a Philippine Scout, or a male or female nurse on detached duty, stationed in a city or town where subsistence is not furnished by the Government; to sergeants detailed for duty with the National Guard, and for duty with disciplinary organizations; to enlisted men detailed for duty at institutions where one or more units of the Reserve Officers' Training Corps are maintained, or at schools or colleges pursuant to section 56, act of Congress approved June 3, 1916, stationed in a city or town where subsistence is not furnished by the Government..... | 1.00 | .50 |
| 4. To an enlisted man or a Philippine Scout traveling under orders from a place or station at which his rations have been regularly commuted..... | 1.50 | .75 |
| 5. To an enlisted man or a Philippine Scout traveling under orders alone, when the journey can not be performed in 24 hours and it is impracticable to carry rations of any kind (which fact must be stated in the order directing the journey); to members of the Regular Army Reserve upon being summoned for field training and when mobilized by the President and reporting for duty, while traveling from their homes to the places where ordered to report for duty, to members of the Reserve Officers' Training Corps while traveling, except by organization, to and from camps of instruction; and to members of the Enlisted Reserve Corps when ordered into active service, while traveling, except by organization, to and from the place to which ordered..... | 1.50 | .75 |
| 6. To two enlisted men or Philippine Scouts traveling under orders as a detachment, or traveling under orders as a guard to an insane patient or military prisoner, when the journey can not be performed in 24 hours and it is impracticable to carry rations of any kind (which fact must be stated in the order directing the journey), each..... | 1.50 | .75 |
| 7. To an insane patient or military prisoner traveling under orders under guard of one or two enlisted men or Philippine Scouts, when the journey can not be performed in 24 hours and it is impracticable to carry rations of any kind (which fact must be stated in the order directing the journey), to be paid on the order of the commanding officer in advance to, and to be receipted for by, the person to whose charge the patient or military prisoner is committed by the order..... | 1.50 | .75 |
| To enlisted men or Philippine Scouts selected to contest for places or prizes in department or Army rifle competitions, while traveling under orders to and from places of contest, when the journey can not be performed in 24 hours and it is impracticable to carry rations of any kind (which fact must be stated in the order), each..... | 1.50 | .75 |

(C. A. R., Nos. 43, 51, and 52.)

1224. Applicants for enlistment and recruits forwarded from recruiting stations, recruiting depots, or other military posts will be furnished the following allowances for subsistence while traveling, viz:

| When 1 or 2 men are forwarded. | When more than 2 men are forwarded. |
|--|---|
| <i>For a journey of 24 hours or less.</i> | <i>For a journey of 24 hours or less.</i> |
| Travel rations, or cooked rations, to be obtained from the contractor for meals or from the company or general mess. | For a detachment of 3 or more men: Travel rations (or, if not available, cooked rations, to be obtained from the contractor for meals or from the company or general mess). |
| <i>For a journey of more than 24 hours.</i> | <i>For a journey of more than 24 hours.</i> |
| Commutation of rations at not exceeding 50 cents a meal (\$1.50 a day) for each man. | For a detachment of 3 or more men: Travel rations if available, or, if not available, commutation of rations at not exceeding 50 cents a meal (\$1.50 a day) for each man. |

1225. Enlisted men, applicants for enlistment, and recruits ordered upon journeys which can be performed within 24 hours from the hour of starting must be subsisted during the journey upon cooked or travel rations procured for the purpose from the company kitchen, the contractor for meals, or from the quartermaster.

1226. Enlisted men absent under orders from their stations upon recruiting duty for not exceeding seven days will be deemed to be traveling under orders during the entire period, notwithstanding that some portion of the period may be occupied by detentions in the various towns which they visit in the performance of their duty, and their commutation of rations will be at the rate of \$1.50 a day.

1227. Rescinded. (*C. A. R., No. 18.*)

1228. An enlisted man not a recruit ordered, under subhead 5, paragraph 1223, will be allowed commutation of rations at the rate of 50 cents a meal (\$1.50 a day) for the time actually consumed in travel. The provisions of this paragraph do not apply to travel on Army transports.

1229. Commutation of rations will not be allowed to enlisted men serving where subsistence is furnished by the Government; or traveling under orders when they can carry and cook their rations, or can carry cooked or travel rations; or traveling under orders on Army transports or by steamboat or steamship where the passage rates include meals; or failing to report at their proper stations on or before the last day of furlough unless discharged; or recruiting parties at their stations; nor to civil employees. Commutation of rations will not be allowed to members of the Regular Army Reserve while in field training or after reporting when mobilized for active service in the event of actual or threatened hostilities, nor to members of the Reserve Officers' Training Corps while in camps of instruction, nor to citizens while at camps of instruction authorized by section 54 of the act of Congress approved June 3, 1916, nor to members of the Enlisted Reserve Corps while in active service for purposes of instruction or training or after reporting when ordered to active service in the event of actual or threatened hostilities. (*C. A. R., Nos. 18 and 51.*)

1230. An order directing the travel of an enlisted man or an applicant for enlistment will state that the journey is necessary for the public service. If it be impracticable for him to carry rations of any kind, the order will so state and will direct commutation of rations to be paid; if required to be paid in advance the number of days will be stated.

1231. An enlisted man traveling on duty under orders on a vessel of the United States Army Transport Service will not be allowed commutation of rations for the time he is aboard. He will be quartered with the enlisted men aboard and will mess with them, and the proper transport officer will indorse upon the travel order in the possession of the soldier the dates between which subsistence was so furnished. The travel order so indorsed will be turned over by the enlisted man at the end of the journey to the quartermaster by whom commutation of rations for any portion of the journey is paid, who will file it with the voucher on which payment is made. If commutation of rations is ordered paid in advance, the probable time on shipboard must be taken into account in determining the number of days' commutation to be allowed, and the paying officer will indorse the original order and make payment on a certified copy thereof in the manner directed in paragraph 1232 for paying commutation of rations in advance.

1232. Commutation of rations allowed to an enlisted man or an applicant for enlistment while traveling, when not directed to be paid in advance, will be

paid to him at the end of his journey, upon presentation of the order for the journey, with the certificate of his commanding officer thereon in the following form: "Last rationed to include —, 19—; will leave station at —, —, 19—; the rations overdrawn will be deducted from the ration return of Company —, — Regiment of —, for the period from —, 19—, to —, 19—," and a certificate signed by a commissioned officer in the following form: "Joined station at —, —, 19—." The period allowed by the paying officer will be the time required over the shortest usually traveled route. If ordered paid in advance, it will be paid upon presentation of a certified copy of the order directing the payment, having thereon the certificate in the above form of his commanding officer. In this case the paying officer will indorse the date, mode, and amount of payment, over his signature, on the order which is retained by the soldier or applicant for enlistment, and certify on the copy that he has made such indorsement. The soldier or applicant for enlistment will deliver his retained order to the commanding officer at the station where rations are next furnished. The order, or copy thereof, on which commutation has been paid will be filed as a subvoucher to the receipt roll, and the paying officer will indorse on the order, or copy thereof, the date, mode, and amount of payment.

1233. The furlough of an enlisted man will show by memorandum of his company commander to what day he was last rationed and the number of rations, if any, drawn for him previous to his going on furlough, for the time covered by the furlough, and the certificate of his company commander on the back of the furlough will show the date on which he rejoined his proper station or was discharged and that the rations overdrawn for him were duly deducted from a ration return of his company. If entitled to commutation he will be paid by any quartermaster upon the presentation of the furlough containing the above memorandum and certificate. The paying officer will file the furlough as a subvoucher to his receipt roll, and indorse on the furlough the date, mode, and amount of payment. The authority under which a furlough is granted (whether under Army Regulations or in pursuance of the orders of a superior) should be cited on the face of the furlough by the officer granting it. If the period for which the furlough is given is within the competency of the authority cited, no copy of the order is needed to accompany the furlough when presented to a disbursing officer for payment of commutation of rations; but if the period is manifestly beyond the competency of the authority cited, the furlough should, when presented for payment of commutation of rations, be accompanied by copies of all orders in pursuance of which it was given.

1234. An enlisted man granted a furlough with permission to travel on a vessel of the United States Army Transport Service will be quartered with the enlisted men aboard and will mess with them. The transport officer will certify upon the enlisted man's furlough the dates between which subsistence was so furnished. In paying commutation of rations on the furlough these days will be deducted.

1235. Enlisted men discharged while serving in places outside of the States composing the Union will be provided free transportation to the said States on Government transports upon direction of the commanding officers in the several localities, and will be subsisted by the Quartermaster Corps to the port of destination. They will not be entitled to travel pay from port of embarkation to the United States, nor to commutation of rations for the time so subsisted on the transports. The fact that such transportation and subsistence have been furnished must be noted on the final statements. In view of the provisions of paragraph 1378, the foregoing is not to be construed as precluding the furnishing of transportation at Government expense, via commercial vessels in cases

where the Government maintains no regular transport service between the localities of discharge and the United States. (*C. A. R., No. 20.*)

1236. When an officer orders commutation of rations to be paid, or rations furnished to a soldier on furlough to enable him to reach his proper station, the officer paying the commutation or furnishing the rations will report the full amount paid, or the money value of the food supplied, to the soldier's company commander. Should the soldier reach his station on or before the last day of his furlough the company commander will charge the full amount of the payment, or value of the rations, against his pay on the next pay roll. Should he reach his post after the expiration of his furlough, and the delay be not excused, the full amount will be similarly charged. Should the overstaying of his furlough be excused, the full amount, diminished by the value of the ration, at 25 cents a day, for the number of days during which he was absent after the furlough had expired, will be charged.

1237. When a furlough is lost, a certified copy prepared by his company commander, with the soldier's affidavit stating when, where, and the circumstances under which the loss occurred, that he reported at his station on or before the last day of his furlough or was discharged, and that no rations have been furnished nor commutation paid him for any portion of the time during which he was on furlough, may be presented within six months after the loss, through his company and post commanders, to the department quartermaster for payment or other disposition.

1238. An enlisted man having a claim for commutation of rations while traveling or on furlough, and who is at a distance from a paying quartermaster, will be paid upon forwarding to a paying quartermaster his travel orders or furlough properly made out. An enlisted man on detached duty who is entitled to commutation of rations may be similarly paid upon the certificate of the officer under whom he may be serving, or if not serving under an officer, upon his own certificate, setting forth the period for which commutation is due, accompanied by a copy of the authority for its allowance, or by a reference to such authority if previously furnished.

SALES.

1239. Sales of subsistence stores will be made at cost prices for cash to an officer on his certificate that the stores are for his personal or family use or for the use of an officers' mess of which he is the caterer, and will be similarly made on a certificate that they are for his or her personal use to a contract surgeon, a dental surgeon, a veterinarian, a female nurse, or a hospital matron when stationed within a military post or serving with troops in the field. Sales will also be made at cost prices for cash to a member of the immediate family of an officer, during his absence, upon a written request by him to the quartermaster.

1240. Sales to officers paid for within the calendar month in which made will be regarded as cash sales; if not paid for within that month, the quartermaster making the sale will forward an itemized statement of each account to the General Quartermaster for the action prescribed by paragraph 1308.

Thereafter, until evidence is furnished by the delinquent, showing payment of the amount so reported for stoppage, further sales will not be made to him except for cash upon receipt of stores. (*C. A. R., No. 10.*)

1241. Sales of reasonable quantities of stores will be made to an enlisted man on the active or retired list, for cash, upon his declaration, in writing, that they are intended for his own use. A post exchange may purchase stores upon the certificate of the officer in charge, and such purchases, when paid for within the calendar month in which made, are regarded as cash sales.

1241. Officers and enlisted men of the Navy and the Marine Corps are permitted to purchase subsistence supplies at the same price as is charged the officers and the enlisted men of the Army, and the officers and the enlisted men of the Army are permitted to purchase subsistence supplies from the Navy and Marine Corps at the same price as is charged the officers and the enlisted men of the Navy and Marine Corps.

These supplies will be sold at cost prices for cash to an officer of the Navy or Marine Corps on his certificate that the supplies are for his personal use or for family use or for the use of an officer's mess, of which he is the caterer, and to an enlisted man of the Navy or Marine Corps on the active or retired list at cost prices for cash upon his declaration in writing that such supplies are intended for his own use. When an enlisted man of the Navy or Marine Corps desires to make a purchase and is not serving with the Army he should make application in writing, stating that the supplies are intended for his own use, and his application must be indorsed by the officer under whom he is serving, who will state that the enlisted man concerned is entitled to purchase subsistence supplies. (*C. A. R., Nos. 10 and 12.*)

1242. Sales may be made on credit to officers and enlisted men who have not been regularly paid or who are in the field. Officers will certify that the stores are for their own use and will receipt for them. Enlisted men will obtain permits from their company commanders, approved by the commanding officer. Permits will not be given to a soldier in excess of the unencumbered pay due to him nor in any month in excess of his monthly pay. Such of the following-named articles as may be needed by him may be furnished to a recruit on credit, viz: A hand basin, a pipe, a box or bottle of tooth powder, and not to exceed 1 pound of tobacco.

1243. An officer purchasing subsistence stores on credit will furnish to the quartermaster making the sale a receipt in duplicate setting forth the place and date of purchase, the name of the quartermaster who made the sale, and the money value of the stores so purchased. One copy of the receipt will be forwarded by the quartermaster to the quartermaster who pays the officer, or to the department quartermaster, and will be filed with the pay voucher on which collection is made. The duplicate receipt will be filed by the quartermaster with his retained abstract of subsistence stores sold. The names of the officers purchasing subsistence stores on credit, the organizations to which they belong, and the money value of the stores so purchased will be entered on the abstract of subsistence stores sold.

1244. Exceptional articles of subsistence stores called for by officers and enlisted men, to be paid for by them regardless of condition upon arrival at posts, may be purchased under such instructions as to purchase and accountability as may from time to time be given by the Quartermaster General. (*C. A. R., No. 10.*)

1245. Civilians employed with the Army, including those expressly employed for their services as tailors, shoemakers, and laundrymen, may be allowed, at remote places or in the field where food can not otherwise be procured, to purchase from the Quartermaster Corps, in limited quantities for their own use, for cash, at cost prices, such articles of the ration or of stores kept for sales to officers and enlisted men as can be spared from the supplies on hand.

1246. Articles purchased by the Quartermaster Corps by net weight will be sold at net weight at the time of sale. Where the weight of a wrapper or cover at the time of purchase was included in the weight of an article it will be included in the weight when the article is sold. Articles in cartons, packets, or sealed cans will be sold as purchased.

1247. Post commanders will regulate sales and delivery of supplies. Selling (except by the post exchange) or bartering of supplies purchased or drawn from the quartermaster is forbidden.

1248. The commanding officer of a post at or near which the immediate family of an enlisted man who is absent abroad resides may, if the residence and other conditions of such family make it proper, grant to the head thereof permits to purchase from the Quartermaster Corps at the post, for cash, at cost prices, such quantities of subsistence stores as in his opinion may be reasonably needed for the sole use of the soldier's immediate family. The total amount of subsistence stores so sold to soldiers' families will be entered by the quartermaster in a separate item on the abstract of sales each month.

1249. The quartermaster who extends credit to enlisted men will forward to the proper company or organization commander the permit on which the supplies were sold, signed by the purchasers, which then becomes a statement of credit sales and of amounts due. The company or other commander will charge the amounts due on the next pay roll (and on subsequent rolls until the amounts shall have been collected) and return the permit-statement to the quartermaster, with notation thereon of any additional subsistence and other authorized quartermaster charges appearing on the pay rolls, showing in each case whether the charge is for credit sales, refundment of commutation of rations, or other authorized quartermaster account, and the place where and the month and year in which the indebtedness was contracted. The quartermaster will file the original with his retained papers for the month to which the credit sales pertain, and forward the carbon copy to the Quartermaster General with his monthly accounts. If a member of an organization or a recruit leaves his organization or a recruit depot before the money value of the articles furnished to him on credit shall have been collected, the amount due in each case, the place where, and the month and year in which the indebtedness was contracted will be noted on the service record. (*C. A. R., Nos. 10, 15, and 55.*)

1250. Sales will be consolidated monthly on an abstract. The commanding officer will satisfy himself that the purchases have been properly authorized and duly made and will so certify on the abstract. The abstract accompanying the quartermaster's account current will serve as a voucher to the account current as well as to the officer's return.

1251. The price at which subsistence stores may be transferred, or sold to officers and enlisted men, is the invoice or purchase price of the last lot of the same variety of subsistence stores received by the officer making the sale or transfer prior to the first day of the month in which the sale or transfer is made; but (1) the prices at a post or depot or at the office of a quartermaster will not be affected by transfers thereto from military posts, except where the articles are purchased at one post for shipment to another, the former having been regularly designated as the point of supply for the particular articles for the latter, in which case the rule laid down in the first five lines of this paragraph will obtain; (2) if two or more lots of the same variety of article are received on one invoice, or on the same date at different prices, the unit price to govern will be determined by dividing the total value of such lots by the total quantity of the same; (3) the equalization of prices among several varieties of the same article is not authorized, as in the case of several kinds of smoking tobacco, cigars, crackers, etc.; (4) if a quartermaster who has received an invoice of stores during the current month is relieved before the end of that month he will invoice to his successor the stores so received at their actual invoice price, although the current selling price of such stores will continue until the beginning of the next month. On the first day of each month a price list will be prepared at each station where sales are made, one copy

to be furnished to the commanding officer and one copy to be posted in the salesroom.

1252. The quartermaster will be accountable for and will carry on his property accounts all cooking apparatus supplied by the Quartermaster Corps, and will furnish to commanding officers of organizations and detachments the necessary authorized articles of the same on approved requisitions, the issues to be made on memorandum receipts. Bake ovens will be dropped from his property accounts when permanently installed at posts.

BLANK FORMS.

1253. Blank forms will be furnished to quartermasters on periodical requisitions sent directly to the Quartermaster General. Officers at posts will obtain them from the post quartermasters. (*C. A. R., No. 10.*)

PAYMENTS, GENERAL PROVISIONS.

1254. The senior quartermaster of a command, under the direction of its commander, will be responsible for the payment of the troops of the command.

1255. In payments to officers and enlisted men, the days of commencement and expiration of service will be included. When service begins on the 31st day of a month, pay will not be allowed for that day.

PAYMENTS TO OFFICERS.

1256. Officers on the active list, and retired officers assigned to active duty under laws entitling them to active pay or allowances, will be paid monthly on accounts certified by themselves according to prescribed forms. (*C. A. R., No. 2.*)

1257. An officer of the Army will be paid within the limits of his department and, as far as practicable, by the same quartermaster, unless he is on leave of absence or detached duty beyond the limits of his department, or shall have transferred or disposed of his accounts as provided in paragraphs 1258 and 1259, or has the authority of the Quartermaster General for payment elsewhere. A retired officer, except when assigned to active duty under laws entitling him to active pay or allowances, will be paid by the depot quartermaster, Washington, D. C., unless residing in the Philippine Islands or Hawaii, in which event he may, if he so desires, be paid by the department quartermaster of the Philippine or Hawaiian Department. (*C. A. R., Nos. 2 and 10.*)

1258. An officer may forward his pay account to a quartermaster before maturity, the amount to be remitted to the officer when due, or placed to his credit with a bank if the account is so indorsed, but an officer will not hypothecate or transfer an account not actually due. When due it may be transferred, when the following form of indorsement will be strictly observed:

Transferred this _____ day of _____, 191____, to _____

 and the department quartermaster at _____ has been so notified.
 (Signature) _____,

When an account is so transferred, the officer will notify the department quartermaster of the department in which he is stationed, or the quartermaster who has been authorized by the Quartermaster General to pay his accounts, and will instruct the person or persons to whom the account may be transferred to forward it to such quartermaster for payment. A transferred account will not be paid outside of the department in which the officer is regularly paid except when it is transferred for the benefit of his family residing in another depart-

ment, in which case the officer will send the notification through the office of the department quartermaster of the department in which he is usually paid, to the department quartermaster of the department in which the payee resides; the former to forward with the notification any information he may have affecting the validity of the account. (*C. A. R., No. 10.*)

1259. An officer about to embark for service beyond the sea and desiring to make provision for himself or his family in the United States, may send to the Depot Quartermaster, Washington, D. C., such full monthly accounts as he may elect, indorsing them as follows: "When due pay to ———," or "When due place to the credit of ——— with ———," or "When due place to my credit with ———." The Depot Quartermaster, Washington, D. C., will immediately notify the department quartermaster of the department where the officer is to serve of the months for which accounts have been so received, and will then pay them as they become due if the casualty list and stoppage circular show no bar to payment. If the officer be under orders to proceed to Alaska or the Canal Zone, or for service with an independent brigade or division, the notification will be sent directly to the quartermaster where the officer is to serve. Should an officer already in service beyond the sea desire to have his accounts paid as described, he will forward them, through the department quartermaster of the department where he is serving, to the Depot Quartermaster, Washington, D. C., except when stationed in Alaska or the Canal Zone, or serving with an independent brigade or division, in which event the accounts will be forwarded through the local quartermaster. Department and other quartermasters, through whom accounts are sent to the Depot Quartermaster, Washington, D. C., will make a record of the accounts so forwarded. (*C. A. R., No. 9.*)

1260. A person appointed to the Army, or receiving an appointment to a new office therein, is entitled to pay from date of acceptance only. If the appointment creates vacancies to be filled by promotion, the promoted officers are entitled to pay of the new grade from the date of acceptance of the appointee. In all other cases of promotion the officer is entitled to pay from date of the occurrence of the vacancy.

1261. An officer of the Army appointed to a grade in the volunteers or militia in the service of the United States superior to that held by him in the Army will be entitled to the pay and emoluments of the grade to which appointed from date of acceptance of such appointment or from date of muster in thereunder.

1262. An officer who resigns, is dismissed, honorably discharged, or wholly retired, will forward his pay account (War Department Form 336) to the Depot Quartermaster, Washington, D. C., who will cause a certificate of nonindebtedness to be obtained from the Treasury Department and the chief of each bureau of the War Department and will inquire, through military channels, of the last commanding officer under whom the ex-officer served, whether he is properly chargeable with responsibility or accountability for Government funds or property, or is indebted to the United States or to a company fund or post exchange. The account will not be settled until this information has been received. An officer who has served in the Philippine Islands will procure a certificate of nonindebtedness from the Insular Auditor prior to departure from the islands, this certificate being an indispensable prerequisite to the settlement of an officers' final accounts with the Government. (*C. A. R., Nos. 10 and 51.*)

1263. An officer whose resignation is accepted while he is on leave of absence will receive pay to include the date of acceptance; if accepted while he is on duty, he will receive pay to include the date he receives notice of its acceptance, or if sooner relieved from duty, to include the date of relief. An officer whose resignation takes effect at a future date is entitled to pay to include that date.

1264. An officer placed upon the retired list will receive active pay to include the date of retirement, and the pay of a retired officer thereafter. If on duty, he will receive active pay to include the date of receipt by him of notice of his retirement.

1265. An officer dismissed by sentence of court-martial will be paid to include the date of termination of service as specified in the order promulgating the sentence.

1266. Contract surgeons must present their contracts to quartermasters when applying for payment of salaries, and quartermasters will indorse thereon date and period for which paid. If a contract surgeon on foreign service desires to have his accounts paid in the United States, the months for which such accounts have been transferred will be indorsed on the contract by a quartermaster or the commanding officer, who will also indorse on each voucher "Transfer noted on contract (signature)," and such accounts will not be paid unless so indorsed. (*C. A. R., No. 51.*)

ADDITIONAL PAY.

1267. To entitle an officer to additional pay under the acts of April 23, 1898, and May 23, 1900, for exercising a command above that pertaining to his grade, he must have exercised such command of troops operating against an enemy for a period of three months or more continuously, in obedience to orders issued by superior authority which he was bound to obey, and no pay or allowances as of a higher grade than that actually held by an officer will be paid him under this regulation unless a certified copy, in duplicate, of such order, accompanied by a statement of service thereunder, is filed with the quartermaster.

1268. The 10 per cent allowed by law to officers serving beyond the limits of the United States and territories contiguous thereto, except the Canal Zone, Panama, or Hawaii, or Porto Rico, will be paid on their regular monthly pay vouchers, which will be made up to include the entire compensation, of whatever character, which may be due the officer for the calendar month, or months, included in the accounts. There will be noted on the pay accounts the numbers and dates of orders or any other facts which affect the officer's pay status for the period covered by the accounts presented for payment.

1269. From time to time there will be announced in special orders of the War Department the names of military aviators, junior military aviators, and aviation officers who are on duty, requiring them to participate regularly and frequently in aerial flights. An officer announced in such orders as aviation officer, junior military aviator, or military aviator, under the terms of the act of Congress approved July 18, 1914, and the national defense act approved June 3, 1916, is entitled to pay and allowances authorized by the act named in his order, under the following conditions:

The order will specify the date on which such duty was commenced, and a subsequent order will specify the date on which such duty was terminated. A copy of the order announcing the date on which such duty was commenced will be filed with the first voucher upon which pay and allowances of the higher grade or additional pay is charged, and the order will be cited on all subsequent vouchers as long as pay and allowances of higher pay is charged. Each officer entitled to pay and allowances of a higher grade or additional pay will certify on each voucher, during the time pay and allowances of a higher grade or additional pay is charged, that he has been throughout the period covered by the voucher on duty for which pay and allowances of a higher grade or additional pay is authorized under the act of July 18, 1914, or under the act of June 3, 1916 (citing the proper act). A copy of the order announcing the

date when such duty was terminated will be filed with the voucher for the period including such date.

It is the duty of the commander of an aviation station or aeronautical organization in the field to recommend the issue of orders announcing the commencement and termination of periods of higher grades or additional pay of officers of his command, certifying, where the right to additional pay depends on such duty, that the officer's duty from or to the date named required him to participate regularly and frequently in aerial flights.

When the commander of an aviation station or aeronautical organization in the field is entitled to pay and allowances of a higher grade or to additional pay and allowances of his grade under either of the acts named, it is the duty of the officer in charge of the Aviation Section, Signal Corps, to make recommendations and certificates prescribed in the foregoing for such commanders, concerning the officers under their command. No officer will be continued on such duty except as authorized by the act of July 18, 1914, or the act of June 3, 1916. (*C. A. R., No. 51.*)

1270. No officer shall receive pay for two staff appointments for the same time.

1271. In computing longevity pay, service performed as enlisted men of the Army or Navy, or as cadets at the United States Military or Naval Academy, by those appointed prior to August 24, 1912, will be counted. Service performed as such cadets by those appointed on or after said date will not be counted.

MOUNTED PAY.

1272. The officers on the active list hereinafter designated are required to be mounted: All officers of the General Staff Corps; officers of the staff corps and departments, whether permanent or detailed; officers of Cavalry; officers of Field Artillery; authorized aids duly appointed; regimental and battalion staff officers; acting judge advocates detailed under the act of Congress approved February 2, 1901; all officers above the grade of captain, whatever their arm or corps; chaplains of all grades; officers temporarily attached to staff corps or to organizations of Cavalry, Field Artillery, and mounted Infantry; regularly detailed assistants to the Chief of Coast Artillery; the authorized staff officers of Coast Artillery districts and of coast defense commands; officer serving as military attachés to the embassies and legations of the United States at foreign capitals; instructors and student officers at the Army School of the Line, the Army Signal School, the Army Staff College, and the Army War College; officers on duty in the department of tactics and in the department of practical military engineering, military signaling and telegraphy at the United States Military Academy. All field officers of the mobile army serving with troops are required to own and provide their mounts. The private mounts, owned and provided by officers of all grades in the Army, for which the Government expends public funds in the matter of maintenance and care, shall be of a standard fixed by the Secretary of War from time to time. (*C. A. R., No. 6.*)

In addition to the foregoing, officers not ordinarily required to be mounted may be temporarily placed upon duty that shall require them to be mounted. This may be done by the Secretary of War, the commander of an army, field army, or of a division or department; the order in each case will state that the duty therein assigned to the officer requires him to be mounted.

1273. Officers below the grade of major, required to be mounted, whether permanently or temporarily, will be furnished with a proper mount by the Quar-

termaster Corps. Such officers may, however, provide themselves with suitable mounts at their own expense and of their exclusive ownership, and any officer of the grades indicated who so provides himself shall receive an addition to his pay of \$150 per annum if he provides one mount and \$200 per annum if he provides two mounts. An officer claiming additional pay for providing his own mount must personally certify on each account that he was suitably mounted at his own expense, and is the actual and exclusive owner of the mount or mounts in question, specifying the place at which maintained. In case an officer is only temporarily upon duty requiring him to be mounted, the authority by which he was placed upon such duty must accompany his first voucher and be cited upon subsequent vouchers upon which additional pay is claimed accompanied by a certificate that he has continued under the authority cited upon the mounted duty in question.

The officer's certificate upon his pay accounts will be the evidence upon which quartermasters will base their payments of additional pay for mounts, until information is received by them from proper authority that such additional pay is to be stopped.

1274. Officers below the grade of major providing their own mounts do not forfeit the right to additional pay by reason of absence on account of sickness or on ordinary leave, nor will the mere fact that such officers are detached for a purely temporary period from the stations where their mounts are kept deprive them of their right to the additional pay so long as the horses are actually and exclusively owned and kept for their use in the military service at their regular stations. In all other cases the right to the additional pay accrues only where the mounts are actually available for use at the station where the officer is serving.

PAY DURING ABSENCE.

1275. In determining the period for which an officer is entitled to full pay on leave, time within four successive leave years, terminating with the one in which absence is taken, will be considered. If the absence does not cover the entire period for which full pay is allowed, the balance thereof will be placed to the officer's credit as belonging to the last year or years of the four considered and may be made available for future leave.

1276. The leave year is reckoned from July 1 to the following June 30, both inclusive. In computing leave of absence expressed in days during any leave year, every day of such absence will be counted; but in aggregating such absence 30 days, whether consecutive or otherwise, will be regarded as a month's absence. Leave expressed in months will be counted in months.

1277. Leave of absence may be granted by the Superintendent of the United States Military Academy, under regulations prescribed by the Secretary of War, to the professors, assistant professors, instructors, and other officers of the academy for the entire period of the suspension of the ordinary academic studies, without deduction from pay or allowances. Similarly officers in charge of service schools may grant leaves of absence to officers on duty exclusively as instructors at such schools.

1278. An officer ordered to temporary duty while on leave will be regarded as on duty from the day on which he receives the order. When the duty is to be performed at a future date he will be on duty from the date on which he starts to obey the order. The date of the receipt of the order in the first case, and the date of departure in the second, will be promptly reported to The Adjutant General of the Army. When relieved from such duty, or on the completion thereof, he reverts to the status of leave and will be credited with the time on duty under such order.

MILEAGE.

1279. When an officer travels under competent orders he will be entitled to reimbursement as follows:

1. When traveling without troops by land, except within the geographical limits of the Territory of Alaska, or in the Philippine Archipelago, in the Hawaiian Archipelago, in the home waters of the United States, or between the United States and Alaska, by mileage at the rate of 7 cents a mile, and no more; distances to be computed and mileage to be paid over the shortest usually traveled routes, with deductions as hereinafter provided.

2. When traveling without troops within the geographical limits of the Territory of Alaska, in the amount of actual expenses only, not to exceed \$4.50 a day and cost of transportation when not furnished by the Quartermaster Corps, to be paid upon proper vouchers duly itemized and supported by receipts where it is practicable at the time to obtain the same.

3. When traveling with or without troops, by sea, in the amount of actual expenses.

4. Officers who so desire may upon application to the Quartermaster Corps be furnished under their orders transportation requests for the entire journey by land, exclusive of sleeping and parlor car accommodations, or by water; and the transportation so furnished shall, if travel was performed under a mileage status, be charged against the officer's mileage account, to be deducted at the rate of 3 cents a mile by the quartermaster paying the account, and of the amount so deducted there shall be turned over to an authorized officer of the Quartermaster Corps 3 cents a mile for transportation furnished, except over any railroad which is a free or 50 per cent land-grant railroad, for the credit of the appropriation for the transportation of the Army and its supplies.

5. When the established route of travel shall, in whole or in part, be over the line of any railroad on which the troops and supplies of the United States are entitled to be transported free of charge, or over any 50 per cent land-grant railroad, officers traveling as herein provided for shall, for the travel over such roads, be furnished with transportation requests exclusive of sleeping or parlor car accommodations by the Quartermaster Corps. When transportation is furnished by the Quartermaster Corps, or when the established route of travel is over any of the railroads above specified, there shall be deducted from the officer's mileage account by the quartermaster paying the same 3 cents a mile for the distance for which transportation has been or should have been furnished. Travel in the Philippine Archipelago, the Hawaiian Archipelago, and the home waters of the United States is confined to travel in which both termini of the journey are in one of the above places.

1280. Actual expenses only will be paid to officers for sea travel when traveling under competent orders, with or without troops, and the amount so paid shall not include any shore expenses at port of embarkation or debarkation. Travel in the Philippine Archipelago, the Hawaiian Archipelago, in the home waters of the United States, and between the United States and Alaska is not regarded as sea travel.

An itemized statement of such expenses will be filed with each voucher for payment, using the following as a basis of what is allowable:

1. Fares upon commercial steamers or other usual modes of conveyance by sea, and the cost of transportation for self and baggage, by boat or lighter, to and from vessels when voyages are not begun or ended at docks and a charge in addition to the cost of passage is made therefor.

2. Cost of customary stateroom accommodations on commercial steamers when the same is not included in the charge for passage.

3. Hire of special water transportation when there are no regular means of conveyance.

4. Actual cost of meals for the time actually and unavoidably consumed in the voyage when the same is not included in the charge for passage, provided that under such conditions the total charge for meals, including fees to dining-room stewards, does not exceed \$5 per day. Amount of rent of steamer chair, not exceeding \$1 for trips of two days or longer on each commercial steamer, and fees to cabin and other stewards not exceeding the following: Six days or less on the Atlantic Ocean, \$1.50 a day; 7 to 10 days, not exceeding \$10; 11 to 15 days or longer, \$1 a day; total, not exceeding \$15. On the Pacific Ocean, 15 days or less, \$1 a day; total fees for 15 days or longer, not exceeding \$15. To the West Indies, Cuba, Porto Rico, Panama, and to South American ports, \$1 a day; total fees for 15 days or longer, not exceeding \$15. From the Orient to the United States, via Suez, not exceeding \$25.

5. When transshipping at an intermediate port, as a necessary incident to a continuous voyage, the actual cost at hotels of meals, lodgings, baths, and fees not exceeding 50 cents per day to waiters and bellboys, provided the total charge for these items does not exceed \$5 per day; transfer of self and baggage from dock to hotel and from hotel to dock, and fees to porters for handling baggage, not exceeding \$2 for each transfer. The officer will certify on the itemized statement that the account is correct and just, and that the amounts charged therein were actually paid by him. Subvouchers, properly receipted, will be required for items of board and lodging at hotels. When not practicable to obtain such subvouchers, the officer will so certify. Charges for baths, where baths are not included in the charge for lodging, will in every instance be supported by subvouchers. The payment of fees to cabin or other stewards or the rent of steamer chairs when traveling on Government transports is not authorized. Accounts for reimbursement for items not authorized herein will be forwarded to the Quartermaster General of the Army, to be submitted to the Secretary of War for his consideration and approval before payment, but in no case can the total of such expenses as are reasonably included under the heads board and lodging be lawfully reimbursed in excess of \$5 per day. (*C. A. R., No. 12.*)

1281. "Traveling with troops" will be regarded as covering all cases of officers included (a) in orders for movement, in whatever manner, of their appropriate commands; (b) in orders for movement of detachments, escorts, or stores, which proceed by marches or by transportation belonging to or especially hired for the purpose by the United States, the idea being that in marches the officers should move as do the troops and that where transportation is specially devoted to the movement it is sufficient for all included therein; or (c) in orders directing officers to accompany troops. But the term will not be regarded as covering cases of officers included in the movement by railroad, stage, or like established lines of conveyances, of detachments of less than 10 armed or unarmed men, such as guards and nurses for disabled or insane officers or soldiers, or recruiting parties and escorts for inspectors, quartermasters, and others, or the public funds or property in their charge. (*C. A. R., No. 53.*)

1282. In the settlement of the mileage account of an officer, distances will be determined and deductions computed over established routes and from mileage tables prepared under the direction of the Secretary of War by the Quartermaster General; and all payments made by quartermasters on account of mileage will be determined in accordance with distance tables officially promulgated and in use at the date of beginning of the journey. Exception to this rule will be made only when the terms of the order or the impracticability of the shortest usually traveled route compel the officer to take a longer route, in which

case mileage will be computed over the route actually traveled. (*C. A. R., No. 10.*)

1288. Mileage will be paid in the department in which the journey is completed, but this will not apply to journeys in which delays at intermediate points occur and afford opportunity for the collection of mileage for travel performed to such points.

1289. No portion of the appropriation for mileage to officers shall be expended for inspections or investigations except such as are especially ordered by the Secretary of War, or such as are made by Army and department commanders in visiting their commands, and those made by the Inspector General's Department in pursuance of law, Army Regulations, or orders issued by the Secretary of War; but the commanding generals of the Philippine and Hawaiian Departments may issue orders in the name of the Secretary of War, involving travel to investigate claims for property, damages, buildings, and other property and important investigations in the Philippine Islands and Hawaii Territory.

1290. To entitle an officer to mileage, the order for travel must be issued previously to commencement of the journey, except when the urgency of the duty prevents the obtaining of previous orders, in which case the travel must be confirmed in orders. Both directory and confirmatory orders will state the specific duty enjoined, recite that the travel is necessary in the military service, and direct the officer to return to his station upon completion of the duty assigned, if such return is contemplated. Confirmatory orders should recite the authority, oral or otherwise, under which the travel was performed, or state that the urgency was such as to prevent the obtaining of orders in advance.

1291. Coast defense commanders have no authority to issue orders to officers carrying mileage to and from posts within the coast defenses under their command.

1292. Orders will not prescribe lines of travel, except when necessary, and then the reasons will be set forth in the order.

1293. The original order, or certified copy, including indorsements, will accompany each voucher for mileage, and when transportation in kind has been furnished for the whole or for any part of the distance actually traveled, the order must be indorsed by the quartermaster issuing the transportation, showing between what points and over what route such transportation was furnished.

1294. When an officer on leave of absence is ordered to rejoin his station, he will not be entitled to mileage unless the public service requires the performance of duty en route, in which case the order will specify the duty, the necessity therefor, and the points at which the duty will begin and end.

1295. When an officer is ordered, while on leave of absence, to accompany a detachment of recruits and on the completion of this duty to join his station, he returns to a status of leave as soon as relieved from duty with the recruits, and will proceed to join his station without expense to the Government, unless the distance he may have to travel without troops should be in excess of what it would have been had he not received the order. For such excess distance he is entitled to mileage.

1296. An officer on leave of absence, ordered to temporary duty, involving travel without troops, will receive mileage from place of receipt of order to place of performance of duty, and also for the return journey to place of receipt of order, provided he makes such return journey under proper orders.

1297. When the station of an officer is changed while he is on leave of absence, he will on joining the new station be entitled to mileage for the distance to the new station from the place where he received the order directing the change, provided the distance be no greater than from the old to the new

station; if the distance be greater, he will be entitled to mileage for a distance equal to that from the old to the new station only.

1293. An officer under orders to change station without troops who takes advantage of a leave of absence before he joins his new station is not deprived of the mileage to which he would be entitled had he not availed himself of the leave. The leave of absence merely suspends the execution of the order for change of station, and at the expiration of the leave the officer comes under operation of the order, and in obeying it is entitled to full pay for the time necessary to perform the journey from his old to his new station.

1294. An officer relieved from duty at a station and granted leave of absence before assignment to another, who receives an order of assignment before expiration of leave, is entitled to mileage from the place where he receives the order to his new station.

1295. An officer traveling on duty in connection with public works (not arsenals, military surveys, or explorations) will receive travel allowances from the appropriation for the work, but if there be no appropriation he will receive mileage from the Quartermaster Corps. An officer traveling on duty in connection with the National Guard will receive his travel allowances from the appropriation for the National Guard. (*C. A. R., No. 51.*)

1296. The following are entitled to mileage to their first stations: Officers of the Medical Corps, officers of the Medical Reserve Corps, contract surgeons, and acting dental surgeons, from place of appointment; graduates of the United States Military Academy, from their homes; officers appointed from the ranks, from place of discharge as enlisted men.

1297. In the following cases mileage is not allowed: In joining for duty upon first appointment to the military service from civil life; or under the first order after a reinstatement or reappointment; or under an order to effect a transfer from one company or regiment to another, made at the request of the officers transferred; or insane officers sent under escort to the Government Hospital for the Insane; or sick officers transferred from one hospital to another.

1298. Allowances for travel of officers or enlisted men summoned to appear and testify before committees of Congress, or before the courts of a State or Territory, are not proper charges against the appropriations for the support of the Army. Military persons so summoned must seek reimbursement for their expenses of travel from the committee or court which summoned them.

COMMUTATIONS OF QUARTERS.

1299. A commissioned officer on duty at a place where there are no public quarters available is entitled to commutation of quarters. (*C. A. R., Nos. 28 and 51.*)

1300. Public quarters at a post or station will be considered as not being available only when all of the quarters at the post or station are assigned to officers, noncommissioned officers, or others authorized to occupy the same. (*C. A. R., No. 28.*)

1301. An officer on duty at a station where he is properly in receipt of commutation of quarters is entitled to the allowance during ordinary leave on full pay, but not during sick leave. If he is relieved from duty at the station and then avails himself of a leave, his commutation ceases.

1302. An officer does not lose his right to quarters or commutation at his permanent station by a temporary absence on duty. While he continues to

claim and exercise that right, he can not legally demand quarters or commutation thereof at any other station. (*C. A. R., No. 4.*)

1303. When the command to which an officer belongs changes stations during his temporary absence on duty, he loses his right to quarters from the time his command leaves its old station and does not acquire a right at the new station until he has reported for duty thereat. He is entitled in the meantime to quarters or commutation therefor at the station where he is temporarily serving.

1304. An officer upon being relieved from duty at one station where he was entitled to commutation of quarters, and assigned to another station, is not entitled to such allowance from the date of departure from the old station, in accordance with his relief orders, to the date on which he reports in person at the new station.

1305. Officers who, for the convenience of the Government, are directed to await orders for a limited period at a point where there are no public quarters are entitled to commutation; but an officer ordered to his home to await orders is not entitled to this allowance. An officer ordered to report by letter to a superior does not become entitled to commutation of quarters until he receives a specific order of assignment and reports in person at the station to which assigned.

1306. Officers on duty at colleges where no public quarters are furnished by the United States are entitled to commutation, subject, in respect to retired officers, to such limitations and restrictions as are prescribed by law.

1307. The first voucher for commutation of quarters, heat, and light at any station must be accompanied by a copy of the order assigning the officer to duty thereat. In subsequent vouchers the quartermaster will refer by number, etc., to the voucher with which the order is filed, and the final voucher must be accompanied by the authority for, and must show the date of relief from, such duty.

1307½. An enlisted man on duty at a place where there are no public quarters available may, when specifically authorized by the Secretary of War, be paid commutation of quarters at the rate of \$15 per month, in lieu of hiring quarters for him at Government expense. (*C. A. R., No. 28.*)

STOPPAGES.

1308. When an officer has been overpaid, or is indebted to the United States for money or property, or has failed properly to account for the same, the chief of the bureau concerned will promptly notify him of the amount of his indebtedness or his failure to account. If after such notice he does not refund, or make satisfactory explanation, or take proper action within a reasonable time, the matter will be reported to the Secretary of War.

1309. On the order of the Secretary of War, stoppages may be made against the pay of officers for overpayments, illegal disbursement, or loss through fraud or neglect of the public funds, and for deficiencies in, loss of, or damage to military supplies, unless proof be furnished that the deficiency, loss, or damage was not occasioned by any fault on their part.

1310. The notice of stoppage of officers' pay will be prepared in the form of a monthly circular to quartermasters, advising them of stoppages outstanding at its date. This circular will be submitted to the Secretary of War for his approval prior to its publication. When an officer's name is borne thereon no payment of salary will be made to him which is not in accordance with the stoppage entry made against his name.

1311. Overpayments to an officer will be deducted on the first payment after a notice of stoppage against him is received, even if the pay accounts have been assigned; the assignee takes the account subject to all risks of stoppage.

PAYMENT OF CADETS.

1312. Payment on pay rolls and final accounts will be made to the cadets at the United States Military Academy by a quartermaster, who will turn over the net amount of the rolls and accounts to the treasurer of the academy.

1313. Cadets upon being discharged from the service are not entitled to mileage, but to actual expenses to their homes, paid by the quartermaster of the United States Military Academy.

1314. Graduates of the United States Military Academy are entitled to full pay from the date of graduation to the date of their acceptance of and qualification under their commissions, and during their graduation leave.

Should a graduated cadet be discharged after graduation but before being commissioned, he will be entitled to the pay of a cadet after graduation until date of discharge.

PAYMENT OF ENLISTED MEN.

1315. Troops will be paid every month unless circumstances prevent, in which case the quartermaster charged with the payment will immediately report the facts, through his department quartermaster, to the Quartermaster General. (*C. A. R., No. 10.*)

1316. Payments will be made as soon after the close of each month as practicable.

The troops at posts where quartermasters are stationed and others in their immediate vicinity, to be designated in instructions issued from the War Department, will be paid by quartermasters in person.

For posts at which payments are not required to be made in person, the quartermaster will transmit by registered mail or express the pay due in one or more of the following ways:

1. By individual check, payable to the order of each man, for the exact amount due.

2. By inclosing in a separate sealed envelope the exact amount in currency due each soldier, with his name and the amount inclosed marked thereon.

Troops in the field will be paid by quartermasters in person, unless instructions to the contrary are given by proper authority.

1317. So far as relates to disbursements in the Philippine Islands and other places, including Alaska, beyond the boundary of the States composing the Union, and for the convenience of the quartermaster in obtaining ready money, as well as for the accommodation of both officers and men at such distant places, a check may be drawn for a portion of the pay due the soldier (or officer), in which case it will be drawn in favor of the soldier (or officer), and the object or purpose will be stated as "part pay for month of ———;" if for any sum which the soldier (or officer) may desire in exchange for money after he has been paid, the check will be drawn by the quartermaster in favor of himself and indorsed by him payable to the order of the soldier (or officer), and the object or purpose will be stated as "to obtain cash to make payments at a distance from a depository." In this case the data on the check stub will be the same as on the check to which it relates, including the name of the soldier (or officer) to whom the check is indorsed by the quartermaster.

1818. Calculations on the pay rolls are made by the quartermaster and copied on the retained roll by the company or detachment commander, who will certify that he witnessed the payment, and will enter thereon the name of the quartermaster and date of payment.

1819. All enlisted men present will receipt one of the triplicate rolls for the amount due to them, except when it is known that payment will be made by check, in which case signatures will not be required. Witnessing officers will see that the soldiers' signatures correspond with their names as borne on the roll, and when a soldier can not write he will receipt by his mark, which will be witnessed by a commissioned officer, or, in the absence of a commissioned officer, by a contract surgeon. Duplicate copies of the rolls will then be forwarded by the commanding officer to the quartermaster designated to pay the command.

1820. If the payment is not to be made by the quartermaster in person, the commanding officer, when forwarding the rolls, will furnish the quartermaster with the name, rank, etc., of the officer designated to see that the men of the command are paid, and at the same time will state what part of the pay can conveniently be received by the men in individual checks and cashed at or near the post without discount, and whether it is desired that the checks be sent by mail or by express. The remainder of the pay will be sent in envelopes.

1821. The checks, when not sent by mail, and the money for each organization will be inclosed in separate packages properly marked, and the whole will be consolidated into one package and forwarded by express to the post commander. One of each of the company or detachment rolls, extended to show the amounts to be paid, will be returned to the commanding officer and by him sent to the proper company commanders.

1822. The quartermaster, in the presence of at least one witness, will personally place in each envelope the exact amount of money due the soldier, seal the same, see that the name of the soldier and amount inclosed are marked on the envelope, and that the individual checks and the sealed envelopes are inclosed in one sealed package, upon the outside of which will be indorsed—

1. Name of the organization.
2. Number of checks inclosed.
3. Number of sealed envelopes inclosed.
4. Total amount of pay due and remitted, less deposits, \$ _____.
 - a. By check _____ \$ _____.
 - b. By currency _____ \$ _____.
5. Signature of the quartermaster.

All the packages containing checks and sealed envelopes for the several organizations, completed and indorsed as above, will be made up into one parcel and sealed by the quartermaster. Upon the outside will be marked the name and address of the post or other command and the names of the subordinate organizations for which pay is therein remitted, and the quartermaster will append thereto his signature.

1823. The consolidated package thus marked and addressed to the commanding officer will be forwarded by express to its destination.

The following are specimen indorsements:

FOR THE COMMANDING OFFICER, FORT
LEAVENWORTH, KANS.

Contents of this package.

The pay, less deposits, due for month of
September, 1896, for—

N. C. O. and band, 20th Infantry.

| | | |
|--------|---|---|
| Co. A, | " | " |
| " B, | " | " |
| " C, | " | " |
| " D, | " | " |
| " E, | " | " |
| " F, | " | " |
| " G, | " | " |
| " H, | " | " |

Troop A, 6th Cavalry.

| | | |
|------|---|---|
| " B, | " | " |
| " C, | " | " |
| " D, | " | " |

Hospital Corps Detachment.

Post N. C. Staff.

In making up the contents of this package the provisions of paragraph 1322 of the Army Regulations have been complied with.

JOHN SMITH,

Major, Quartermaster Corps.

Pay for Troop F, 8th Cavalry, September,
1896.

Contents.

| | |
|--------------------------|------------|
| 43 sealed envelopes----- | \$1,000.00 |
| 17 checks ----- | 563.18 |
| 60 remittances----- | 1,563.18 |

JOHN SMITH,

Major, Quartermaster Corps.

Private Joseph Thompson, Co. A, 20th
Infantry.

Contents.

\$14.75 in currency.

1824. At places beyond express delivery the post commander, when notified by the quartermaster that funds sent by express are to be expected, will send an officer with a suitable escort to receipt for the express package and convey the funds to the post. The name of the officer authorized to receipt for the package will previously have been reported to the quartermaster.

1825. When the express package is received at the post it will be opened in the presence of witnesses by the commanding officer, who will observe the condition of the seals, verify the number of company and detachment packages, and see that the marking upon them conforms to these instructions. The separate sealed packages containing the pay for the several companies and detachments will then be delivered to the officer designated to pay the command, for distribution, which will be made as soon as practicable thereafter; but in no case will such distribution be deferred more than 24 hours. The commanding officer will be responsible for the safe-keeping of the packages of funds from the time of their receipt at the post until they have been thus turned over for distribution.

1826. When a company or detachment is paraded for pay, the officer designated to pay the command will open the package containing the pay for that

company or detachment in the presence of at least one witness, who shall be a commissioned officer; or, in the absence of a commissioned officer, the verification and delivery may be witnessed by a contract surgeon. The number of checks in the package and the number of sealed envelopes purporting to contain the pay of individual soldiers will be counted, and the agreement of this number with the record made by the quartermaster upon the wrapper will be verified by both officers, and the amount marked on the sealed envelope as the pay due each man will be verified by comparison with the pay roll before the distribution begins. As each man's name is called the check drawn to his order will be given to him, or the envelope bearing the man's name will be opened, its contents verified by comparison with the marks on the envelope or with the pay roll, and the money handed to the soldier by said officer, all in presence and under the personal observation of the officer designated to witness the payment.

1827. Should there be a deficiency it will be so certified on the roll by the paying and verifying officers, and the envelope will be resealed without taking anything from it, and returned to the quartermaster unless the amount should be offset by finding a surplus in another envelope. Should there be an excess the surplus will be returned to the quartermaster. In each case a statement of the facts, with appropriate certificates, will be sent to the quartermaster by the commanding officer.

1828. In case of error or informality a statement of the facts as found to exist will be immediately indorsed upon the envelope or wrapper, as the case may be, and the officers present will certify to the correctness of the statement and lay the same before the commanding officer.

1829. The copy of the pay roll of each organization, which the quartermaster is required by paragraph 1821 to return to the post, will be reforwarded to the quartermaster by the commanding officer without delay after the payment is completed.

1830. Should any error or informality be discovered in a check it will be returned to the quartermaster, who will correct the same and return it with the least practicable delay. The roll will be returned to the quartermaster after payment of the company with a note thereon, verified by the witnessing officer, stating the facts as to the erroneous check. The receipt of the corrected check will be certified by the company commander to the quartermaster, who will file such certificate with the pay rolls.

1831. Should the bank or person who cashes the individual check so desire, the company commander will certify to the correctness of the indorsements made by his men upon their respective checks.

1832. An officer commanding a company or detachment at the time of payment will sign the prescribed certificate as to witnessing the payment, printed on the pay roll, and, when requested to do so by the quartermaster, will certify that the quartermaster's retained roll is a true copy of the roll upon which payment was made.

1833. Should a soldier die or desert in the interval between the signing of the pay roll and the receipt of the money at the post from the quartermaster, the check or cash will be returned immediately to the quartermaster by the company or detachment commander, the cash by express, through the Quartermaster Corps, the check by registered mail; and a note of explanation stating the fact of nonpayment and return of the check or money will be made on the roll, and verified by the signature of the witnessing officer. The same course will be pursued should a soldier decline to receive his pay, or if for any reason it should be impracticable to deliver it to him in person. When a quartermaster

has had money returned to him in such cases he will not cancel the signature of the soldier on the roll, but will mark "Not paid" opposite the signature.

Should it appear from the pay rolls submitted to the quartermaster that the term of any soldier thereon will expire and he be discharged before the pay rolls and money can be received back at the post, the quartermaster will ignore the man's account and mark "Not paid" in the "Total paid" column, and the company commander in preparing such soldier's final statement will note thereon the date of the last actual payment and not the date of expiration of the muster period for which he has signed the roll.

1334. When companies or detachments of troops are absent from their stations for an indefinite period, and funds for their payment can not be sent by express, the rolls will be held and not sent to the quartermaster until the troops reach some point to which it is practicable to send funds. When a command can be mustered and the rolls completed and duly signed by the men, they can be sent to the quartermaster to be made out and held by him until notified where and when the command can be paid. In cases where the rolls have been sent to the quartermaster and the troops are sent away from their station before the receipt of funds for their payment, post commanders will not hold the money at their discretion, but will return the rolls and the money to the quartermaster unless payment can be made within a reasonable time, not exceeding three days.

1335. Deposits may be made in the usual manner, the amount to be deposited being reported to the quartermaster by letter forwarded with the rolls, the soldier's deposit book being also forwarded therewith. When it is known that the payment will be made by check and the rolls are forwarded without signatures, an order directing deposit of the desired amount of pay, signed by the soldier and witnessed by the company or detachment commander, will accompany the rolls. Should a man desire to deposit a sum greater than his pay his company commander will see that a proper check, postal order, or express order accompanies his deposit book; if neither check nor order can be obtained the company commander will send the money by registered mail at public expense, verifying the amount and reporting it in a separate communication to the quartermaster. Deposit books will be returned to the company commander properly filled in for attestation.

1336. When a quartermaster has made an incorrect payment to an enlisted man, he will report the fact to the commander of the company in which the man is mustered, who will note the same on the next pay roll, that it may be corrected.

1337. Payments to enlisted men will be made on pay rolls except in those cases where entitled to commutation of quarters or commutation of heat and light when payment will be made on service records. This method of payment may also be used in the cases of enlisted men on detached duty away from their commands at places where there is no commissioned officer available to make the muster for pay, irrespective of whether they are entitled to commutation of quarters, or of heat and light. War Department Form No. 369 will be used in making payment to those enlisted men who are authorized to be paid on their service records. Payments to discharged soldiers will be made by quartermasters under the provisions of paragraphs 1375-1383. (*C. A. R., Nos. 28 and 55.*)

REENLISTED AND CONTINUOUS-SERVICE PAY.

1338. Any enlisted man honorably discharged at the termination of his first or any succeeding enlistment period who reenlists after the expiration of three months shall be regarded as in his second enlistment; and an enlistment shall

not be regarded as complete until the soldier shall have made good any time lost during an enlistment period by desertion or, in the case of enlistments made on or since May 11, 1908, by unauthorized absences exceeding one day, but any soldier who receives an honorable discharge for the convenience of the Government after having served more than half of his enlistment shall be considered as having served an enlistment period within the meaning of the act of May 11, 1908. Any enlisted man of the Army in active service on May 11, 1908, who had a prior service entitling him to reenlisted pay is entitled to credit for one enlistment period on account of such service regardless of whether on that date he was on a status of "entitled to reenlisted pay" or on a status of a certain year of continuous service.

1339. Any enlisted man honorably discharged at the termination of an enlistment period who reenlists within three months thereafter shall be entitled to continuous-service pay in addition to the initial pay provided by the act of May 11, 1908, as follows: Where the initial pay is \$36 or more a month, an increase of \$4 monthly pay for and during the second enlistment, and a further monthly increase of \$4 for and during each subsequent enlistment up to and including the seventh enlistment. Where the initial pay is \$18, \$21, \$24, or \$30, an increase of \$3 monthly pay for and during the second enlistment, and a further monthly increase of \$3 for and during each subsequent enlistment up to and including the seventh. Where the initial pay is \$15 and \$16, an increase of \$3 monthly pay for and during the second and third enlistments each, and a further monthly increase of \$1 for and during each subsequent enlistment up to and including the seventh. After the seventh enlistment the pay shall remain as in the seventh enlistment.

1340. Any private, first class, of engineers, ordnance, Quartermaster Corps, Signal Corps, and Medical Department, trumpeters, musicians of Infantry, Artillery, and engineers, or private of the Quartermaster Corps, Medical Department, Cavalry, Artillery, Infantry, and Signal Corps, or private, second class, engineers and ordnance, honorably discharged at the termination of his first enlistment period who reenlists within three months of the date of such discharge, shall, upon reenlistment, receive an amount equal to three months' pay at the rate he was receiving at the time of his discharge. (*C. A. R., No. 55.*)

CERTIFICATE OF MERIT.

1341. A certificate of merit granted to an enlisted man for distinguished service entitles him, from the date of such service, to additional pay at the rate of \$2 a month during military service, whether as an enlisted man or as an officer, although such service may not be continuous, and is payable in full to a retired enlisted man.

ADDITIONAL PAY TO ENLISTED MEN.

1342. The 20 per cent allowed by law to enlisted men serving beyond the limits of the United States and Territories contiguous thereto, except the Canal Zone, Panama, or Hawaii or Porto Rico, is payable from date of departure from the United States until date of return thereto; but enlisted men entitled to this increase are not entitled to receive extra-duty pay.

1343. An enlisted man of the Aviation Section of the Signal Corps announced in special orders with the rating of aviation mechanician, or as on duty requiring him to participate regularly and frequently in aerial flights, under the terms of the act of Congress approved July 18, 1914, is entitled to the

additional pay authorized by such act. For troops, serving in the Hawaiian and Philippine Departments, such special orders will be issued by department commanders; for those serving in the Panama Canal Zone, by the commanding general of the troops there; for all others, by the War Department. The following conditions will govern:

The order will specify the date on which the rating became effective or the duty to participate regularly and frequently in aerial flights commenced, and a subsequent order the date on which such rating or duty terminated.

The following notations will be made on the first pay rolls on which the names of such men appear: "Due soldier 50 per cent increase from ———, 191—; rated as aviation mechanic ———, 191—, per paragraph —, S. O. No. —, W. D., 191—"; or, "Due soldier 50 per cent increase from ———, 191—; on duty requiring him to participate regularly and frequently in aerial flights per paragraph —, S. O. No. —, W. D., 191—."

The following notations will be made on subsequent pay rolls as long as such rating and additional pay are authorized: "Due soldier 50 per cent increase, aviation mechanic"; or "Due soldier 50 per cent increase, aerial flyer."

When an enlisted man ceases to be entitled to rating or additional pay, notation of the date when such rating or additional pay terminated and of the number, source, and date of the order announcing such termination will be made on the proper pay roll.

When an enlisted man reenlists on the day following the day of his discharge his rating or additional pay will be continued in force as long as his duty warrants such rating, or additional pay under the terms of the act of July 18, 1914.

It is the duty of the commander of an aviation station or aeronautical organization in the field to recommend the issue of orders announcing the commencement and termination of rating or additional pay of enlisted men of his command. No enlisted man will be continued on such duty except as authorized by the act of July 18, 1914. (*C. A. R., No. 51.*)

1348. An enlisted man who qualifies hereafter as gunner in the Coast Artillery Corps is entitled to \$3 a month if he be a first-class gunner, and \$2 a month if he be a second-class gunner, in addition to his pay, from the date of qualification until the next opportunity to requalify, or for one year if no opportunity for requalification is presented within that year, provided that during that time he does not attain a higher qualification and that he continues to be a member of the Coast Artillery Corps, or reenlists in that branch of the service within three months from date of discharge therefrom.

The fact of qualification will be published in coast defense command orders, which will give the date of actual qualification from which the soldier is entitled to the additional pay. The fact of the qualification of Coast Artillery enlisted men not assigned to coast defense commands will be published in department orders.

Notation will be made on the pay rolls as follows: The first roll on which the soldier is mustered for and paid the additional pay will give the date of actual qualification, and the number, date, and source of the order in which such qualification is announced. Subsequent rolls will set forth the date of original qualification, thus: "First-class gunner, May 15, 1915." In case of failure to requalify during the next regular annual gunners' examination, or within one year, the last roll on which an enlisted man is entitled to additional pay should show the date on which qualification ceases.

In case the soldier is discharged before his qualification has been published in orders, notation will be made on the final statement of the fact and date of qualification and that orders announcing such qualification have not been received. Such notation will authorize the payment of the amount due the

soldier as additional pay; and if such additional pay is due for a period prior to the date to which last paid that fact must be shown.

Except in case of urgent necessity, a furlough will not be granted to a soldier when his absence would prevent him from being examined at the regular gunners' examination.

An enlisted man of the Coast Artillery qualified and rated as a plotter, an observer, first class, a casemate electrician, or a coxswain is entitled to \$9 a month, and as a gun pointer, gun commander, observer, second class, chief planter or chief loader, to \$7 a month, in addition to his pay.

The first pay roll on which a soldier is mustered for additional pay by reason of having been appointed to a rated position will set forth the date of such appointment, and the number, date, and source of the order announcing the same. Subsequent rolls will simply show the rated position held, as "planter," "chief loader," and when disrated the date thereof will be given. If disrated before his appointment expires by limitation, he reverts to a status of being entitled to pay as first-class gunner, and remarks should be entered on the pay roll as herein provided for first-class gunners.

No enlisted man shall receive at the same time additional pay for more than one of the classifications named in this paragraph and in paragraphs 1344 and 1345. (*C. A. R., Nos. 1, 43, and 54.*)

1344. An enlisted man who qualifies hereafter as gunner in the Field Artillery is entitled to \$3 a month if he be a first-class gunner, and \$2 a month if he be a second-class gunner, in addition to his pay, from the date of qualification until the next opportunity to requalify, or for one year if no opportunity for requalification is presented within that year, provided that during that time he does not attain a higher qualification and that he continues to be a member of the Field Artillery or reenlists in that branch of the service within three months from date of discharge therefrom.

The fact of qualification will be published in orders issued by commanders empowered by regulations to issue orders for the appointment and promotion of noncommissioned officers. Such orders will give the date of actual qualification from which the soldier is entitled to the additional pay.

Notation will be made on the pay rolls as follows: The first roll on which the soldier is mustered for and paid the additional pay will give the date of actual qualification and the number, date, and source of the order in which such qualification is announced. Subsequent rolls will set forth the date of original qualification, thus: "First-class gunner, May 15, 1915." In case of failure to requalify during the next regular annual gunners' examination, or within one year, the last roll on which an enlisted man is entitled to additional pay should show the date on which qualification ceases.

In case the soldier is discharged before his qualification has been published in orders, notation will be made on the final statement of the fact and date of qualification, and that orders announcing such qualification have not been received. Such notation will authorize the payment of the amount due the soldier as additional pay; and if such additional pay is due for a period prior to the date to which last paid that fact must be shown.

Except in case of urgent necessity, a furlough will not be granted to a soldier when his absence would prevent him from being examined at the regular gunners' examination. (*C. A. R., Nos. 43 and 53.*)

1345. An enlisted man who qualifies hereafter as an expert rifleman is entitled to \$5 a month, as a sharpshooter to \$3 a month, and as a marksman to \$2 a month, in addition to his pay, from the date of qualification until the next opportunity to requalify, or for one year if no opportunity for requalification is presented within that year, provided that during that time

he does not attain a higher qualification and that he continues to be a member of an organization armed with the rifle, in which qualification is authorized, or reenlists in such organization within three months from date of discharge therefrom. This provision applies also to a soldier who reenlists within three months after receiving an honorable discharge from the Marine Corps while holding a qualification as expert rifleman, sharpshooter, or marksman therein.

All enlisted men of a regiment of Infantry, Cavalry, or Engineers and of a mounted battalion of Engineers, who are required or authorized to fire the known-distance practice under the provisions of paragraph 89, Small Arms Firing Manual, 1913, are members of an organization armed with the rifle within the meaning of this paragraph.

The fact of qualification will be published in orders issued by commanders empowered by regulations to issue orders for the appointment and promotion of noncommissioned officers, or in exceptional cases by higher commanders, upon receipt of properly authenticated evidence as to qualification; such orders will give the date of actual qualification from which the soldier is entitled to the additional pay.

Notation will be made on the pay rolls as follows: The first roll on which the soldier is mustered for and paid the additional pay will give the date of actual qualification and the number, date, and source of the order in which such qualification is announced. Subsequent rolls will set forth the date of original qualification, thus: "Expert rifleman, May 15, 1915." In case of failure to requalify during the next regular season or within one year, the last roll on which an enlisted man is entitled to additional pay should show the date on which qualification ceases.

Qualification can not be made in the Coast Artillery Corps nor in bands of any arm.

In case the soldier is discharged before his qualification has been published in orders, notation will be made on the final statement of the fact and date of qualification and that orders announcing such qualification have not been received. Such notation will authorize the payment of the amount due the soldier as additional pay; and if such additional pay is due for a period prior to the date to which last paid, that fact must be shown.

Except in case of urgent necessity, a furlough will not be granted to a soldier during the regular season of target practice. (*C. A. R., Nos. 20, 43, and 47.*)

1345j. Enlisted men, Philippine Scouts, qualifying as expert riflemen, are entitled to \$1.50 a month, those qualifying as sharpshooters to \$1 a month, and those qualifying as marksmen to \$0.50 a month, in addition to their pay, for the same periods and subject to the same conditions prescribed in paragraph 1345 for additional pay of enlisted members of other organizations armed with the rifle in which qualification is authorized. (*C. A. R., No. 37.*)

1346. In organizations in which the grade of mess sergeant is created by the act of Congress approved June 3, 1916, the men holding the grade of mess sergeant are entitled only to pay established for that grade. The arms of the service for which the act cited makes provision for mess sergeants are not entitled to have additional mess sergeants assigned or detailed thereto.

In the arms of the service for which the grade of mess sergeant is not provided men detailed as mess sergeants are entitled to the pay of the grades actually held and \$6 per month additional pay under the act of Congress approved May 11, 1908. Detail of a mess sergeant is authorized, in addition, for each regularly established separate detachment mess of enlisted men, whether

of the line or staff corps, but no mess sergeant will be detailed for a detachment when the number of men habitually messed is less than 25, except upon special authority of the Secretary of War in each case. When the pay roll on which a soldier is mustered for additional pay as mess sergeant for a separate detachment mess does not on its face show that the number messed is 25 or more, no payment will be made of additional pay as mess sergeant unless the roll contains notation that the number of men habitually messed is not less than 25 or that the mess sergeant has been specially authorized by the Secretary of War. Mess sergeants in organizations not having the grade of mess sergeant will be detailed by the officer in immediate command of the company or detachment. Mess sergeants may be detailed from the grade of sergeant, first class, Medical Department, but only by special authority of the Surgeon General in each individual case, granted after consideration of evidence showing that such detail is necessary and for the best interests of the service. When organizations not having the grade of mess sergeant or detachments are merged into a general mess, mess sergeants will not be detailed. (*C. A. R., No. 51.*)

ALLOTMENTS.

1847. Every enlisted man absent on distant duty shall be allowed to allot such portion of his pay as he may desire for the support of his family or relatives, for his own savings, or for any other purpose, excepting that of obtaining an advance on his pay; but the allotment privileges to soldiers serving within the boundaries of the United States will be limited to the support of their families and relatives.

1848. As soon as possible after the receipt of an order for distant duty the commanding officers of troops, batteries, companies, bands, noncommissioned staff, Signal Corps, or Medical Department, or any other detachments affected by such order will prepare allotments on the prescribed blanks for all men of their organizations who desire to make the same. When executed these allotments will be forwarded by registered mail to the Quartermaster General, who will make acknowledgment thereof to the respective commanding officers, stating the names of the grantors and the amounts and periods of the allotments. (*C. A. R., No. 55.*)

1849. All allotments shall be executed in duplicate and witnessed by the respective commanding officers specified in paragraph 1848, one copy to be retained by said commanding officers and the other to be forwarded immediately to the Quartermaster General. Before witnessing an allotment such commanding officer shall, however, satisfy himself that the allotment is not made for the purpose of obtaining an advance on the soldier's pay. When a bank is designated as allottee, the immediate commanding officer of the grantor shall furnish the bank, at the same time that he furnishes the allotment roll to the Quartermaster General, with the signature of the grantor, and also inform the bank of the amount and period of allotment. Such commanding officer shall also, if possible, satisfy himself that the bank named has an existence. An allotment shall be made payable on the last day of each month and for a stated period. (*C. A. R., No. 10.*)

1850. On the death, discharge, or desertion of a soldier who has an allotment running, the allotment ceases. In such cases the immediate commanding officer will report as expeditiously as possible to the Quartermaster General, or in the Philippine and Hawaiian Departments to the department adjutants of those departments, the names of grantors whose allotments thus cease. In the Philippine and Hawaiian Departments, except in the case of deaths

which are otherwise reported, the department commanders will send by cable notification to The Adjutant General of the Army, who will at once notify the Quartermaster General. In case of forfeiture by sentence of a court-martial the stoppage of pay to meet the allotment, being a reimbursement to the United States of the amount paid the allottee, will take precedence of the forfeiture; when, however, the forfeiture is such that possibly it can not be stopped in full prior to the discharge of the soldier if the allotment is continued, the immediate commanding officer will report at once by mail to the Quartermaster General requesting a discontinuance of the allotment. Similar action will be taken when, due to reduction, to stoppages for clothing overdrawn, to continued misconduct, or to any reason, the soldier's available pay will not warrant the continuance of the allotment. The Quartermaster General will notify a soldier's immediate commanding officer of the fact of discontinuance of payment to the allottee and the last month's allotment paid. The stoppage of pay to meet the allotment will be continued until this notice is received, and the soldier will be credited on the next roll with any amount withheld in excess of amount paid the allottee. (*C. A. R., No. 10.*)

1851. When the grantor of an allotment desires it discontinued prior to the expiration of the period for which it was granted, the commanding officers specified in paragraph 1848 will prepare and transmit to the Quartermaster General, on the prescribed blank, the soldier's request for such discontinuance. This request must specify the month for which the last payment is to be made, but the stoppage of pay to meet the allotment should be continued until receipt from the office of the Quartermaster General of acknowledgment of request for discontinuance. If on receipt of the request for discontinuance of an allotment payment thereon has been made beyond the month specified, the Quartermaster General in making acknowledgment, will state the date to which the allotment has been paid and direct the repayment to the soldier of any pay deducted in excess of the payments on the allotment.

When an allotment is to run for the full period for which granted, no request for discontinuance or notice of the expiration is necessary. (*C. A. R., No. 10.*)

1852. Payment to allottees shall be made by one or more quartermasters, to be designated by the Quartermaster General. Said disbursing officer shall, before making payment of such allotment, use due diligence in obtaining and making use of all information that may have been received in the War Department relative to the grantors of the allotments. (*C. A. R., No. 10.*)

1853. If an erroneous payment is made because of the failure of an officer responsible for such report to report, in the manner prescribed by the Secretary of War, the death of the grantor, or any fact which renders the allotment not payable, then the amount of such erroneous payment shall be collected by the Quartermaster General from the officer who fails to make such report, if such collection is practicable. (*C. A. R., No. 10.*)

1854. All allotments of pay of enlisted men that have been or shall be paid to the designated allottees, after the expiration of one month subsequent to the month in which said allotments accrued, shall pass to the credit of the disbursing officer who has made or shall make such payment.

1855. In case of the capture by the enemy of soldiers who have made allotments which may expire after their capture, the monthly payments of the same shall be continued until otherwise ordered by the Secretary of War.

1856. In case of the transfer of a soldier whose period of allotment still continues, all the data respecting said allotments shall be entered on his service record, and the commanding officer of the troop, battery, or company from which he is transferred shall at once report such transfer to the Quartermaster General. (*C. A. R., Nos. 10 and 55.*)

1857. The date, period, and amount of allotment shall be entered as a part of the soldier's record and also noted on each pay roll during the period of allotment. The discontinuance of an allotment shall be similarly entered and noted.

1858. When the grantor of an allotment is soon entitled to discharge and is so much in debt to the United States that it will require the whole or a part of his allotted pay to cancel his obligation, this allotment shall be terminated in the prescribed manner.

1859. Upon receiving information of the death of any person to whom an allotment is payable by him, the quartermaster properly designated to pay this allotment shall at once report this fact to the Quartermaster General, who shall forthwith inform the grantor's immediate commanding officer. (*C. A. R., No. 10.*)

1860. When an allotment is discontinued, at the request of the person making it, before the expiration of the term for which it is granted, it shall not be renewed within that term except by permission of the regimental or post commander, on satisfactory reasons being given for such discontinuance and renewal.

DEPOSITS.

1861. An enlisted man, not on the retired list, may deposit his savings with any quartermaster in sums of not less than \$5; the same to remain so deposited until final payment on discharge or until furloughed to the reserve. The quartermaster will furnish to each depositor a book in which each deposit, with the name of the depositor, date, place, and amount, in words and figures, will be entered in the form of a certificate, signed by the quartermaster and company commander. The transfer, pledge, or sale of a deposit book is prohibited.

Each company or detachment commander will keep in the soldier's service record an account of every deposit made by the soldier, and after each regular payment he will forward directly to the Quartermaster General a list of the names of the depositors, showing in each case the date, place, and amount of deposit and the name of the quartermaster who received it. Each report will be restricted to and will include only deposits with one quartermaster on a given date. These lists before transmittal will be examined and compared with the service record and the deposit book of the soldier, and attesting officers will see that the names are identical with the names as borne on the rolls.

Should a soldier who has made a deposit be transferred or desert, the fact will be promptly reported directly to the Quartermaster General by the officer in command of the company or detachment to which he belongs. There is no objection to deposits being made by Indian and Philippine scouts and by enlisted men of the Porto Rico Regiment of Infantry. (*C. A. R., Nos. 10 and 55.*)

1862. On the discharge of a soldier or on his being furloughed to the reserve, the date and amount, in words and figures, of each of his deposits will be entered upon his final statement, and his deposit book will be taken up by the quartermaster who pays him and filed with the voucher of payment. In case deposits are forfeited by desertion, the amounts of the same will be entered on the final statements under the head "Remarks," and the facts and authority for such forfeiture given.

1863. Before delivering final statements upon which deposits are credited, the officer signing them will ascertain whether the soldier has the deposit book; and, if so, instruct him to present it to the quartermaster. Should he claim to have lost it, the officer will cause his affidavit to that effect to be taken before he leaves the post and attached to the statement. The affidavit will clearly

state the circumstances attending loss of the book and show that the soldier has not sold or assigned it. Upon this evidence the quartermaster may pay and the responsibility for the correctness of amounts credited on the statement will rest with the officer certifying them.

1864. Quartermasters will not pay deposits except on final statements. When they are not paid the soldier should forward his deposit book or the evidence referred to in the preceding paragraph to the Quartermaster General. Enlisted men should be informed of the importance of preserving deposit books as the only certain means of insuring prompt repayment. (*C. A. R., No. 10.*)

1865. A soldier must draw his deposit when he is discharged or furloughed to the reserve. He can then renew it after reenlistment, and will be entitled to interest thereon from the date of such renewal. Failure to present the final statements leaves the money without interest until it is drawn and again deposited. A discharged soldier who desires, after reenlistment, to have all or a part of the money due to him on discharge deposited under the provisions of paragraph 1361, must furnish to the quartermaster who makes payment on his final statement a written order requesting that such part of the amount due thereon, as he may desire so deposited, be transferred to his new account. The quartermaster will file this order with the paid final statement as authority for this disposition of the money due to the soldier.

1866. For any sum of not less than \$5 deposited for the period of six months or longer the soldier, when discharged or furloughed to the reserve, will be paid interest at the rate of 4 per cent per annum to date of discharge.

1867. On the death of a soldier each deposit, with amount, date, place, and quartermaster with whom deposited, will be noted in the inventory of his effects and on the accompanying final statement with which his deposit book will be filed.

1868. Both deposits and interest will be forfeited by desertion, but forfeiture of them can not be imposed by sentence of a court-martial.

They are exempt from liability (a) for debts due to individuals within the meaning of section 2, paragraph 1370, (b) to meet a sentence of a court-martial imposing forfeiture of pay or allowances, and (c) for the soldier's private debts.

Deposits and interest are not exempt from liability for debts due to the United States. (*C. A. R., No. 41.*)

1869. If an enlisted man deposits money with the company or post commander, the same to be applied for purchase of his discharge, the officer will immediately upon receipt of order for discharge of the man forward the money to a quartermaster for deposit and send to the Quartermaster General the usual notification of deposit. On the return of the deposit book by the quartermaster the soldier will be discharged and a final statement furnished to him, with notation of the deposit thereon, thus showing on its face the total credit of the soldier, which must in every case be sufficient to cover all indebtedness to the United States. (*C. A. R., No. 10.*)

FORFEITURES AND DEDUCTIONS.

1870. Authorized stoppages will be entered on the pay rolls and deducted at times of payment in the following order:

1. Reimbursements to the United States.
2. Reimbursements to individuals, as the quartermaster or post exchange, for instance.
3. Forfeitures for desertion and fines.

Articles of camp and garrison equipage must be charged on the pay rolls as such, and other articles of quartermaster stores or property must be enumerated and the price stated in the column of "Remarks" in order that the proper appropriation may be credited therewith.

Notwithstanding a sentence contemplates payment of a stated sum to a soldier upon his release from confinement, it can not be made unless there is a sufficient balance to his credit after all authorized stoppages are deducted. (*C. A. R., No. 55.*)

1370. A sentence imposing forfeiture of a part of pay for a month or number of months means the forfeiture of the part of the pay, as specified, for each month. If the sentence does not indicate any particular date when the forfeiture shall commence, it will begin with the date from which pay has accrued since last payment; except that when stoppages of the nature specified in sections 1 and 2 of paragraph 1370 stand against the soldier, the forfeiture will not begin until such stoppages have been satisfied. The rate of soldier's pay during the period over which the forfeiture is actually applied will govern the rate of the forfeiture. (*C. A. R., No. 55.*)

1371. Officers and enlisted men in arrest and confinement by the civil authorities will receive no pay for the time of such absence; if released without trial, or after trial and acquittal, their right to pay for the time of such absence is restored.

A soldier awaiting result of trial will not be paid before the result is known. (*C. A. R., No. 55.*)

PAY OF DESERTERS.

(See Article XIX.)

1372. An enlisted man charged with desertion will not receive pay until his offense has been investigated by a court-martial, or he has been restored to duty without trial, or the charge has been set aside as having been erroneously made.

1373. Every deserter forfeits all pay and allowances due at the date of desertion. Such forfeited pay and allowances will be used to satisfy authorized stoppages due the United States at the date of desertion, and only the amount of such stoppages in excess of such forfeited pay and allowances will be collected from pay accruing after date of return to military control. The organization commander will enter the following data on the first pay roll after the return of a soldier to military control: A statement of his account at date of desertion, a statement of his new account opened after return to military control (the account at date of desertion and the account since return to military control being stated separately), the place and date of return to military control, and whether he surrendered or was apprehended. On subsequent rolls, until the result of the trial has been published or the case otherwise disposed of, will appear the remark, "Awaiting trial (or result of trial) for desertion; for statement of account see pay roll for ———, 191—." On the next roll following the final disposition of the case, and on subsequent rolls until paid, will appear a complete statement of the soldier's account, as indicated above, including the number, date, and source of the order announcing his return to duty, or the result of the trial. If, while absent in desertion, he fraudulently enlisted in another organization, the date to which last paid in such fraudulent enlistment and all stoppages due the United States at date of surrender or apprehension will be stated.

1874. No settlement of the pay account of any enlisted man will be made on the pay rolls until sufficient pay shall have accrued to satisfy all authorized stoppages and pay a balance to the soldier.

PAYMENT OF DISCHARGED SOLDIERS.

(See Article XXI.)

1875. Discharged soldiers and those furloughed to the reserve will be paid on final statements prepared in duplicate and furnished to them by their company or detachment commanders. Payment will be made only on presentation of both copies. Except when notified as prescribed in paragraph 155 quartermasters will not pay discharged soldiers and those furloughed to the reserve unless otherwise satisfied of the genuineness of the discharge papers and the identity of the claimants.

1876. Upon payment of the final statement of a soldier discharged or furloughed to the reserve, the quartermaster over his signature will indorse on the discharge or on the certificate of furlough to the reserve the amount paid, and will specify in the indorsement any item for which payment has not been made in full. This action will not be required when the final statement has been transferred in conformity with the provisions of paragraph 1883. The day of enlistment and the day of discharge or of furlough to the reserve will both be included in reckoning pay. (*C. A. R., Nos. 40 and 55.*)

1877. Quartermasters or other officers to whom a soldier who has been discharged or furloughed to the reserve reports the loss or nonreceipt by him of final statement to which he is entitled will report the fact to the Quartermaster General, with any evidence the soldier furnishes them in the matter. The Quartermaster General will transmit the evidence to the Auditor for the War Department. (*C. A. R., No. 10.*)

1878. When an enlisted man is discharged from the service, except by way of punishment for an offense, or is furloughed to the reserve, he shall receive $3\frac{1}{2}$ cents a mile from the place of his discharge or furlough to the place of his acceptance for enlistment: *Provided*, That for sea travel on discharge or furlough, transportation and subsistence only shall be furnished to enlisted men: *And provided further*, That for the purpose of determining allowances for all travel of enlisted men on discharge or furlough, travel in the Philippine Archipelago, the Hawaiian Archipelago, the home waters of the United States, and between the United States and Alaska shall not be regarded as sea travel, but shall be paid for at the rates established by law for land travel within the boundaries of the United States.

When an enlisted man who was enrolled or mustered into the service of the United States is discharged, except by way of punishment for an offense, he shall receive the travel allowances stated above from the place of his discharge to the place of his enrollment or original muster into the service, at his option. (*C. A. R., Nos. 39 and 51.*)

1879. Quartermasters when paying final statements of soldiers discharged or furloughed to the reserve under foregoing conditions will include in such payments travel allowances from station to port of embarkation and from port of arrival in the United States to place of acceptance for enlistment or enrollment. (*C. A. R., No. 39.*)

1880. An enlisted man discharged for minority concealed at enlistment, or for other cause involving fraud on his part in the enlistment, is not entitled to pay and allowances, including those for travel, and will not receive a final

statement unless deposits are due him, in which case a final statement, containing a full statement of the soldier's accounts at date of discharge will be furnished.

1381. A soldier held in military custody under sentence of court-martial beyond his term of enlistment (except where dishonorable discharge is imposed) will be furnished with a final statement showing the actual date of discharge and the cause of detention. A soldier in the hands of civil authorities awaiting trial should, at the expiration of his term of service, be furnished with his discharge certificate and a final statement containing all necessary data for the quartermaster, giving date and cause of arrest and remarks "Not entitled to pay or clothing since date of arrest nor to travel pay unless acquitted or released without trial."

1382. Recruits are entitled to pay and allowances when discharged on certificates of disability. When discharged for any cause involving fraud on their part at enlistment, paragraph 1380 will govern.

1383. The transfer by an enlisted man of a claim for pay due on his final statement will be recognized only when made after discharge, or on being furloughed to the reserve, in writing, indorsed on the final statement, signed by the soldier, and witnessed by a commissioned officer or by some other reputable person known to the quartermaster. The person witnessing the transfer must indorse on the discharge or on the certificate of furlough to the reserve the fact of transfer of the final statement, and on the final statement the fact that such indorsement has been made on the discharge or on the certificate of furlough to the reserve. (*C. A. R., Nos. 40 and 55.*)

MISCELLANEOUS.

1384. An officer of the Quartermaster Corps will not give a receipt, except in the following cases:

1. For the transfer of money when the transfer is of cash.
2. For the money of a deceased soldier, deserter, or an escaped military prisoner.
3. For a stoppage authorized by the Secretary of War, for which the Quartermaster General may direct a receipt to be given.
4. For a refundment made by an officer on account of an overpayment made by a quartermaster.

A separate receipt will be given in each individual case.

In all other cases the person turning over or refunding money will deposit it in some authorized public depository or transfer it to a disbursing officer of the department to which the money belongs. (*C. A. R., No. 10.*)

1385. When any officer or enlisted man on the active list of the Army dies from wounds or disease not the result of his own misconduct, his widow, or some other person duly designated by him, is entitled to receive, through the Quartermaster Corps, an amount equal to six months' pay at the rate such officer or enlisted man was receiving pay at the date of his death, less \$75 in the case of each officer and \$35 in the case of each enlisted man. Any residue of the sums thus reserved, after the expenses of interment have been met therefrom, will be paid subsequently to the same beneficiary. Each officer and enlisted man in service on the active list will file on the form furnished for that purpose by The Adjutant General of the Army the full name and address of the person to whom he wishes the half year's salary paid in the event of death, and he may also file on the said form the full name and address of the person to whom he wishes the half year's salary paid in the event of the death

of the first named beneficiary prior to the date of payment of the gratuity. The signature in every case will be witnessed and attested as required by the printed notes on the form. Should an officer or enlisted man desire to change a beneficiary previously designated by him and to make a new designation, he may do this by filling up and forwarding to The Adjutant General of the Army another blank of the prescribed form, properly signed, witnessed, and attested.

All officers when first appointed and all recruits, at the time of their enlistment, will make the prescribed designation which, for an officer, will be forwarded to The Adjutant General of the Army with the officer's letter accepting his commission, and for a recruit will be forwarded together with the recruit's enlistment paper to The Adjutant General of the Army, who will transmit all designations thus received to the Quartermaster General, in whose office all designations of beneficiaries under this regulation will be filed permanently. Designations duly made and filed will continue to be valid and sufficient, unless revoked as herein provided, as long as the officers or enlisted men making the designations continue upon the active list of the Army. (*C. A. R., No. 10.*)

ARTICLE LXXIV.

MEDICAL DEPARTMENT.

NOTE.—Regulations for the government of the Medical Department, prepared and published under the authority of the Secretary of War, are distributed to its officers by the Surgeon General. Only such regulations are herein given as are general in their nature or affect other branches of the service.

GENERAL PROVISIONS.

1386. The Medical Department is charged with the duty of investigating the sanitary condition of the Army and making recommendations in reference thereto, of advising with reference to the location of permanent camps and posts, the adoption of systems of water supply and purification, and the disposal of wastes, with the duty of caring for the sick and wounded, making physical examinations of officers and enlisted men, the management and control of military hospitals, the recruitment, instruction, and control of the enlisted force of the Medical Department and of the Nurse Corps, and furnishing all medical and hospital supplies except for public animals. (*C. A. R., No. 55.*)

1387. The surgeon of every post or command, under the direction of the commanding officer, will supervise its hygiene and recommend such measures as he may deem necessary to prevent or diminish disease. He will examine, at least once a month, the sanitary condition of the public buildings and grounds, the drainage, the sewerage, the condition of all sanitary appliances, including incinerators, sterilizers, filters, and odorless excavators, the amount and potability of the water supply, the character and cooking of the food, including the quality of the milk and the condition of the dairies from which it is obtained, and the character and causes of prevailing diseases and measures taken to prevent them. Immediately after such examination he will report thereon in writing to the commanding officer, noting also in the report the dates on which the prescribed physical inspections of the various organizations of the command were made, the number of new cases of venereal disease which appeared in the command, the ratio of the same per 1,000 of strength, and the number of venereal prophylactic treatments given, with such recommendations as he may deem proper. The commanding officer will forward the report, through military channels, to The Adjutant General of the Army, noting thereon his views and the action taken by him; and should he have deemed the action recommended by the surgeon impracticable or undesirable, he will state fully his objections. The

commanding officer will furnish the surgeon with a copy of his indorsement forwarding the report. Special sanitary reports will take the same course as the regular monthly sanitary reports. As far as practicable, intermediate commanders will correct sanitary defects, noting their action by indorsement.

Sanitary inspections of a general hospital or other establishment or organization of the Medical Department will be made under the direction of the medical officer in command, by a junior medical officer assigned to that duty, who will report in writing to the commanding officer. The latter will forward the reports through military channels to the Surgeon General, indicating his action by indorsement thereon. The commanding officer will keep an appropriate record of the reports and his indorsements. (*C. A. R., No. 25.*)

APPOINTMENTS.

1888. No person shall receive an appointment as first lieutenant in the Medical Corps unless he shall have been examined and approved by an Army medical board consisting of not less than three officers of the Medical Corps designated by the Secretary of War; and no officer of the Medical Corps below the rank of lieutenant colonel shall be promoted therein until he shall have passed an examination before an Army medical board consisting of not less than three officers of the Medical Corps designated as aforesaid, unless in case of an officer below the rank of major a board of review shall have pronounced him qualified for promotion after an adverse finding by an examining board. Any major of the Medical Corps on the active list of the Army who, at his first examination for promotion to the grade of lieutenant colonel in said corps, is found disqualified for such promotion for any reason other than physical disability incurred in the line of duty, will be suspended from promotion, and his right thereto will pass successively to such officers next below him in rank in said corps as may become eligible to promotion under existing law during the period of his suspension; and any major of the Medical Corps suspended from promotion, as hereinbefore provided, will be reexamined as soon as practicable after the expiration of one year from the date of the completion of the examination that resulted in his suspension; and if on such reexamination he is found qualified for promotion, he will again become eligible thereto; but if he is found disqualified by reason of physical disability incurred in the line of duty, he will be retired with the rank to which his seniority entitles him to be promoted; and if he is not found disqualified by reason of such physical disability, but is found disqualified for promotion for any other reason, he will be retired without promotion.

1889. Officers of the Medical Reserve Corps who apply for appointment in the Medical Corps of the Army may, upon the recommendation of the Surgeon General, be placed on active duty by the Secretary of War and ordered to the Army Medical School for instruction and further examination to determine their fitness for commission in the Medical Corps, but this will apply only to officers who have passed the preliminary examination for the Medical Corps. An officer of the Medical Reserve Corps ordered to active duty in the service of the United States for purposes other than that of attending the Army Medical School with a view to appointment in the Medical Corps of the Army will be subjected to a critical physical examination at the beginning of such active duty and again at the termination thereof. A complete record of both examinations will be filed in the Surgeon General's office as a part of the active service record of the officer. These examinations may be waived by the Surgeon General in the case of officers of the Medical Reserve Corps called into active service for temporary duty. (*C. A. R., No. 31.*)

CONTRACT SURGEONS, ACTING DENTAL SURGEONS.

1890. In emergencies civilian physicians may be employed as contract surgeons under contracts entered into by the Surgeon General of the Army with the approval of the Secretary of War. They are entitled to mileage, and when on duty at a post or station where quarters in kind are provided by the United States they will be entitled to the quarters allowed by regulation to a first lieutenant, including heat and light in kind. They are not entitled to the 10 per cent increase of pay for foreign service, nor to commutation of quarters, heat, or light. (*C. A. R., Nos. 12 and 51.*)

1891. Contract surgeons and acting dental surgeons are entitled to the same protection in their positions and the same respect and obedience from enlisted men as commissioned officers.

1892. Whenever the contract of a physician or dentist is annulled, the fact and date of annulment will be noted in writing on his contract, and when ordered to his home for annulment of contract, such fact will also be noted thereon by the officer under whose orders he may at the time be serving.

1893. Contract surgeons, on availing themselves of leaves of absence, must submit their contracts to the commanding officer of the post or station where serving, who will indorse thereon the date of commencement and duration of leave. The actual date of their rejoining from leave should also be noted on contract on return to post or station.

1894. The services rendered by a contract surgeon are not restricted to those of a purely professional character; on the contrary, his eligibility for duty is the same as that of a first lieutenant of the Medical Corps, except in so far as it is limited by the fact that he is not a commissioned officer. A contract surgeon, though not eligible for detail on courts-martial, may prefer charges against enlisted men and may be detailed on councils of administration, and as post treasurer, etc.; he may also witness payments to enlisted men under the provisions of paragraphs 1315 to 1337.

THE DENTAL CORPS.

1895. Contracts with acting dental surgeons will be made for three years, but may be annulled at any time by the commanding general of a department, or of a mobilized division after official investigation, for conduct to the prejudice of good order and military discipline, or by the Surgeon General when in his opinion a termination of the contract would be in the interests of the service.

1896. Dental surgeons and acting dental surgeons are a part of the Medical Department, and will be assigned to duty in accordance with the recommendations of the Surgeon General or the department or division surgeon.

A dental surgeon or an acting dental surgeon on duty with a military command is subordinate to the senior medical officer of the command and under his immediate control.

1897. When a dental surgeon or an acting dental surgeon reports for duty at a post the surgeon will assign a room in the hospital to him for use as an operating room, if one is available. If no room in the hospital is available, the post commander will provide a suitable operating room in one of the other post buildings.

Each dental surgeon or acting dental surgeon will ordinarily be allowed one enlisted man as an assistant, who will be detailed from the Medical Department, and whose duty it will be to assist the dentist in his operations, in caring for

the instruments and other public property, in keeping the records, and in the performance of such other official work pertaining to this position as he may be directed by the proper authority to do. An enlisted man of the Medical Department detailed as dentist's assistant and stationed in a city or town will be provided with a suitable room as quarters by the Quartermaster Corps, but when stationed at a post, in camp, or in the field he will be attached to the detachment of the Medical Department. (*C. A. R., No. 55.*)

1398. Members of the Dental Corps will serve free of charge all those entitled to free medical treatment by medical officers.

1399. Members of the Dental Corps will operate upon those entitled to their services. Materials issued by the Government will be expended only in operations upon those entitled to free services. Emergency work for officers and enlisted men will have precedence at all times over other work.

1400. Members of the Dental Corps will not perform any operation upon officers or enlisted men of the Army or prescribe medicines for them, other than those necessary for the treatment of the teeth and gums. This prohibition does not apply to cases of emergency, where no medical officer is within reach, and where a dental surgeon or an acting dental surgeon is able to render necessary surgical assistance to meet the immediate emergency.

1401. For plate work or for the filling of teeth of enlisted men the materials supplied by the Government will be used and no other, and members of the Dental Corps are forbidden to enter into any financial agreement with enlisted men involving an obligation for payment for silver, platinum, or gold used for filling cavities in teeth, for the construction of bridge work, for the fitting of crowns, the making of artificial dentures, or other dental work. Beyond the territorial limits of the United States, post commanders, upon receipt of written application by enlisted men, may authorize such enlisted men to receive from members of the Dental Corps any class of dental treatment which the best interests of the service may require. In such cases a deposit sufficient to cover the proper expenses involved will be made with the post commander by an enlisted man concerned when the application is made.

1402. Enlisted men requiring the services of the dentist at an hour prescribed by the commanding officer will be conducted to the designated place under a noncommissioned officer, who will take with him and hand to the dentist a list of those reporting for treatment.

1403. All cases requiring treatment involving future appointment will be so noted, and the others will be marked according to the circumstances, as "Treatment unnecessary," "Further treatment unnecessary," "Should be sent to surgeon," etc. When future treatment is necessary, the dentist will, in writing, using the form provided therefor, request the adjutant to direct the soldier to report for treatment at a time designated.

THE ENLISTED FORCE OF THE MEDICAL DEPARTMENT.

1404. The enlisted men of the Medical Department will perform all necessary hospital services in garrison, camp, or field (including ambulance service) under such officers of the Medical Department and assistants as may be detailed for that duty. (*C. A. R., No. 46.*)

1405. Master hospital sergeants are appointed by the Secretary of War on the recommendation of the Surgeon General, and hospital sergeants, sergeants first class, and sergeants are appointed by the Surgeon General, all after having passed a satisfactory examination as hereinafter prescribed. Corporals, lance corporals and privates first class are appointed on the recommendation of

their detachment or organization commanders—(1) by the Surgeon General, if serving with troops under the immediate supervision of the War Department; (2) by the department surgeon, or by the division surgeon of a mobilized division, if serving with departmental or divisional troops. Cooks are appointed by the commanding officer of a company or detachment of the Medical Department in such numbers as are allotted to the company or detachment by the Surgeon General or by the department or division surgeon by authority of the Surgeon General.

Master hospital sergeants, hospital sergeants, sergeants, first class, and sergeants are given warrants signed by the Surgeon General. Corporals are given warrants signed by the officer who appoints them. Ordinarily a warrant issued to a noncommissioned officer of the Medical Department confers grade under all assignments; but a limited warrant as sergeant, first class, sergeant, or corporal may be issued conferring grade for service only with a field hospital company, ambulance company, or company of instruction designated therein. Upon relief from assignment to such company a limited warrant ceases and determines, and the noncommissioned officer holding the same reverts to his previous grade in the Medical Department.

No person shall be designated for examination for appointment as master hospital sergeant, hospital sergeant, or sergeant, first class, except by written authority of the Surgeon General; nor for examination for appointment as sergeant except by written authority of the Surgeon General, if serving with troops under the immediate supervision of the War Department, or of the department surgeon or the division surgeon of a mobilized division, if serving with departmental or divisional troops. A candidate for appointment as master hospital sergeant must have served not less than 12 months as hospital sergeant or sergeant, first class, Medical Department, or as sergeant, first class, in the Hospital Corps. A candidate for appointment as hospital sergeant must have served not less than 12 months as sergeant, first class, Medical Department, or sergeant, first class, Hospital Corps. A candidate for appointment as sergeant, first class, must have served not less than 12 months as sergeant, Medical Department, or sergeant, Hospital Corps.

The examination of a candidate for appointment as master hospital sergeant, hospital sergeant, sergeant, first class, or sergeant will be conducted by a board of one or more medical officers at the station where the candidate is serving. If the number of medical officers deemed proper for the board is not available at the station of the candidate he will be sent to the nearest station where a board can be convened. When the examination is for a limited warrant, the commanding officer of the organization in which the candidate is to serve will constitute the board. In all cases the report of the board will be forwarded directly to the officer authorizing the examination. (*C. A. R., Nos. 29 and 46.*)

1406. Master hospital sergeants, hospital sergeants, and sergeants, first class, stationed at places where no post returns are made will make such personal reports as the Surgeon General may direct. (*C. A. R., No. 46.*)

1407. Master hospital sergeants, hospital sergeants, and sergeants, first class, except those of the latter grade holding limited warrants, though liable to discharge, will not be reduced, except by sentence of a court-martial. Sergeants, first class, holding limited warrants, sergeants, corporals, lance corporals, cooks, and privates, first class, may be reduced by sentence of a court-martial, by the Surgeon General, by a department surgeon, or by the division surgeon of a mobilized division. (*C. A. R., Nos. 46 and 49.*)

1408. To test the capacity of privates, first class, and privates of the Medical Department for the duties of noncommissioned officers, the Surgeon General,

the department surgeons, and the division surgeons of mobilized divisions may appoint lance corporals, who will be obeyed and respected as corporals; but no detachment shall have more lance corporals at a time than enough to make the proportion of all noncommissioned officers present for duty one to four soldiers of the Medical Department in the grades of cook, private, first class, and private. Lance corporals are on the same footing regarding reduction as corporals. (*C. A. R., No. 46.*)

1409. The commander of an Army corps, or of a division or brigade acting independently, is charged with the full control of the transfer from the line, the enlistment, reenlistment, and discharge of enlisted men of the Medical Department of his command. (*C. A. R., No. 46.*)

1410. Original enlistments for the Medical Department are made in the grade of private. Master hospital sergeants, hospital sergeants, sergeants first class, sergeants, corporals, lance corporals, cooks, horseshoers, saddlers, farriers, mechanics, and privates first class, may be reenlisted in their respective grades and their warrants and appointments continued in force, provided they reenlist on the day following that of discharge. Any noncommissioned officer enlisted on or after the first day of November, nineteen hundred and sixteen, furloughed to the reserve upon the completion of three years in the active service with an excellent character, shall be permitted to reenlist in the organization from which furloughed with the rank and grade held by him at the time of his furlough if he reenlists within 20 days after the date of such furlough. In each case the soldier will reenlist at the place where his organization is stationed. Each enlistment and continuance will be noted on the warrant or appointment by the surgeon. Recruiting officers at general recruiting stations may accept applicants for enlistment or reenlistment in the Medical Department upon the authority of the Surgeon General and will be guided by his instructions in making the physical examination of such applicants. Applicants may be accepted with a vision of 20/70 in each eye correctible to 20/40 with glasses, provided that no organic disease exists in either eye. After enlistment recruits will be forwarded to such stations as may have been designated for them by the Surgeon General. (*C. A. R., Nos. 46 and 51.*)

1411. Enlisted men of the line, buglars excepted, may be transferred to the Medical Department as privates by the commander of a department or a mobilized division or separate brigade on the application of the surgeon of the post or command, forwarded through military channels. The application will be made on the form provided therefor. (*C. A. R., Nos. 46 and 51.*)

1412. Married men will not be enlisted as privates in or transferred to the Medical Department, and no enlisted man below the grade of sergeant, first class, who is married will be reenlisted therein without special authority. (*C. A. R., No. 46.*)

1413. Enlisted men of the Medical Department will not be required to attend ceremonies, except when directed by the commanding officer, and will ordinarily be inspected and mustered at the hospital. The forms of inspection will be in accordance with the prescribed drill regulations for the Medical Department. (*C. A. R., No. 46.*)

1414. To meet the requirements of epidemics or other emergencies and to fill vacancies enlisted men of the Medical Department may be transferred by a department commander between posts in his department, the quota of each post, as prescribed by paragraphs 1416 and 1417, not being permanently exceeded. (*C. A. R., No. 46.*)

1415. Accounts of pay and clothing of enlisted men of the Medical Department will be kept by the medical officer under whose immediate direction they

are serving. All such enlisted men casually at a post, camp, or other station are under the immediate orders of the surgeon, except prisoners, who will, however, be borne on the muster rolls, morning reports, and returns of the Medical Department detachment. If furloughed to the reserve or discharged their final statements will be prepared by the surgeon.

Upon the transfer of an enlisted man of the Medical Department from one sanitary formation to another his descriptive list will be closed by his immediate commander and a new list furnished to his new immediate commander. If there is no change in the soldier's military record or in his accounts of pay and clothing while under the new commanding officer, the latter may forward the list by wrapper, stating that there has been no such change, to the next successive commander, who may in turn do likewise, the conditions remaining the same, taking care, however, to use the original wrapper of transmittal. This procedure may be continued for successive transfers until there is a change in the soldier's status requiring entry in his military record or in his pay and clothing account, when a new list will be opened by the medical officer under whose command the soldier is when the change occurs. The medical officer preparing the new list will retain the old list for his protection. In case of subsequent transfer, the new list will be closed and filed and another list prepared and forwarded in the usual manner. (*C. A. R., No. 46.*)

1416. At every permanent military post there will be at least one noncommissioned officer of the Medical Department and an additional noncommissioned officer for every four enlisted men of the Medical Department of the grades of cook, private, first class, and private in excess of four. (*C. A. R., No. 46.*)

1417. At every permanent military post there will be at least four enlisted men of the Medical Department of the grades of cook, private, first class, and private; six when the strength of the garrison is 200; and two additional for every additional 100 of strength. They will be assigned by the surgeon to appropriate duties connected with the hospital service. (*C. A. R., No. 46.*)

1418. The number of enlisted men of the several grades of the Medical Department to be stationed at general hospitals, arsenals, engineer stations, and independent posts will be determined by the Surgeon General under the direction of the Secretary of War. (*C. A. R., No. 46.*)

1419. Special instruction in the methods of rendering first aid to the sick and wounded will be given to all enlisted men of the Signal Corps and of the line of the Army by their company officers for at least twelve hours in each calendar year.

1420. All enlisted men of the Medical Department will be instructed under the supervision of the surgeon in the duties of litter bearers, the methods of rendering first aid to the sick and wounded, and the various subjects pertaining to the sanitary soldier. (*C. A. R., No. 46.*)

1420½. Privates, first class, are eligible for ratings for additional pay as follows: As dispensary assistant, \$2 a month; as nurse, \$3 a month; as surgical assistant, \$5 a month: *Provided*, That no enlisted man may receive more than one rating for additional pay under this regulation, nor may he receive any additional pay under such rating unless he shall have actually performed the duties for which he shall be rated. These ratings will be made, upon the recommendation of the detachment or organization commander, (1) by the Surgeon General, if the men are serving with troops under the immediate supervision of the War Department; (2) by the department surgeon, or by the division surgeon of a mobilized division, if serving with departmental or divisional troops. (*C. A. R., No. 46.*)

NURSE CORPS (FEMALE).

1421. Army nurses will be appointed and discharged by the Surgeon General with the approval of the Secretary of War. They will be assigned to duty at hospitals under the direction of the Surgeon General.

1422. The superintendent of the Nurse Corps, under the direction of the Surgeon General, will have general supervision of the corps, and her duties and the duties of chief nurses and nurses shall be as prescribed by the Surgeon General.

1423. The services of army nurses will be afforded sick and wounded officers, enlisted men, and other patients in military hospitals. When traveling under orders on transports they will assist in the care of sick officers and enlisted men, under the direction of the transport surgeon.

1424. Members of officers' and enlisted men's families are not entitled to the services of army nurses, but in great emergencies and for the manifest interest of the service, nurses will care for such patients when so directed by the officer in charge of the hospital, a report of the fact being made in each instance to the Surgeon General through military channels.

1425. At places where the services of trained nurses are not otherwise obtainable, a nurse may, if she so desires, and with the approval of the officer in charge of the hospital, be granted a special leave, without pay and allowances, in order to take a private case, such leaves not to exceed sixty days.

1426. The pay, allowances, and privileges of nurses are specified by law, and they are forbidden to receive presents from patients, or from the relatives or friends of patients, for services rendered when on duty.

GARRISON AND FIELD SERVICE.

1427. Ambulances are vehicles provided for the service of the Medical Department. They will be furnished and repaired by the Quartermaster Corps. They will be used only for the following purposes: The transportation of the sick and wounded and the absolutely necessary nurses or attendants on duty therewith; the recreation of convalescent patients; the instruction of enlisted men of the Medical Department in the duties of the ambulance service; and in the field, in urgent cases, for the transportation of medical supplies. All persons are prohibited from using them, or requiring or permitting them to be used for any other purpose. Ambulances will always be subject to the call of the surgeon, in garrison, and of the medical officer on whom responsibility for the transportation of the sick devolves, in the field, whose duty it shall be to report to the commander of troops any violation of the above-mentioned provisions governing their use. When practicable, in garrison, they will be housed near the hospital. (*C. A. R., Nos. 8 and 55.*)

1428. Ambulances complete will be issued and classed as follows:

1. For mobile army troops, to accompany troops in the field.
2. For post purposes exclusively, e. g., for Coast Artillery stations, recruit depots, certain mobile army stations which would require ambulance service after withdrawal of mobile army troops therefrom, military prisons, supply depots, etc. Department commanders will see that such of these posts as require ambulance service are provided with ambulances which do not belong to the divisional or other sanitary train of the mobile army.
3. For general hospitals and for reserve supply.

Ambulances under class 1 will be furnished in numbers prescribed for war basis in Tables of Organization; under classes 2 and 3 the number of ambu-

lances to be supplied will be determined by the War Department on recommendation of the department commander as regards class 2, and of the Surgeon General as regards class 3. (*C. A. R., No. 8.*)

1429. At each post one or more privates of the detachment Medical Department will be designated by the surgeon as ambulance driver only for ambulances not belonging to organized ambulance companies. In addition to his other duties he will care for the ambulance, its equipment, and harness, and see that they are ready for immediate use; and in the field he will care for the animals also. In garrison, when it is necessary to use the ambulance for any transportation purposes, the commanding officer, on the application of the surgeon, will see that the requisite animals are provided by the quartermaster and placed at the disposal of the surgeon. At stations of organized ambulance companies, class 2 ambulances may be used for garrison ambulance service or the ambulance company may furnish the garrison ambulance service, at the discretion of the post commander. (*C. A. R., Nos. 8 and 55.*)

1480. Each company will be furnished with one hand litter, which will be kept ready for use at all times. It will be supplied by the Medical Department

1481. Rescinded. (*C. A. R., No. 8.*)

1481½. Transportation assigned to mobile army troops for sanitary purposes is classed as follows:

1. The sanitary combat train. (A pack mule to carry equipment for the regimental aid station.) These pack mules are provided in time of peace and are assigned to the organizations indicated in the Tables of Organization. They will be placed at the disposition of the surgeon when needed for drill of enlisted men of the Medical Department in packing, and will habitually accompany the combat train of the organizations to which they are assigned, both in peace and war.

2. Ambulances of class 1, paragraph 1428. These are marked with the words "Sanitary Train ——— Division," and with the number of the ambulance company to which assigned. Ambulance companies operated in peace are equipped with their quota of ambulances, and the remaining ambulances of the divisional sanitary train are attached in time of peace to combatant organizations of the division by the department commander. Ambulances so attached are available for garrison service in peace when required, as well as ambulances of class 2, and will be cared for by ambulance drivers designated by the surgeon. When the division is assembled, these ambulances accompany the organizations to which attached, join the companies to which they are assigned, and complete the ambulance equipment of the sanitary companies not operated in time of peace.

3. Wagons pertaining to the divisional sanitary train. These will be marked with the words "Sanitary Train ——— Division" and the number of the company to which assigned. Companies belonging to the sanitary train which are operated in peace are equipped with their quota of wagons. In addition, wagons of the divisional sanitary train are attached to combatant organizations, as prescribed in Tables of Organization, for the transportation of the camp infirmary. When the division is assembled these wagons accompany the organizations to which attached and join the sanitary companies to which assigned. (*C. A. R., Nos. 8 and 55.*)

1482. Commanding officers will inspect ambulances, litters, and other field sanitary matériel at each monthly inspection and see that the equipment is complete and in serviceable condition. When practicable, the ambulance fully equipped for service, with the animals attached, and the pack mule carrying the sanitary equipment pertaining to the sanitary combat train, will be presented for inspection. (*C. A. R. No. 8.*)

1433. Medical Department enlisted personnel is classified as follows:

1. That portion attached to combatant organizations.
2. That portion assigned to units of the divisional sanitary train and to administrative offices in the field.
3. That portion assigned to the service of the interior for service in war, which should include only the minimum of trained men.

All men of the Medical Department will be carried on muster rolls and returns of the Medical Department, under "Remarks," as attached to a definite combatant organization, or as belonging to a unit of class 2, or to class 3. Department commanders will determine, on recommendation of the department surgeon, the number of men at each post or station to be assigned to each class, within the limits prescribed in Tables of Organizations, and the individual men will be assigned to their respective classes and those of class 1 attached to organizations of mobile troops by the post commander on recommendation of the surgeon. All papers of enlisted men of the Medical Department of classes 1 and 2, required when sanitary personnel accompanies troops to which attached, will be prepared in advance so far as practicable. Medical officers assigned to stations of mobile army troops, except those on duty with ambulance or field hospital companies, will be similarly attached to organizations by the post commander on recommendation of the surgeon. Combatant organizations will carry attached sanitary troops in red ink on their muster rolls and returns. (*C. A. R., Nos. 8 and 55.*)

1434. Rescinded. (*C. A. R., No. 30.*)

1434. Surgeons of posts will keep on hand horse equipments furnished by the Ordnance Department for the use of enlisted men of the Medical Department under their command who are authorized in Tables of Organization to be mounted in war. At all posts where there are Cavalry troops, or a Field Artillery headquarters detachment, or Infantry mounted orderlies, or a field hospital company or an ambulance company, these men of the Medical Department who are authorized to be mounted in peace will be reported to a troop or mounted detachment commander for instruction in equitation, under instructions published from time to time by the War Department. (*C. A. R., Nos. 8 and 55.*)

1435. Rescinded. (*C. A. R., No. 8.*)

1435. On receipt of orders directing a movement of troops of the mobile Army with attached sanitary personnel, the Medical Department personnel of class 1 attached to those troops, together with the drivers of ambulances and wagons attached, will report for duty to the organization commander, and, while absent, will be carried as on detached service, unless another status is specified in orders. When the troops again come under the jurisdiction of a post commander, the attached sanitary personnel will report to the surgeon of the post for garrison duty. Property pertaining to the sanitary service, required by an organization temporarily detached from its station, will be issued by the surgeon to the senior medical officer accompanying the organization, on memorandum receipt. (*C. A. R., No. 8.*)

1436. Field hospitals and ambulance companies will be considered organizations of the mobile Army and, except as to medical supplies, will be supplied, instructed, and disciplined and the affairs thereof administered as is provided by the Army Regulations for other organizations of the mobile Army. (*C. A. R., No. 8.*)

1437. No person, except the proper medical officers or the officers, noncommissioned officers, and privates of the ambulance service, or such persons as may be specially assigned by competent military authority to duty therewith,

will be permitted to take or accompany sick or injured men to the rear, either on the march or elsewhere.

1438. For service in campaign against uncivilized tribes, or under other circumstances which justify the expectation that their rights under the Geneva Convention will not be respected, commanding officers will issue to the commissioned and enlisted personnel of the Medical Department pistols or other available firearms for their own defense and for that of the sick and wounded under their charge. To ambulance companies and field hospital companies there will be issued such number of pistol equipments as may be prescribed in equipment orders or manuals for equipping the enlisted personnel when required, as authorized by the Geneva Convention, and for the performance of their own interior guard duty. (*C. A. R., No. 36.*)

GENERAL HOSPITALS.

1439. General hospitals will be under the exclusive control of the Surgeon General and will be governed by such regulations as the Secretary of War may prescribe. The senior medical officer on duty therein will command the same and will not be subject to the orders of local commanders other than those of territorial departments to whom specific delegation of authority may have been made. The commanding officer of a territorial department may order to any general hospital located within the limits of his department and to the General Hospital at Fort Bayard, N. Mex., any cases of sickness and injury among officers and enlisted men under his command that are appropriate for treatment at such hospital. Officers and enlisted men on the active list of the Army who shall have been transferred to a general hospital for treatment only will, when fit for duty, be returned to their proper posts or commands by the commanding officer of the hospital, unless he shall have been otherwise instructed. Upon request of the commanding officer of the Letterman General Hospital, Presidio of San Francisco, Cal., the commanding general, Western Department, will issue the necessary travel orders for patients from that hospital recommended for treatment at the General Hospital at Fort Bayard. (*C. A. R., No. 39.*)

1440. Hospital transports, boats, and railway trains, after being properly assigned as such, will be exclusively under the control of the Medical Department, and will not be diverted from their special purposes by orders of local or department commanders or officers of other staff corps.

1441. The Army and Navy General Hospital, Hot Springs, Ark., is under the direction of the Secretary of War, and is devoted to the treatment of the officers and enlisted men of the military and naval service of the United States, cadets at the United States Military and Naval Academies, officers of the Revenue-Cutter Service, officers of the Public Health Service, and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States for such diseases as the waters of the Hot Springs of Arkansas have an established reputation in benefiting.

1442. Admission to this hospital is restricted to those of the above-named classes who require medical treatment in the following order of preference: (1) Officers and enlisted men of the Army, the Navy, and the Marine Corps on the active lists and cadets at the United States Military and Naval Academies; (2) officers and enlisted men of the Army, the Navy, and the Marine Corps on the retired lists; (3) officers of the Revenue-Cutter Service and of the Public Health Service; (4) honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States may also be admitted by authority of the Surgeon General when there are vacant beds in the hospital.

1443. The ration of enlisted men of the Army on the active list while under treatment and the ration of members of the Nurse Corps while on duty in this hospital will be commuted at the rate of 40 cents a ration, to be paid to the surgeon in charge by the post quartermaster or by such officer of the Quartermaster Corps as may be designated, conformably to the regulations governing the subsistence of patients and nurses at other Army hospitals. The ration of the enlisted men of the Army on duty at this hospital will be commuted at the rate of 40 cents a ration, to be paid to the men by the quartermaster upon their individual receipts, conformably to the regulations governing such payments in other Army cases. The subsistence of enlisted men of the Navy and of the Marine Corps on the active list under treatment in this hospital in pursuance of orders will be paid for to the surgeon in charge at the rate of 40 cents a day by the proper officer of the Navy Department, upon monthly statements of amounts due certified by the Surgeon General of the Army to the Surgeon General of the Navy through the prescribed channels. (C. A. R., No. 45.)

1444. Enlisted men of the Army, the Navy, and the Marine Corps on the retired list and honorably discharged soldiers and sailors of the Regular and Volunteer Army and Navy of the United States will pay for subsistence at the rate of 40 cents a day.

1445. The General Hospital at Fort Bayard, N. Mex., is under the direction of the Secretary of War and is set apart as a sanitarium for the treatment of officers and enlisted men of the Army suffering from pulmonary tuberculosis.

1446. Officers and enlisted men on the active list of the Army in suitable cases, as determined by the commanding officer of the territorial department under whose command they are serving, or by the War Department if serving at posts or stations that are exempted from the control of department commanders, upon the recommendation of the proper medical officers, may be ordered to the General Hospital at Fort Bayard, N. Mex., for treatment. No enlisted man will be recommended for transfer to Fort Bayard unless he is willing if discharged to remain at that hospital for treatment as a beneficiary of the Soldiers' Home for a period of three months from admission thereto. Soldiers suffering from pulmonary tuberculosis who do not desire treatment at that hospital will be recommended for discharge on certificates of disability.

An enlisted man who is sent to Fort Bayard for treatment, or his attendant if he has one, will be furnished by the commanding officer of his post or station with an official telegram blank, and will be instructed to telegraph from Deming, N. Mex., to the commanding officer of the hospital, reporting the train upon which the patient may be expected to arrive.

Authority for the transfer to the Army and Navy General Hospital at Hot Springs, Ark., of officers and enlisted men on the active list of the Army, except those serving under the command of the commanding officer of the territorial department in which the hospital is situated, will be applied for in each case to the War Department. Department commanders, however, need not forward to the War Department applications for such transfer which do not meet their approval.

No enlisted man who is unfitted for military service by reason of a disability that is not curable within a reasonable time so as to enable him to return to full duty, will be recommended for treatment at the Army and Navy General Hospital. In such cases discharge on certificates of disability will be recommended.

The recommendation of the medical officer for transfer to either of these hospitals for treatment, together with a full medical report of the case and a certificate by the medical officer stating the disability for which he recommends

the transfer of the case to the hospital selected and his opinion that treatment in that hospital will conduce to the more rapid recovery of the patient, will be forwarded through military channels to the authority competent to order the patient to the hospital selected. In case of necessity such authority may order an attendant to accompany the patient and return to such attendant's proper station on completing the duty, but care should be taken not to send any patient to either of these hospitals when travel would be dangerous or injurious to him.

The medical officer who certifies a case for transfer for treatment to either of these hospitals will be held responsible for the proper selection of the case, for the correctness of the diagnosis made therein, and for recommending at the proper time the transfer of the patient to the hospital selected.

Retired officers of the Army may apply directly to The Adjutant General of the Army for permission to enter these hospitals, the application in each case to be accompanied by the medical report and certificate hereinbefore prescribed for officers on the active list.

SERVICE IN HOSPITALS.

1447. The surgeon is charged with the management and is responsible for the condition of the hospital, which will be at all times subject to inspection by the commanding officer. The surgeon will inspect the hospital every morning, and on Saturday will also inspect the detachment of the Medical Department. (*C. A. R., No. 55.*)

1448. The surgeon will assign his assistants and the enlisted men of the Medical Department to duty and report them on the muster rolls in the capacity in which they are serving. With the approval of the commanding officer, he will also appoint the matrons. (*C. A. R., No. 55.*)

1449. Hospital matrons will be allowed at hospitals at posts and arsenals in numbers to be fixed by the Surgeon General.

1450. Patients will, if possible, leave their arms and accouterments with their companies.

1451. Whenever a soldier is detached from his company or other organization or station for treatment or observation by and under control of officers of the Medical Department, his company or other immediate commander will send the soldier's service record directly to the medical officer in charge of the hospital or other place to which the soldier is or has been sent. If the service record is not received by such medical officer in due time, he will make a direct call upon the proper officer to furnish it. The service record of the soldier will be transmitted by indorsement to the several officers under whose charge he comes in the course of subsequent transfers, should such ensue, from hospital to hospital, by hospital ships, hospital trains, or otherwise, or when he is sent to an organization or station for duty. In case the soldier is returned or sent to, or receives a furlough at the expiration of which he is to return to or join, a particular company or other organization or station, the service record will be sent directly to the immediate commander of such company or other organization or station.

Whenever a soldier detached from his company or other organization or station and under control of the Medical Department passes out of that control, his service record will be forwarded at once by the responsible officer as follows: (a) In case of discharge, death, retirement, capture, desertion, return to duty, or upon receiving a furlough at the expiration of which the soldier is to return to his company or other organization or station, or upon being dropped, to the soldier's company or other immediate commander; (b) in case of transfer

to another company or other organization or station, to the immediate commander of the company or other organization or station to which the soldier is transferred; (c) in case of transfer to the Government Hospital for the Insane, to The Adjutant General of the Army.

In the cases of soldiers detached from their companies or other organizations or stations and under the control of the Medical Department action will be taken by the proper medical officers as follows: If a soldier is discovered to be a deserter from the Navy or Marine Corps, paragraph 133 will be complied with; if a soldier is discharged, a final statement will be furnished to him; if a soldier dies, paragraph 162 will be complied with. (*C. A. R., No. 55.*)

1452. Sick or wounded soldiers, discharged while in hospital, will be entitled to medical treatment in hospital, and to the usual ration during disability, or for the period considered proper for them to remain under treatment, but a discharged soldier who has left the hospital will not be readmitted except upon the written order of the commanding officer.

1453. Recently discharged soldiers, needing hospital treatment, who arrive in New York City, San Francisco, or other port on Government transports, may be sent to one of the military hospitals in the vicinity, and rations in kind drawn for them while undergoing treatment.

1454. Tents, clothing, hospital furniture, and other stores used in the treatment of contagious diseases will be disinfected or burned upon the recommendation and under the supervision of a medical officer.

1455. The Secretary of War may, on the recommendation of the Surgeon General, order gratuitous issues of clothing to soldiers who have had contagious diseases, and to hospital attendants who have nursed them, to replace articles destroyed by order of the proper medical officer to prevent contagion.

1456. Medical officers in charge of hospital property will not permit it to be used for other than hospital purposes.

1457. Civilian employees at military posts, including the employees of post exchanges, may be furnished the medical supplies prescribed for them by a medical officer under such regulations as the Surgeon General may establish in accordance with law.

1458. A civilian employee on duty at a station where other than Army medical attendance can not be procured is entitled, when necessary, to admission to hospital.

1459. A civilian seaman or river boatman will be admitted to an Army hospital only on permit issued by a medical officer of the Public Health Service or by a customs officer, unless his condition demands immediate relief, when in the discretion of the post commander he may be admitted in advance of the receipt of the permit. Officers and enlisted men of the Organized Militia while attending national rifle contests or joint camps of instruction will be admitted to field hospitals of the Army on the approval, respectively, of the executive officer of the national matches or the commanding officer of the joint camps of instruction. Members of the families of officers and enlisted men requiring hospital treatment or isolation will be admitted to Army hospitals when suitable accommodations for their care are available. Other civilians not in the public service will be admitted to hospital only in cases of extreme necessity, and by permission of the commanding officer on the written application of the surgeon. Their food will be purchased from the hospital fund when they have the means to reimburse that fund for such purchases. In cases of destitution rations may be issued to them under the conditions laid down in paragraph 1219.

1460. Hospital charges at the Army and Navy General Hospital, Hot Springs, Ark., and at the General Hospital at Fort Bayard, N. Mex., are governed by special regulations made from time to time. Subsistence charges for patients in other Army hospitals, except field hospitals, will be as follows: For retired enlisted men of the Army, Navy, and Marine Corps, for enlisted men of the Navy and Marine Corps, and for civilians on the footing of enlisted men, 40 cents a day; for officers of the Army, \$1 a day; for officers of the Navy, including warrant officers, and of the Marine Corps, and for civilians on the footing of officers, \$1.25 a day. In field hospitals the subsistence charges for the above classes will be 30 cents a day, 50 cents a day, and 60 cents a day, respectively. When necessary to protect the hospital fund at posts in Alaska against actual loss the post commanders may prescribe an additional charge for each such patient not to exceed 25 cents a day. The money received for subsistence charges will be accounted for with the hospital fund.

A medicine charge of 25 cents a day will be made for all patients in Army hospitals who are not entitled to medical care and treatment at the cost of Army appropriations, including officers and enlisted men of the Navy and Marine Corps, civilian employees and civilians, the money received therefor to be deposited in the Treasury of the United States to the credit of the proper appropriations and to be accounted for in due form accordingly.

The surgeon will determine in each case, subject to instructions from higher authority, whether civilian patients shall be on the footing of enlisted men or of officers.

Subsistence charges will be made for officers and enlisted men of the Organized Militia admitted to field hospitals of the Army under paragraph 1459, at the rate of 50 cents a day and 80 cents a day, respectively, to be accounted for with the hospital fund, and medicine charges at the rate of 25 cents a day to be deposited to the credit of the proper appropriations. The subsistence charges for enlisted men and the medicine charges for officers and enlisted men will constitute charges against the allotments, under section 1661, Revised Statutes, to the State, Territory, or District of Columbia, to the militia of which the patients respectively belong.

1461. Officers and civilian employees of the Army should pay their indebtedness for hospital charges before leaving the hospital, or promptly at the end of every month if they then continue in the hospital.

If the hospital charges against an officer are not paid by the fifth day of the month immediately following that in which they were incurred, the commanding officer of the hospital will forward a statement of the indebtedness, through military channels, to the Surgeon General, for the action required by paragraph 1308.

A civilian employee who is unable to pay his hospital charges at the prescribed time will give a certificate of his indebtedness, in triplicate, on Form 49 A, Medical Department (marking one number "original," one "duplicate," and the third "triplicate"), to the commanding officer of the hospital, who will designate by indorsement thereon the officer to whom the amount of the indebtedness should be remitted, and will forward the original and duplicate at once through proper channels to the officer under whom the employee is serving, retaining the triplicate for his own files. The employing officer will refer the certificate to the quartermaster or disbursing officer who is to pay the employee, and such quartermaster or disbursing officer will deduct the amount of the indebtedness from the pay due, and will remit the amount so deducted to the officer designated to receive it. When an employee who is indebted for hospital charges dies before the indebtedness is settled, the commanding officer

of the hospital will prepare an account thereof in duplicate certifying the same to be correct, and will forward one number to the employing officer for his information and guidance, and the second number, through the Surgeon General, to the Auditor for the War Department, retaining a copy for his own files. Should a certificate of the indebtedness have been given previously all the numbers thereof will be assembled and forwarded with the account for the auditor. Ordinarily the commanding officer of the hospital where the employee was cared for will be designated as the officer who is to receive the amount of the indebtedness. But when the hospital is about to be or has been closed the department surgeon having jurisdiction over it should be designated to receive the remittance; or if the field army or independent division, or the territorial department, under which the charges were incurred, is about to be or has been disbanded or discontinued, then the Surgeon General should be so designated. The Surgeon General should also be designated to receive remittances for hospital service rendered in general hospitals which have been or are about to be closed.

1462. The surgeon of a post or command, or the commanding officer of a general hospital or other sanitary formation, will keep, account for, and expend the hospital fund, according to the instructions of the Surgeon General, exclusively for the benefit of the sick in hospital and of the enlisted men of the Medical Department and members of the Nurse Corps on duty therein. (*C. A. R., No. 55.*)

1463. Medical and official publications furnished from the Surgeon General's Office to surgeons in charge of hospitals will be properly filed and preserved in the hospital library. The expense of binding these publications and those issued to department or division surgeons will be defrayed by the Medical Department, and they will be transported to and from the medical supply depots by the Quartermaster Corps.

HOSPITAL BUILDINGS.

1464. A building will not be erected for or occupied as a hospital until the opinion of a medical officer has been obtained in writing upon the suitability of site and proposed arrangement. If the commanding officer dissent from this opinion he will return it to the surgeon with his reasons indorsed thereon, who will forward it, through military channels, to the Surgeon General.

1465. Hospitals will be erected at permanent posts in accordance with plans and specifications furnished by the Surgeon General, approved by the Secretary of War.

1466. When alterations of or additions to hospitals are necessary, the surgeon, after obtaining from the quartermaster an estimate of cost, will transmit plans and specifications, with proposed modifications, through military channels, to the Secretary of War. Similar action will be taken upon quarters for master hospital sergeants, hospital sergeants, and sergeants first class, Medical Department. (*C. A. R., No. 42.*)

1467. When hospitals or quarters for master hospital sergeants, hospital sergeants, or sergeants first class, Medical Department, are erected or repaired, the officer conducting the work will consult the surgeon, who will inspect the work during its progress; and when a building is ready for occupancy, the surgeon will report as to its merits to the Surgeon General, through the regular channel, and furnish a copy of the report to the constructing officer. (*C. A. R., No. 42.*)

1468. Estimates for new construction, betterments, and repairs in connection with hospitals, quarters for master hospital sergeants, hospital sergeants, and sergeants first class, Medical Department, and other buildings, structures, and

systems payable from the appropriation for "Construction and repair of hospitals" or "Hospital stewards' quarters" will be prepared separately, but in the same manner and forwarded at the same time as the estimates pertaining to other appropriations of the Quartermaster Corps.

These estimates will be prepared by the quartermaster, to whom the surgeon will furnish in writing a statement showing the items required.

When the work has been completed the surgeon will report to the Surgeon General whether or not it was performed according to the estimate and will furnish to him a statement showing the material and balance of allotment remaining. Approved plans or estimates for construction or repair will be altered only by authority of the Secretary of War. (*C. A. R., No. 42.*)

1469. The Surgeon General will furnish to the Quartermaster General in sufficient time for his annual estimates a statement showing the hospital repairs which will be needed during the ensuing year, with estimated cost of the same. (*C. A. R., No. 10.*)

1470. No portion of any hospital building at a military post will be used or occupied as quarters, nor will any mess be permitted or maintained therein except such as may be necessary for patients and enlisted men there on duty.

SICK CALL.

1471. At sick call the enlisted men of each company who require medical attention will be conducted to the hospital or infirmary by a noncommissioned officer, who will give to the attending medical officer the company sick report book containing the names of the sick. The medical officer, after examination, will indicate in the book, opposite their names, the men who are to be admitted to hospital and those to be returned to quarters, noting what duties the latter can perform and any other information in regard to the sick which he may have to communicate to the company commander. The senior medical officer of every command (except independent medical units) promptly after sick call each morning will forward to the adjutant a report of the sick of the command on the prescribed form furnished by the Surgeon General. After the report has served its purpose at headquarters of the command the adjutant will enter in the proper columns the strength of the command for the day present and absent and return the report to the medical officer. Completed morning reports of sick will be preserved for a period of one year, unless the command is sooner discontinued, when they will be destroyed.

1472. Medical officers will furnish company commanders any information, except the diagnosis, which will assist them in determining, for entry on the muster rolls, whether or not the disability of a soldier who is or has been on sick report originated in the line of duty, entering this information in the company sick report book. When required they will furnish the diagnosis to the commanding officer.

MEDICAL ATTENDANCE.

1473. Medical officers and contract surgeons on duty will attend officers, enlisted men, contract surgeons, acting dental surgeons, members of the Nurse Corps, prisoners of war, and other persons in military custody or confinement, and applicants for enlistment while held under observation; also, when practicable, the families of officers and enlisted men; and at stations, or in the field, where other medical attendance can not be procured, civilian employees. Medicines will be dispensed to all persons entitled to medical attendance, and hospital stores to enlisted men and hospital matrons, also to officers at posts or stations where they can not be procured by purchase.

1474. Medical officers and contract surgeons at their stations will furnish medical attendance to officers and enlisted men on the retired list, but they will not be required to leave their stations for that purpose. Medicines, dressings, etc., will be supplied to retired officers and enlisted men from Army dispensaries on medical officers' prescriptions.

1475. Enlisted men sick at recruiting stations, excepting those with trivial disabilities or those with severe injuries which render their removal impracticable, will be sent by the recruiting officer for treatment to the nearest military hospital.

1476. When medical treatment, including medicine, nursing, and hospital care, is required by an officer, an enlisted man, a contract surgeon, an acting dental surgeon, or an Army nurse, on duty with any command or detachment by a prisoner in military custody, or by an applicant for enlistment held under observation, and can not otherwise be had, the commanding officer may employ the necessary civilian service to furnish the same, and just accounts therefor will be paid by the Medical Department. When the officer, the contract surgeon, the acting dental surgeon, or the nurse who requires such treatment is on duty without troops, or the enlisted man is on duty where there is no officer, he or she may arrange for the required service. When medical treatment is required by the superintendent of the Nurse Corps while on duty and can not otherwise be had she may in like manner procure the necessary civilian service, just accounts therefor to be paid by the Medical Department.

Accounts for the medical treatment of officers, enlisted men, contract surgeons, acting dental surgeons, the superintendent of the Nurse Corps and nurses absent from duty, and of the families and servants of officers and men, are not payable from public funds. Accounts for consultation will not be allowed. Treatment of chronic complaints by a specialist will not be paid for unless authority to employ such specialist has been obtained from the Surgeon General. Surgical appliances will be paid for only upon satisfactory evidence of their necessity; and such evidence, except in cases of emergency, should be submitted to the Surgeon General for his approval before purchase. Accounts for hospital stores will be paid only for enlisted men.

1477. Accounts for medical care and treatment arising among troops under the immediate supervision of the War Department will be forwarded directly to the Surgeon General; those arising among departmental troops or the troops of a mobilized division, to the department or division surgeon. Accounts for continuous service will be rendered monthly; those for temporary service, promptly upon the completion of such service. Blank forms may be obtained from the Surgeon General on application. Separate forms are provided for physicians' bills, medicine bills, hospital bills, special nursing bills, and reimbursement claims. The account will in each case be stated on its special form, complying fully with all the instructions printed thereon. (*C. A. R., No. 39.*)

1478. Rescinded. (*C. A. R., No. 39.*)

1479. The compensation allowed to civilian physicians for ordinary medical attendance on public account at garrisoned posts or camps will not exceed the following rates, and if the local charge per visit is less the account will be rendered at the local rates: For attending post or sick call, five patients or less, \$2.50; for each patient in excess of five, 50 cents; for each additional visit to post or sick call on the same day, when necessary, \$2. Where there is a large sick report and the service will be required for an extended period, application will be made to the Surgeon General for authority to employ a physician by the month. Accounts arising at posts or camps under exceptional circumstances, all accounts arising at other places, and accounts for special or surgical services will be allowed at reasonable rates approved by the Surgeon General.

1480. Rescinded. (*C. A. R., No. 39.*)

1481. Rescinded. (*C. A. R., No. 39.*)

1482. Compensation of special nurses may be allowed at reasonable rates approved by the Surgeon General, not, however, exceeding the rates customary in the vicinity for services of a similar character. (*C. A. R., Nos. 12 and 39.*)

1483. Bills incurred on Army account for medical care and treatment should not be paid otherwise than by disbursing officers, except when absolutely necessary. (*C. A. R., No. 39.*)

1484. The compensation allowed to civilian physicians for the physical examination of applicants for enlistment, when authorized by regulations or orders, will be at the following rates: For a single recruit, \$1; for two recruits on the same day, \$1.50; for three recruits on the same day, \$2; for four recruits on the same day, \$2.50, and 40 cents for each recruit over four examined on any one day. A physician employed at different recruiting stations will be allowed the above-mentioned rates in full for the examinations at each station. He will also be allowed 50 cents for each authorized vaccination. The accounts will be prepared on the special forms prescribed therefor, which may be obtained from the Surgeon General. The instructions printed on the forms will be carefully observed. (*C. A. R., No. 39.*)

1485. Civilian physicians employed, in the absence of a medical officer or contract surgeon, to examine physically or vaccinate enlisted men, under these regulations or orders from competent authority, will be paid at the rates prescribed above for the examination and vaccination of recruits.

MEDICAL SUPPLIES.

1486. Purchase of medical supplies will be made in pursuance of law, under the direction of the Surgeon General.

1487. The routine issue of disinfectants is prohibited.

1488. Damaged or unserviceable medicines, medical books, surgical or scientific instruments and appliances, pertaining to the Medical Department, will not be presented to an inspector for condemnation until authority for so doing has been obtained from the department surgeon, or, if with a mobilized division, from the division surgeon.

RETURNS.

1489. Each department surgeon will transmit, not later than the 5th day of every month, to the Surgeon General a return of the officers of the Medical Corps and of the medical section of the Officers' Reserve Corps, the contract surgeons, the officers of the Dental Corps and of the dental section of the Officers' Reserve Corps, the officers of the Veterinary Corps and the reserve veterinarians under assignment to or serving in the department during the preceding month. The chief surgeon of an Army corps will, in like manner, render a similar return of those who are not reported on the divisional and other returns made through him. The division surgeons of mobilized divisions and the surgeons of other units not divisional, forming parts of an Army corps, will in like manner render similar returns through the chief surgeon of the Army corps. The senior medical officer of a separate brigade or detachment of an Army corps, temporarily detached, will render a similar return through the same channel. The surgeon in charge of the medical base group of a line of communications will render a similar return through the chief surgeon of the Army corps or senior medical officer of troops at the front of those under assignment to or serving on the line of communications who are not included in other returns. The senior medical officer of a post, station, or

separate command under the immediate direction of the War Department will, unless otherwise instructed, render a similar return directly to the Surgeon General.

Separate returns will be made in like manner of the medical officers of Volunteers and of the National Guard in the service of the United States.

When consolidated field returns of sanitary personnel are required by division or other commanders, medical officers are authorized to substitute an extract copy thereof for the returns called for in this paragraph. (*C. A. R., Nos. 12 and 46.*)

ARTIFICIAL LIMBS.

1490. Every officer, enlisted man, or employee of the military forces of the United States who, in the line of duty, or through disease contracted in service, shall have lost a limb, or the use of a limb, will receive once every three years an artificial limb or appliance, or commutation therefor if he shall so elect, under such regulations as the Surgeon General of the Army shall prescribe. The money value allowed as commutation is, for a leg, \$75; for an arm, foot, and apparatus for resection, \$50.

1491. Necessary transportation, including sleeping car accommodations, required for travel to place where artificial limbs may be fitted, will be furnished by the Quartermaster Corps, the cost to be refunded from any money appropriated for the purchase of artificial limbs.

1492. An officer who pays an account for transportation of persons to enable them to procure artificial limbs will take credit for amounts paid for such transportation in the usual manner on his accounts current, and the vouchers evidencing the payments will accompany the accounts to the Auditor for the War Department for settlement. For the convenience of the auditor in adjusting the appropriations involved the vouchers should bear conspicuously across their face a notation reading, "Transportation to have artificial limbs fitted."

ARTICLE LXXV.

CORPS OF ENGINEERS.

NOTE.—Regulations for the government of the Corps of Engineers, prepared and published under the authority of the Secretary of War, are distributed to its officers by the Chief of Engineers. Only such regulations are herein given as are general in their nature or affect other branches of the service.

1493. The duties of the Corps of Engineers comprise reconnoitering and surveying for military purposes, including the laying out of camps; the preparation of military maps of the United States and its possessions, including cooperation with other Government and private mapping agencies, and in field operations, of maps of the theater of operations; selection of sites and formation of plans and estimates for military defenses; construction and repair of fortifications and their accessories; the supervision of the location of all buildings in or within 1 mile of any fortification; the installation of electric power plants and electric power cable connected with seacoast batteries, and furnishing the necessary electrical supplies connected therewith; planning and superintending of defensive or offensive works of troops in the field; examination of routes of communications for supplies and for military movements; construction and repair of military roads, railroads, and bridges; military demolitions; execution of river and harbor improvements assigned to it; and such other duties as the President or Congress may order. It collects, arranges, and preserves all correspondence, reports, memoirs, estimates, plans, drawings, such

deeds and titles as relate to the Washington Aqueduct and public buildings and grounds in the District of Columbia, and models which concern or relate in any wise to the several duties above enumerated.

In time of actual or threatened hostilities, within the theater of operations, it has charge of the location, design, and construction of wharves, piers, landings, storehouses, hospitals, and other structures of general interest; and of the construction, maintenance, and repair of roads, ferries, bridges, and incidental structures; and of the construction, maintenance, and operation of railroads under military control, including the construction and operation of armored trains. (*C. A. R.*, No. 46.)

1494. The Chief of Engineers will have his headquarters at Washington, D. C., and will be charged, under the direction of the War Department, with the command of the Corps of Engineers, both staff and line, excepting such portions as are specifically detached by order of the War Department, and with the management of the Engineer Department, including the regulation of the duties of all officers, agents, and others who may be employed under his direction.

1495. When officers or troops of the Corps of Engineers are detached from the command of the Chief of Engineers they will continue to conform to the regulations of the Engineer Department in regard to the keeping of records and rendering of reports and accounts.

1496. Officers and troops serving under the immediate orders of the Chief of Engineers will not be diverted from such service except in cases of marked public exigencies, and when so diverted the officers will immediately report the facts to the Chief of Engineers, forwarding a copy of the orders they may have received. The officer issuing the order will transmit a copy directly to the War Department. Upon the termination of the exigency such officers or troops will be returned to their prior service, unless otherwise directed by the Chief of Engineers.

1497. The senior officer of engineers commanding engineer troops serving with an army, a field army, or an independent division in the field, will be attached to general headquarters of that organization, but will not be a member of the staff of the commanding officer unless specifically so appointed.

1498. The senior officer of engineers serving with an army, a field army, a division, a brigade, or a smaller body will communicate to the commander thereof any orders received from any engineer officer who has authority to issue such orders.

1499. An engineer directed to superintend any works to be constructed by troops will point out what is to be done, and will maintain such a supervision as will enable him to see that it is done correctly. It will be the duty of the officer having charge of the detachment to execute the work in accordance with the instructions of the engineer officer in charge. The detail of troops for work to be carried on under the superintendence of engineers will be furnished on requisition addressed to the officer in chief command of the troops by the senior engineer officer on the staff of that command. The requisition will specify the number of men required, the times and places at which they will assemble to commence work, and the name and rank of the engineer officer to whom they will report. The requisition may be for part of a day or night, for a whole day or night, for a week or a longer period, according to circumstances, the duration of the service always being specified.

1500. When on duty in the field with armies or other independent organizations, engineer officers making surveys and reconnaissances will at once forward their maps and reports of operations to the proper officer at headquarters, who will report directly to the commanding officer at those headquarters.

1501. The senior engineer officer serving with an army or other independent organization in the field will, subject to the approval of his commanding officer, report monthly to the Chief of Engineers, United States Army, the operations of the engineer force under his direction sufficiently in detail to show the nature and extent of the operations and the respective portions executed by the several engineer officers engaged therein.

1502. The senior engineer officer will also cause to be made plans of all works executed under his direction, and will cause journals to be kept, showing by drawings and descriptions, as far as practicable, each day's events. These plans and descriptions, with maps of all surveys and reconnaissances and explanatory reports or memoirs, will be carefully preserved and transmitted at suitable opportunities to the Chief of Engineers, United States Army.

1503. When an engineer officer is sent to any military department, fortress, garrison, or post, a duplicate of his orders will be sent to the commanding officer. On his arrival the engineer officer will communicate his orders, and necessary facilities for executing them will be afforded by the commanding officer. While so on duty, without being especially put under the direction of the commanding officer, the engineer officer will be furnished with copies of all orders and regulations of the command relative to etiquette and police and with the countersign when quartered within a chain of sentinels. The engineer officer will report to the commanding officer when relieved from duty within the limits of the command.

1504. Engineer officers engaged in the construction of fortifications or other public works are entitled to the same allowances as are provided by regulations for officers at garrisoned posts.

1505. All plans for new fortifications, and all plans embodying important structural changes in existing fortifications, will be sent to the Chief of Staff, through the Chief of Coast Artillery, for the approval of the Secretary of War. The plans will be prepared for approval by the Chief of Engineers and the Chief of Coast Artillery, and by the Chief of Staff, for the Secretary of War. No alterations will be made in any fortification or in its casemates, quarters, barracks, magazines, storehouses, or any other building belonging to it, nor will any building of any kind, or work of earth, masonry, or timber be erected within any fortification, or within a mile of its exterior, except under the direction of the Chief of Engineers, and by authority of the Secretary of War.

1505j. 1. All electrical equipment connected with new fortifications under construction, or old fortifications not in the hands of Coast Artillery troops undergoing structural modifications, shall be installed by the Corps of Engineers in the course of such construction or modification, and after the new or the modified fortifications shall have been turned over to the Coast Artillery Corps for service, all work of maintenance and all ordinary repairs of said electrical equipment shall be done by Coast Artillery troops under the supervision of coast defense commanders. Repairs involving construction work, or structural modifications of the fortifications, of an engineering nature, shall be made by the Corps of Engineers.

2. Installation of new articles of electrical equipment in old fortifications in charge of the Coast Artillery Corps shall be made by the Coast Artillery Corps; provided that any structural changes of the fortifications that may be necessary to prepare them to receive said installations shall be made by the Corps of Engineers. The Coast Artillery shall install and connect up with the existing system all circuits of such new installations.

3. The Coast Artillery Corps shall be charged with the installation and maintenance of submarine mine and submarine fire-control cables.

1506. When any fortification or any of its accessories is in all respects complete, so far as the Engineer Department is concerned, the Engineer officer in charge thereof, when authorized by the Chief of Engineers, will notify the proper commanding officer that he is prepared to transfer the work for use and care by troops. The commanding officer will thereupon make a thorough inspection of the work, and, if found satisfactory, will accept the same, giving the Engineer officer a written statement to that effect, and transmitting a copy of the same to The Adjutant General of the Army through proper channels. This acceptance will include a statement of the condition of the work and its suitability for the purpose for which it is intended. Until a work has been so turned over and accepted, it will not be occupied by troops except by the special order of the War Department. (*C. A. R., No. 29.*)

1506j. 1. Officers of the Corps of Engineers detailed for duty in charge of Engineer districts that include works of permanent fortifications will perform such of their duties as pertain to the preservation and repair of such permanent fortifications (not comprising structural changes) and to the preparation and carrying out of plans for the land defense of the frontiers, under the supervision of the department commander of the territorial department in which such works may be located. This section shall not be so construed as to cause interference with the other duties with which these officers are charged under the immediate orders of the Chief of Engineers.

2. Allotments from the appropriations for preservation and repair of fortifications for such preservation and repair work as does not involve structural changes will be made by the Chief of Engineers to district Engineer officers in accordance with the recommendations of the department commander as far as may be practicable with the funds available.

3. Annual estimates of funds expected to be necessary for the preservation and repair of fortifications not involving structural changes will be submitted by district Engineer officers to the department commander and will be forwarded so as to reach the War Department by June 1 of each year, with such recommendations as the department commander may consider proper. These estimates will then be referred to the Chief of Engineers for his assistance in preparing the consolidated estimates for submission to the Secretary of War. (*C. A. R., No. 44.*)

1507. Travel allowances for officers of the Corps of Engineers, or for those on engineer duty, travelling on service connected with works of public improvement which are not of a military character will be paid from the special appropriation for the work. When changing station or traveling on duty connected with fortifications, or on any other military duty, the mileage will be paid by the Quartermaster Corps from the appropriation for mileage of the Army, except in cases where some other appropriation specifically provides that the travel allowance shall be paid therefrom.

1508. An officer of the Corps of Engineers is detailed as director of railways on the staff of the commander of the line of communications. Under the direction of that commander he is charged with the construction, maintenance, and operation of railways under military control in the theater of operations, directs and coordinates the work of the military and civil staffs, takes charge of such railways and their appurtenances in the theater of operations, including both existing lines and extensions, as may be required in military operations, and is responsible for the proper working of railways and for the supply of armored trains. He shall submit requisitions for the funds required for his work through the headquarters of the commanding general of the lines of communication, disbursements to be made and accounts rendered

under the regulations for the control of the Engineer Department. (*C. A. R.*, No. 46.)

1509. In operations in the field, transfers of funds and material pertaining to the engineer work of a command may be made between officers of the command on the order of the commanding officer.

1509½. Engineer equipment procured for issue to the Army and required by an officer for his own use in the public service may be sold to him by the Engineer Department at the regulation price and the money received passed to the credit of the proper appropriation. Engineer equipment thus sold to officers will not be disposed of to persons not in the military service. (*C. A. R.*, No. 31.)

1510. Engineer supplies will be issued to the Organized Militia of the several States, Territories, and the District of Columbia in accordance with the provisions of "An act to promote the efficiency of the militia, and for other purposes," approved January 21, 1908, as amended by the act of Congress approved May 27, 1908, upon proper requisition therefor.

ARTICLE LXXVI.

ORDNANCE DEPARTMENT.

NOTE.—Regulations for the government of the Ordnance Department, prepared and published under authority of the Secretary of War, are distributed to its officers by the Chief of Ordnance. Only such regulations are herein given as are general in their nature or affect other branches of the service.

GENERAL PROVISIONS.

1511. The Chief of Ordnance is charged with the duty of procuring, by purchase or manufacture, and distributing the necessary ordnance and ordnance stores for the Army and the Organized Militia, and establishes and maintains arsenals and depots for their manufacture and safe-keeping. All officers or other persons, in the military establishment to whom ordnance and ordnance supplies or funds are intrusted, will make accounts and returns thereof to the Chief of Ordnance at the times and in the manner prescribed.

1512. Ordnance and ordnance stores include cannon and artillery vehicles and equipments; apparatus and machines for the service and maneuver of artillery; small arms, ammunition, and accouterments; horse equipments and harness for the field artillery, and horse equipments for cavalry and for all mounted men except those in the Quartermaster Corps; tools, machinery, and materials for the ordnance service; and all property of whatever nature supplied to the military establishment by the Ordnance Department.

1512½. 1. The enlisted men of the Ordnance Department will consist of such number and grades as the President may from time to time direct under the provision of the law.

2. Ordnance sergeants will be appointed by the Secretary of War from sergeants of the line or Ordnance Department who shall have served faithfully for eight years, including four years in the grade of noncommissioned officer; and who are less than 45 years of age. Sergeants and corporals of ordnance will be appointed by the Chief of Ordnance, and privates, first class, will be appointed by the commander of a territorial department, division, or separate brigade in the field on the recommendation of the department, division, or brigade ordnance officer or by arsenal or depot commanders at ordnance establishments. Before appointment, ordnance sergeants and sergeants of ordnance

must pass, under the direction of the Chief of Ordnance, a satisfactory examination, to be conducted by the supply officer or ordnance officer of the station at which the applicant may be serving, or elsewhere as the Chief of Ordnance may direct.

3. Ordnance sergeants, though liable to discharge for inefficiency or misconduct, will not be reduced, except by sentence of a court-martial. Sergeants and corporals of ordnance may be reduced by sentence of court-martial or by the Chief of Ordnance, and privates, first class, may be reduced by sentence of court-martial, by the Chief of Ordnance, or by arsenal or depot commanders at ordnance establishments.

4. Within his command the commander of a territorial department, or of a field army, division, or separate brigade in the field, on the recommendation of the department ordnance officer, chief ordnance officer, division or brigade ordnance officer, may transfer enlisted men of the line of the Army as privates to the Ordnance Department, and he may transfer enlisted men of the Ordnance Department, except ordnance sergeants, from one organization to another where their services are required, reporting such transfer to the Chief of Ordnance. The assignment to station of ordnance sergeants except as may be provided in Field Service Regulations, will be made by the War Department or by commanders of territorial departments, under the special authority, in each case, of the War Department.

Applications for transfer from the line of the Army to the Ordnance Department will state the age, character, special qualifications, physical condition, date of expiration of current enlistment, previous service, and whether made for an existing or prospective vacancy, and will originate with the supply officer of the post or organization or coast defense ordnance officer, and will be forwarded through military channels.

5. All enlistments for the Ordnance Department will be made in the grade of private. Ordnance sergeants, sergeants, corporals, and privates, first class, of ordnance who have completed an authorized enlistment period, none of which has been passed in the reserve, may be reenlisted in their respective grades, and their warrants or appointments continued in force if reenlistment be made on the day following that of discharge.

Any noncommissioned officer enlisted on or after the first day of November, nineteen hundred and sixteen, furloughed to the reserve upon the completion of three years in the active service with an excellent character, shall be permitted to reenlist in the organization from which furloughed with the rank and grade held by him at the time of his furlough if he reenlists within 20 days after the date of such furlough. In each case the soldier will reenlist at the place where his organization is stationed. If, however, the supply officer under whom the soldier may be serving should not deem the continuing in force of the warrant or appointment to be for the best interest of the service, he will communicate through military channels his reasons in detail to the authority competent to appoint or promote to the grade for which reenlistment is desired, in order that a decision may be had before the date of the soldier's discharge. Each reenlistment and continuance will be noted on the warrant or appointment by the supply officer.

Commanding officers of posts or stations, upon the recommendation of the supply officer, may authorize enlistments, including the enlistment or reenlistment of married men, to fill vacancies within the allotment of enlisted men, Ordnance Department, made to organizations at the post or station or to the coast defense command.

6. When a man is enlisted for, reenlisted in, or transferred to the Ordnance Department, the supply officer who first receives the soldier will forward a

copy of his service record directly to the Chief of Ordnance, except in the case of a man stationed in the Philippine or Hawaiian Department, when the copy will be sent through the department ordnance officer.

Supply officers will make monthly returns of their ordnance detachments on a form to be furnished by the Chief of Ordnance. The returns will be forwarded to the Chief of Ordnance through department ordnance officers and will show the date and nature of any change affecting the status of the soldier.

7. Accounts of pay and clothing and all records pertaining to enlisted men of the Ordnance Department will be kept by the supply officer under whose immediate direction they are serving. All members casually at a post, camp or other station are under the immediate orders of the supply officer, except prisoners and those sick in hospital, who will, however, be borne on the muster rolls, morning report, and returns of the ordnance detachment. If discharged, their final statements will be prepared by the supply officer.

8. An ordnance sergeant at any ungarrisoned post or station will be responsible for the property of his own department and for such other property as may be intrusted to him for safe keeping. For all public property committed to his charge he will account to the heads of the staff departments or corps concerned, and if the means at his disposal are insufficient for its preservation he will report the facts.

9. The military control of ordnance sergeants serving at posts not occupied by troops is vested in the commander of the territorial department in which they are serving. All matters relating to them as soldiers subject to military command, as distinguished from the administrative duties imposed upon them by regulations and orders, will, except in cases of reenlistment, be determined at department headquarters, where their service records will be kept. When they are discharged, a copy of the service record upon which will be noted the fact of discharge, with the date, place, and cause and the character given on the discharge certificate will be forwarded to the Chief of Ordnance.

10. Ordnance Department enlisted personnel, except ordnance sergeants, is classified as follows:

- (a) That portion attached to mobile organizations and coast defenses.
- (b) That portion assigned to organizations pertaining to the Ordnance Department.

All men of the Ordnance Department will be carried on muster rolls of the Ordnance Department, under "Remarks," as attached to a definite mobile organization or coast defense command or as belonging to the unit of class (b). Similar notation will be made on the returns of the Ordnance Department. The number of men to be assigned to mobile organizations or coast defense commands will be as directed in War Department orders. When not prescribed in Tables of Organization, the number of men of class (b) assigned to the various organizations pertaining to the Ordnance Department will be determined by the Chief of Ordnance.

11. When mobile organizations take the field the ordnance personnel pertaining to each organization will accompany it. When Coast Artillery organizations take the field the attached ordnance personnel will be on the same basis as for the branch of the service into which the troops are organized; the ordnance enlisted men not taken into the field will remain on duty in the coast defenses to which they are assigned. When the troops again come under the jurisdiction of a post commander, the attached Ordnance Department personnel will be directed to report to the supply officer of the post for duty.

12. Property pertaining to the individual equipment of the Ordnance Department personnel, class (a) will be carried on the returns of the regimental

supply officer of the organization to which attached or of the coast defense ordnance officer. (*C. A. R., Nos. 52 and 55*).

1512. New designs of seacoast armament and ammunition and of ordnance material pertaining thereto, and of improvements therein, and the means for meeting deficiencies in such armament, ammunition, and material, and new designs of ordnance material and all essential changes in such material pertaining to the mobile Army, will be presented by the Chief of Ordnance to the Chief of Staff for reference to the War Department Board of Review, and the approval by the Secretary of War of the proceedings of the board with reference thereto will constitute his approval of the designs which is contemplated by regulations. (*C. A. R., No. 25*.)

ISSUES AND SALES.

1513. In time of peace, ordnance and ordnance stores are issued from the various arsenals and depots, to the extent authorized by regulations, on requisitions submitted in accordance with existing orders.

1514. In time of war, issues may be made to troops in service on the order of any general or field officer commanding an Army, garrison, or detachment, or of a chief ordnance officer of an Army, Army corps, or division. To authorize an issue to militia, they must have been regularly mustered into the service of the United States, and the requisition for the stores must be properly approved.

1515. The Chief of Ordnance will, on the recommendation of a department commander, approved by the Secretary of War, establish ordnance depots at such points as may be designated by the Secretary of War, where ordnance stores will be held for distribution to the troops, under such regulations as the department commander may prescribe.

1516. When practicable, these depots will be under the charge of ordnance officers, and only such limited supply of ordnance stores as may be required to meet current needs will be kept at or issued from them. All other ordnance stores will be supplied from the arsenals, as provided in paragraph 1513.

1517. Requisitions for ordnance supplies to meet current needs will be filled from a depot, under the instructions of the department commander. The officer in charge will be responsible, under the department commander, that sufficient stores, procured by timely requisitions upon the Chief of Ordnance are always on hand. Unserviceable and unsuitable ordnance and ordnance stores at such depots are under the control of the Chief of Ordnance.

1518. Requisitions for ordnance and ordnance stores not on hand within a department must be approved by the immediate commanders. The personal approval of the department commander or of the chief ordnance officer of his department is necessary, but in the absence of the department commander the approval may be made in his name by one of his staff officers.

1519. Requisitions will be made in conformity with the supply tables prepared by the Chief of Ordnance, unless extraordinary circumstances, to be plainly set forth in each case, should require a larger supply of one or more of the articles authorized.

1520. The service arms, ammunition, accoutrements, and horse equipments required by an officer or contract surgeon for his own use in the public service may be sold to him by the Ordnance Department at the regulation price and the money received passed to the credit of the proper appropriation. Ordnance supplies thus sold to officers or contract surgeons will not be disposed of to persons not in the military service. Necessary repairs to the service arms and equipments of an officer or contract surgeon will be made by the Ordnance Department at the cost of these repairs. Officers or contract surgeons making

purchases or having repairs done will furnish certificates of the fact that these sales or repairs are for their own use in the public service. Officers below the grade of major, required to be mounted, as prescribed in paragraph 1272, will be furnished with horse equipments by the Ordnance Department. The authorized number of sets of these equipments will be kept on hand in the unit accountability equipment of the organizations with which officers herein authorized to receive them are serving. Officers not serving with such organizations and entitled to receive horse equipments will submit requisitions therefor, through military channels, accompanied by a copy of the order of the department commander or higher authority designating them for mounted service where such service is temporary. To such officers serving at posts the issue of horse equipments will be made, on the approval of the post commander, by the post ordnance officer on memorandum receipt; to such officers not serving at posts the equipments will be regularly issued under formal invoices and receipts, and will be accounted for by them semiannually to the Chief of Ordnance on special individual returns. Articles of such equipments which become unserviceable shall be submitted to an officer of the Inspector General's Department and upon his recommendation to that effect may be turned in and new articles issued therefor. In the absence of an inspector such articles may be submitted to the action of a surveying officer and upon his recommendation may be turned in and new articles issued therefor. In each such case the surveying officer will recommend submission of the articles to an inspector and a copy of the report of survey will accompany the requisition for the articles to be replaced. An officer to whom horse equipments have been issued under the provisions of this paragraph, upon his promotion to field rank, the termination of mounted service, or upon joining an organization provided with equipment for his use, will promptly turn in his equipments, rendering a final return where previously accountable for such equipments. When an officer holding these equipments on memorandum receipt desires to retain them in his possession on changing station such a course is authorized by exchange of proper invoices and receipts between the post ordnance officers concerned or between the post ordnance officer and the officer holding the equipments if his new station is not at an Army post. When an officer who has been making special individual returns for horse equipments that were issued to him under this paragraph takes station at a post he will at once transfer the accountability for the horse equipments to the post ordnance officer and render a final return to the Chief of Ordnance. (*C. A. R., No. 1.*)

1521. When the arms or equipments authorized to be purchased in the preceding paragraph can not be obtained from an ordnance officer, officers may take from those for which they are accountable such articles as they require for their personal use or may furnish them to officers or contract surgeons of their commands for like purpose. In such cases the accountable officer will deposit the proceeds of the sales as required by paragraph 617 and make the report required by paragraph 612. At the end of each month an abstract of such sales on War Department Form No. 322 will be prepared in duplicate and forwarded to the Chief of Ordnance. One of these copies will be retained in the office of the Chief of Ordnance as a voucher to the property return of the officer. (*C. A. R., No. 55.*)

1522. Officers serving with troops may draw for their personal use, from stores belonging to the command with which they are serving, 1 regulation rifle and 1 revolver, with the appropriate equipments and the usual quantity of ammunition for each arm. This ordnance property may be used in action or target practice and will be accounted for on returns to the Chief of Ordnance.

1523. Ordnance stores will not be loaned to any person, and any officer violating this rule will be held responsible for the money value of the articles.

1524. Issues and transfers of ordnance stores will not be made on memorandum invoices and receipts except as provided for by regulation or orders and in special cases authorized by and subject to instructions from the Chief of Ordnance.

1525. An officer who makes an issue of ordnance stores to one not in command of troops, except under orders from competent authority, will be charged with the money value of the stores so issued.

1526. Civilian employees of the War Department may be armed when necessary for the protection of life or public property, and the same responsibility attaches to the officers accountable for the arms furnished them that attaches to those accountable for the arms in the hands of enlisted men. The sale of ammunition to civilians belonging to exploring or surveying expeditions authorized by law, and to civilian employees of the War Department, may be made for hunting purposes when considered necessary for their subsistence or for the interest of the United States. In the field the sale of meat cans, canteens, knives, forks, and spoons, when they can be spared, to an officer in charge of civilian employees for their use, is authorized, provided they can not be obtained in any other way.

1527. Arms lost, destroyed, or embezzled by civilian employees will be charged in the same manner as stores similarly lost by enlisted men, and the money value thereof accounted for as in case of sales made in accordance with paragraph 1521.

EXPENDITURE OF AMMUNITION.

1528. Ammunition will be expended only in target practice, preliminary instruction of the soldier, military exercises, and hunting, all within the prescribed allowances: in action; in defense of life or public property; in carrying out the prescribed duties of sentinels; and for authorized salutes.

1529. The necessity for all expenditures of ammunition must be shown by the certificate of the responsible officer, which certificate must accompany the property return of the accountable officer; and when ammunition is dropped from a return as "expended in action by civil employees," a statement giving the place, date, and attending circumstances sufficiently in detail to insure verification must be filed with the return.

1530. Ammunition expended by a soldier without orders, or not in the line of duty, or which may be damaged or lost through his neglect, will be charged to him.

1531. When ammunition is furnished to civilian employees, it is not to be dropped from the returns unless expended in action or in hunting when necessary to obtain subsistence. Ammunition not so expended will be returned to the responsible officer and accounted for by him or paid for at the price fixed.

SURPLUS AND DAMAGED STORES.

1532. Serviceable surplus ordnance stores in the hands of post or other ordnance supply officers, not required for reserve, may be shipped to another post in the same department, or may be turned in to the nearest arsenal on the order of a department commander, or, if in the hands of a recruiting officer, on the order of the War Department.

Such articles on hand in an organization, unless otherwise directed, will be turned in to the post or other ordnance supply officer, who will retain them for issue, or ship them, as hereinbefore provided. (*C. A. R., No. 30.*)

1533. Officers in charge of arsenals and ordnance depots will afford every facility to officers authorized to turn in property. They will give receipts for it according to condition.

1534. Whenever ordnance property in the hands of troops, except that under the supervision of an armament officer not specifically listed in War Department publications or orders as subject to the action of a surveying officer, becomes unserviceable it will not be presented for condemnation until no longer repairable with the means available within the organization, post, or district. Timely requisition will be made by the proper post or other ordnance supply officers on the Ordnance Department for such extra parts and materials as are required in making repairs of equipment with whose maintenance he is charged. (C. A. R., No. 30.)

1535. Articles of personal equipments or other ordnance property which a detached soldier carries with him, or for which he may be indebted to the United States at the time of his transfer, will be entered on duplicate invoice and receipt transfer blanks (Ordnance Department Form No. 152). The blanks will, when practicable, indicate the destination of the soldier. The two transfer blanks will be signed by the accountable officer, or the issuing officer in his name, and by the soldier acknowledging receipt of the stores, including those missing. One of these signed blanks will be forwarded with the service record of the soldier; the second constitutes the voucher under which the accountable officer will drop from his return the articles enumerated on the voucher.

In case the soldier is detached or transferred from an organization provided with unit accountability equipment the transfer blank will be made by the organization commander and the retained copy of the voucher will be turned over by him to the post ordnance officer, or if the organization is serving away from a post to the designated supply officer, who will issue to the organization commander like stores to replace those covered by the voucher and who will then use the voucher as his authority for dropping such articles from his return.

On arrival of the soldier at his destination all articles appearing on the transfer blank accompanying the service record will be taken up by the proper officer, who will receipt for the same on this blank and forward it immediately to the Chief of Ordnance. All articles missing on arrival will be charged against the soldier in the usual manner.

In case the soldier, upon arrival at his destination, is assigned to an organization provided with unit accountability equipment, all the articles appearing on the transfer blank accompanying his service record, will be taken up by the post ordnance officer, or, if the organization is serving away from a post, by the designated supply officer, and all articles missing on arrival will be charged against the soldier on the pay rolls of the organization and dropped from the return of the accountable officer under a statement of charges (Ordnance Department Form No. 86) made by the commanding officer of the organization and turned over by him to the accountable officer for that purpose.

When enlisted men are transferred in detachments, with an officer or noncommissioned officer in charge, from a recruit depot and each man is equipped identically and none of them are indebted for other articles of ordnance property, the articles of ordnance property carried by them will all be entered on but one invoice and receipt blank, prepared in duplicate, on Ordnance Department Form No. 152-D. Each of the two copies will be signed by the accountable officer and by the officer or noncommissioned officer in charge of the detachment acknowledging receipt of all the stores. A receipt roll will be made, in duplicate, on Ordnance Department Form No. 153 and duly signed by each of the enlisted men to cover his individual responsibility. One copy of the signed invoice and receipt blank and one copy of the signed receipt roll will be furnished to the officer or noncommissioned officer in charge of the detachment, and the other copies of these signed papers will constitute the voucher under which the

accountable officer will drop the property from his return. On arrival of the detachment at its destination the invoice and receipt blank and the receipt roll will be turned over to the post ordnance officer or the designated supply officer, who will take up all the articles appearing on the transfer blank and receipt for the same on this blank and forward it immediately to the Chief of Ordnance. All articles missing on arrival will be charged against the responsible soldiers on the pay rolls of the organizations to which they are assigned and dropped from the return of the accountable officer under statements of charges made by the commanding officers of the organizations and turned over by them to the accountable officer. In each case where the recruit is indebted to the United States at the time of his transfer, or the articles in his possession are not identical to those in the possession of the other men of the detachment, or where the detachment is not in charge of an officer or noncommissioned officer, individual transfer blanks will be used.

Unless the arrangements for the journey require the use of ordnance property en route, none will be transferred with such soldiers.

A copy of the transfer blank will be kept by each accountable officer for his retained return. (*C. A. R., Nos. 1 and 55.*)

1536. Detached soldiers going to or returning from the Philippine Islands and Alaska will be required to turn in all ordnance property in their possession before departure.

1537. Ordinary repairs can usually be made in the organization, post, or district with the means provided for that purpose by the Ordnance Department. When the repairs required can not be thus made, certain articles or classes of articles, designated by the Chief of Ordnance, may be turned over to the post ordnance officer, or other supply officer, for shipment to a designated arsenal on the approved recommendation of an inspector, or surveying officer, as provided in paragraphs 678 and 717. These will be shipped as directed by the inspector, or surveying officer, or, if no specific instructions are given, in accordance with the general instructions of the Ordnance Department. The voucher numbers of inspection or survey reports or copy of other authority authorizing the turning in or shipment of the stores will be given on the invoice transferring the same. (*C. A. R., No. 30.*)

1538. A department commander may, upon the request of an armament officer, order such shipments of machine guns, mobile and seacoast artillery, and articles pertaining thereto, including ammunition, as may be required, and dispose of surplus ordnance stores as provided in paragraph 1532. In each case a copy of the authority directing such shipment will accompany the invoice covering such transfer. (*C. A. R., No. 30.*)

1539. For the maintenance and improvement of machine guns, mobile and seacoast artillery, and articles pertaining thereto, armament districts are established in orders from the War Department, and the assignment of armament officers to the charge of these districts is made by the Chief of Ordnance. These officers will keep themselves informed of the condition of the matériel by inspections and by direct correspondence with the various district and post commanders. The former are authorized to make the necessary repairs to matériel in their districts, but no alterations can be made without the authority of the Chief of Ordnance. Where repairs indicate improper handling or neglect of matériel, the circumstances will be reported to the Chief of Ordnance.

When mechanics employed by an armament officer are on duty at a post or in a district, they will, in the absence of the armament officer, be under the supervision of the post or district commander.

When a part of or an accessory to an article constituting a portion of the armament of a district becomes obsolete and is replaced, the obsolete part or accessory will be transferred by the coast defense commander to an arsenal to be designated by the armament officer, or will be submitted for the action of an inspector if the armament officer so recommends. (*C. A. R., Nos. 25 and 30.*)

1540. No officer will turn in any unserviceable ordnance stores except as provided in these regulations.

1541. Price lists of ordnance and ordnance stores will be published from time to time for the information and guidance of officers in making inventories, sales, and charges for the loss of or damage to ordnance property.

1542. Arm chests not required for the storage of supplies will be returned to the nearest arsenal or ordnance depot when the cost of transportation is not greater than the value of the property. Officers to whom such chests have been issued will be charged with their value if they are destroyed.

INSPECTION OF ORDNANCE AND ORDNANCE STORES.

1543. When the recommendation of an inspector for sale of ordnance stores is approved, both copies of the report will be returned to the officer accountable for the stores, with detailed instructions how to make the sales. One copy of each inventory and inspection report must accompany the property return. Sales of condemned ordnance and ordnance stores will be accounted for on Form No. 272, which will be executed in duplicate and forwarded directly to the Chief of Ordnance on completion of the sale. A third copy will accompany the officer's property return.

PACKING AND TRANSPORTATION.

1544. Officers who ship arms of any description are held responsible that they are so packed that, under ordinary handling, they can not break loose from their fastenings in the boxes, and that no loaded arm is packed for transportation. When loaded arms, or arms insecurely packed, are received by an officer, he will report the facts direct to the Chief of Ordnance.

1545. After packing arms or ordnance stores for shipment, the covers and bottoms of the arm chests and packing boxes will, if possible, be sealed with wax and stamped with an official mark by the officer responsible. The lid will be secured by screws, at least two of which will be sealed. Each board on top and bottom will have at least one sealed screw. The screw heads will be countersunk to a depth sufficient to protect the wax seal from injury. The design of the seal will designate the arsenal, depot, post, or organization from which shipment is made. For over-sea shipments, all boxes and crates will be properly strapped with wire or hoop iron. Boxes containing arms and other valuable stores will be sealed prior to shipment from ordnance establishments in accordance with special instructions from the Chief of Ordnance.

1546. The Ordnance Department will prepare official stamps for sealing boxes and distribute them to each company. Company commanders will account for them in their returns of ordnance stores and use them exclusively for purposes intended.

1547. In preparing property for shipment, the name of the invoicing officer, or of the arsenal or depot, the date of the invoice, the number, gross weight, and general contents of each box or package, and the name or designation of the receiving officer will be distinctly marked thereon prior to delivery for ship-

ment. Each quartermaster who ships or receives ordnance stores will satisfy himself that the seals on the packages are unbroken. If the seals should be broken and any stores lost, he will cause the value of the lost stores to be charged to the carrier.

1548. When stores are turned over to the Quartermaster Corps for transportation they will be accompanied by triplicate invoices, one of which will be receipted and returned by the shipping quartermaster to the invoicing officer. Duplicate invoices with duplicate receipts to be signed by the receiving officer, and a shipping list describing the contents of each box or package, will be sent direct to the receiving officer by mail, to reach him, if practicable, before the receipts of the stores. Materials procured for current use at ordnance establishments will be transported at the expense of the Ordnance Department.

RETURNS AND REPORTS.

1549. Officers accountable for ordnance and ordnance stores will render the returns and statements required by Ordnance Property Regulations.

1550. Records of artillery firing will be kept at seacoast forts and by organizations of mobile artillery, as prescribed in instructions from the War Department, and a copy forwarded directly to the Chief of Ordnance.

1551. Requisitions for blanks and blank books required for the use of the Ordnance Department will be made annually by every regiment and company, and forwarded to the Chief of Ordnance not later than April 30 of each year. Those suited to every command and arm of the service can be obtained upon application to the Chief of Ordnance. The requisitions will give the form-number and state the quantity of each blank and blank book desired, based on the needs for the following fiscal year.

1552. In the care and preservation of artillery material, magazines, small arms, etc., the instructions contained in the authorized Manual of Coast Artillery and the publications of the Ordnance Department will be observed.

TESTS AND EXPERIMENTAL TRIALS.

1553. No written or pictorial description of tests by this Government of arms or munitions of war will be made for publication without the authority of the Secretary of War, nor will any information, written or verbal, concerning them which is not contained in the printed reports and documents of the War Department be given to any unauthorized person.

1554. Except by special authority of the Secretary of War, no persons other than officers of the Army and Navy of the United States and Members of Congress in their official capacity, and persons in the service of the United States employed in direct connection with such tests, will be allowed to witness the same.

1555. Until further orders, inventors and manufacturers, or their properly accredited representatives, will also be permitted to be present at tests of and experiments with their own inventions.

Commanding officers of ordnance establishments and other military posts are authorized to pass such persons into them when they present the necessary credentials, but only for the purpose stated. Access to parts of commands not involved in the tests and experiments and to any war material, or to any means of obtaining knowledge of the same, is prohibited.

ARTICLE LXXVII.

SIGNAL CORPS.

NOTE.—Regulations for the government of the Signal Corps, and for the operation and maintenance of United States military telegraph lines and cables, prepared and published by the Chief Signal Officer of the Army, under authority of the Secretary of War, are distributed to officers and men by the Chief Signal Officer. Only such regulations are herein given as are general in their nature or affect other branches of the service.

1556. The Chief Signal Officer shall have charge, under the direction of the Secretary of War, of all military signal duties and of books, papers, and devices connected therewith, including telegraph and telephone apparatus and the necessary meteorological instruments for use on target ranges and for other military uses; of the construction, repair, and operation of military telegraph lines and the duty of transmitting messages for the Army, by telegraph or otherwise, and of all other duties usually pertaining to military signaling and the operations of such corps as shall be confined to strictly military matters; of the direction of the Signal Corps of the Army and the control of the officers, enlisted men, and employees attached thereto; of the supply, installation, repair, and operation of military cables, telegraph and telephone lines, and radio apparatus and stations, except as provided in paragraph 1505; of the supply, repair, and operation of field telegraph trains and balloon trains; of the preparation and revision of the War Department Telegraph Code; of the supervision of such instruction in military signaling, telephony, and telegraphy as may be prescribed in orders from the War Department, except such as is used by the Coast Artillery in fire control and fire direction and service of submarine mines; of the procurement, preservation, and distribution of the necessary supplies for the Signal Corps and of the procurement and issue of signal equipment required in coast defense. (*C. A. R., Nos. 40 and 49.*)

1557. Men may be enlisted for the Signal Corps, at the discretion of the Chief Signal Officer of the Army, in the class or grade for which they are competent and in which there is a vacancy. They will be promoted and reduced in the class or grade, as fixed by law, by the Chief Signal Officer of the Army, or by his authority.

Master signal electricians, first-class sergeants, sergeants, corporals, cooks, and first-class privates may be reenlisted for the Signal Corps in their respective grades, and their warrants and appointments continued in force, if reenlistment be made on the day following that of discharge. Each reenlistment and continuance will be noted on the warrant or appointment. If, except in the cases of men on duty in the Philippine and Hawaiian Departments, the officer under whom the soldier is serving does not deem the continuance in force of the warrant or appointment to be for the best interests of the service, he will make a report in detail to The Adjutant General of the Army, through military channels, not less than three months prior to expiration of the soldier's term of service, in order that a decision may be made before the date of discharge and the soldier notified thereof. A similar report will be made to the commanding generals, Philippine and Hawaiian Departments, respectively, with regard to Signal Corps men stationed in those departments.

For the reenlistment of married men in the Signal Corps permission must be obtained from the Chief Signal Officer of the Army for men on duty at points other than in the Philippine and Hawaiian Departments, and from the department signal officers, Philippine and Hawaiian Departments, respectively, for men stationed in those departments. (*C. A. R., Nos. 8 and 12.*)

1558. The senior signal officer of an army in the field commands the signal parties serving therein. Orders affecting them will be transmitted through

him, and he will be responsible that they are fully instructed, adequately supplied, and that they properly perform their duties. He will keep himself informed of the position of the army and of the enemy, and, under the instruction of the general commanding, will establish his stations. He will submit reports of operations to the general commanding, and forward copies thereof to the Chief Signal Officer in Washington, to whom he will report monthly his station, the strength and condition of his parties, and all other matters pertaining to their duties and equipment.

1550. When telegraph lines are placed under charge of signal officers, they will be held responsible for their construction, maintenance, and operation. Commanding officers and others will see that the special duties of these officers are not interfered with, and upon proper application will render any assistance in their power.

1560. Communications transmitted by telegraph or signals are always confidential, and will not be revealed except to those officially entitled to receive them, or in cases specially ordered by competent military authority.

1561. Official and military messages will have precedence. Subject to modification in orders from the War Department, or by order of the commanding general of the army in the field, important dispatches will be usually sent in the following order of priority, due regard being had to the relative urgency of messages in the same class:

First. Those relating to the movement or administration of the army in the field, and of the Navy.

Second. Other messages relating to the Army, to the Navy, and to governmental departments or bureaus of the United States.

Third. Messages of State, Territorial, or other civil officials, relating to public business.

Fourth. Messages between diplomatic agents of neutral governments.

Fifth. Press messages.

Sixth. Miscellaneous business, those relating to death or serious illness having priority.

Unimportant dispatches of any class must not, however, be given precedence over important dispatches of a subordinate class.

2. Dispatches containing matter deemed to be injurious to the public interests must be submitted to the commanding general for his orders relative to their transmission. On detached lines such messages will be submitted to the senior officer or noncommissioned officer for his action.

3. Officers and soldiers are strictly prohibited from communicating, except to commanding officers or under special authorization from proper military authority, information by telegraph, or otherwise, relative to numbers, movements, or operations of troops, or details regarding fortifications, armaments, or experiments made in connection with military affairs. Neither shall they be permitted to file or send dispatches containing opinions on military operations or other military matters relating to any part of the army or command with which they are serving, or to any auxiliary forces.

4. Personal and press messages may, under conditions not interfering with military business, be transmitted free over field military telegraph lines that are closed to the general public.

5. The use of any cipher is forbidden, except in communication to and from commanding officers and their superiors, or in cases of civil officers specially authorized. Personal and press codes, however, may be utilized for the economical transmission of dispatches upon filing a copy of the code with the central office and under such other regulations as may be formulated by the general commanding an army in the field.

6. The chief signal officer of an army operating in the field, or of a district under military control, in carrying out his general instructions will formulate necessary regulations for the management and operation of military telegraph lines under his control. General rules should be reduced to writing, be clearly defined, and impartially enforced.

7. For signal communication between the Army and the Navy the International Morse Code shall be adopted, transmitted by radio, visual, and sound signals whenever applicable to the means of communication employed, with the single modification that in the use of the Ardols night system numerals shall be spelled out and punctuation marks shall be eliminated. The use of the International Morse Code, however, shall not be understood as prohibiting the employment between the Army and the Navy of such other systems of signaling as may be useful under special conditions, such as the International Code, the two-arm semaphore system, pyrotechnics of any description, including rockets, the Very pistol, or any other method of communication not adapted to the dot and dash code, but which at times may become serviceable and which may be temporarily agreed to by the senior officers present of the two services.

8. The International Morse Code is announced as the general service code of the Army, and will be used for all visual signaling, radio telegraphy, and on cables using siphon recorders. The American Morse Code will be used on telegraph lines, on short cables, and on field lines.

1542. Department, division, and brigade commanders will require of all organizations of their commands such instruction in visual signaling as may be necessary for the service of information within their commands. Of at least two enlisted men of each organization to which is issued signal equipment there will be required ability to send and receive messages by use of the 2-foot and semaphore signal flags at the following rates of speed: (a) 2-foot flag, general service code, at a speed equal to three combinations of five mixed letters each, per minute, over a distance not less than one mile; (b) semaphore flags, two-arm semaphore code, at a speed equal to eight combinations of five letters each, per minute, over a distance of not less than five hundred yards. (*C. A. R., Nos. 5 and 23.*)

1543. Whoever shall willfully or maliciously injure or destroy any of the works, property, or material of any telegraph, telephone, or cable line, or system, operated or controlled by the United States, whether constructed or in process of construction, or shall willfully or maliciously interfere in any way with the working or use of any such line, or system, or shall willfully or maliciously obstruct, hinder, or delay the transmission of any communication over any such line, or system, shall be fined not more than \$1,000, or imprisoned not more than three years, or both.

1544. Officers of the Army and cadets of the first and second classes, United States Military Academy, may purchase from the Signal Corps articles of Signal Corps equipment, provided the property is available. They will certify that the articles are for their personal use. The price to be paid by an officer or cadet for such property will be the cost price to the Government. Code cards and instructions for visual signaling will be furnished by the Chief Signal Officer of the Army upon application. Signal supplies will be furnished by the Signal Corps to posts and such organizations as require them on requisitions approved by department commanders. All officers or other persons in the military establishment to whom signal supplies are issued will render accounts and returns therefor to the Chief Signal Officer of the Army on forms furnished for that purpose. (*C. A. R., No. 55.*)

1545. Signal supplies will be issued to the Organized Militia of the several States, Territories, and the District of Columbia in accordance with the pro-

visions of "An act to promote the efficiency of the militia, and for other purposes," approved January 21, 1903, as amended by the act of Congress approved May 27, 1903, upon proper requisition therefor.

1566. Telescopes, telephones, and expensive electrical or aeronautical apparatus of the Signal Corps, when unserviceable, will not be submitted to an inspector for condemnation without previous authority of the Chief Signal Officer of the Army.

Field glasses, when unserviceable beyond local repair, will not be submitted to an inspector, but will be shipped and invoiced to the Signal Corps General Supply Depot, Fort Wood, N. Y. (*C. A. R., Nos. 35 and 46.*)

1567. Quartermasters will issue to signal parties serving in their vicinity, on the requisition of the officer in charge, such supplies from their respective departments as may be necessary for their proper equipment and subsistence.

1568. Electrical engineers and other technical employees of the Signal Corps shall, while serving on transports or other Government vessels used as cable ships, be entitled to subsistence in the same manner as employees of the Quartermaster Corps serving thereon.

ARTICLE LXXVIII.

UNIFORM.

1569. The uniform and equipments of officers and enlisted men will be prescribed in special regulations published by authority of the Secretary of War.

ARTICLE LXXIX.

MANUALS OF STAFF DEPARTMENTS AND BLANK FORMS.

1570. Manuals issued by the staff departments and approved by the Secretary of War, when not in conflict with any of the provisions of these regulations or of orders or bulletins of the War Department, will have equal force therewith.

1571. The standard blank forms used in Army administration, with the notes and directions thereon, have the force and effect of Army Regulations. New forms or alterations will not be made without the authority of the Secretary of War, and the date on which a form or alteration was authorized will be printed on the form itself. All notes or directions on these blanks will, prior to their issue, be approved by the Secretary of War. These forms and lists of them will be furnished by the chiefs of the various bureaus and offices of the War Department. Requisitions therefor will call for them by number and name.

For the service of the interior, blank forms will be procured by requisition as prescribed in these regulations, in general orders, and in the manuals of the several staff corps and departments. For the service of the theater of operations, they will be procured by requisition on the staff officers at the base of operations or base of line of communications, through the division staff officers who will keep on hand an emergency supply of the blank forms of their respective staff corps and departments, preferably carried in the supply train. (*C. A. R., No. 33.*)

1572. The rendition of returns, rolls, certificates, and other documents in manuscript is prohibited when the proper printed forms therefor are on hand.

ARTICLE LXXX.

THE ARMY RESERVE.

[Established by the provisions of the second paragraph of section 2 of the Army appropriation act of August 24, 1912. (37 Stat., 590, 591.)]

1573. Regulations governing the Army Reserve are published in special regulations from the War Department. (*C. A. R., No. 55.*)

NOTE.

The Articles of War are omitted from this reprint for the reason that they are contained in the 1917 Manual for Courts-Martial.

319

MEMORANDUM.

Statement showing new numbers of old paragraphs of Army Regulations.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 1..... | 1..... | 65..... | 65..... | 129..... | 129..... |
| 2..... | 2..... | 66..... | 66..... | 130..... | 130..... |
| 3..... | 3..... | 67..... | 67..... | 131..... | 131..... |
| 4..... | 4..... | 68..... | 68..... | 132..... | 132..... |
| 5..... | 5..... | 69..... | 69..... | 133..... | 133..... |
| 6..... | 6..... | 70..... | 70..... | 134..... | 134..... |
| 7..... | 7..... | 71..... | 71..... | 135..... | 135..... |
| 8..... | 8..... | 72..... | 72..... | 136..... | 136..... |
| 9..... | 9..... | 73..... | 73..... | 137..... | 137..... |
| 10..... | 10..... | 74..... | 74..... | 138..... | 138..... |
| 11..... | 11..... | 75..... | 75..... | 139..... | 139..... |
| 12..... | 12..... | 76..... | 76..... | 140..... | 140..... |
| 13..... | 13..... | 77..... | 77..... | 140½..... | 141..... |
| 14..... | 14..... | 78..... | 78..... | 141..... | 142..... |
| 15..... | 15..... | 79..... | 79..... | 142..... | 143..... |
| 16..... | 16..... | 80..... | 80..... | 143..... | 144..... |
| 17..... | 17..... | 81..... | 81..... | 144..... | 145..... |
| 18..... | 18..... | 82..... | 82..... | 145..... | 146..... |
| 19..... | 19..... | 83..... | 83..... | 146..... | 147..... |
| 20..... | 20..... | 84..... | 84..... | 147..... | 148..... |
| 21..... | 21..... | 85..... | 85..... | 148..... | 149..... |
| 22..... | 22..... | 86..... | 86..... | 149..... | 150..... |
| 23..... | 23..... | 87..... | 87..... | 150..... | 151..... |
| 24..... | 24..... | 88..... | 88..... | 151..... | 152..... |
| 25..... | 25..... | 89..... | 89..... | 152..... | 153..... |
| 26..... | 26..... | 90..... | 90..... | 153..... | 154..... |
| 27..... | 27..... | 91..... | 91..... | 154..... | 155..... |
| 28..... | 28..... | 92..... | 92..... | 155..... | 156..... |
| 29..... | 29..... | 93..... | 93..... | 156..... | 157..... |
| 30..... | 30..... | 94..... | 94..... | 157..... | 158..... |
| 31..... | 31..... | 95..... | 95..... | 158..... | 159..... |
| 32..... | 32..... | 96..... | 96..... | 159..... | 160..... |
| 33..... | 33..... | 97..... | 97..... | 160..... | 161..... |
| 34..... | 34..... | 98..... | 98..... | 161..... | 162..... |
| 35..... | 35..... | 99..... | 99..... | 162..... | 163..... |
| 36..... | 36..... | 100..... | 100..... | 163..... | 164..... |
| 37..... | 37..... | 101..... | 101..... | 164..... | 165..... |
| 38..... | 38..... | 102..... | 102..... | 165..... | 166..... |
| 39..... | 39..... | 103..... | 103..... | 166..... | 167..... |
| 40..... | 40..... | 104..... | 104..... | 167..... | 168..... |
| 41..... | 41..... | 105..... | 105..... | 168..... | 169..... |
| 42..... | 42..... | 106..... | 106..... | 169..... | 170..... |
| 43..... | 43..... | 107..... | 107..... | 170..... | 171..... |
| 44..... | 44..... | 108..... | 108..... | 171..... | 172..... |
| 45..... | 45..... | 109..... | 109..... | 172..... | 173..... |
| 46..... | 46..... | 110..... | 110..... | 173..... | 174..... |
| 47..... | 47..... | 111..... | 111..... | 174..... | 175..... |
| 48..... | 48..... | 112..... | 112..... | 175..... | 176..... |
| 49..... | 49..... | 113..... | 113..... | 176..... | 177..... |
| 50..... | 50..... | 114..... | 114..... | 177..... | 178..... |
| 51..... | 51..... | 115..... | 115..... | 178..... | 179..... |
| 52..... | 52..... | 116..... | 116..... | 179..... | 180..... |
| 53..... | 53..... | 117..... | 117..... | 180..... | 181..... |
| 54..... | 54..... | 118..... | 118..... | 181..... | 182..... |
| 55..... | 55..... | 119..... | 119..... | 182..... | 183..... |
| 56..... | 56..... | 120..... | 120..... | 183..... | 184..... |
| 57..... | 57..... | 121..... | 121..... | 184..... | 185..... |
| 58..... | 58..... | 122..... | 122..... | 185..... | 186..... |
| 59..... | 59..... | 123..... | 123..... | 186..... | 187..... |
| 60..... | 60..... | | | 187..... | 188..... |
| | | | | 187½..... | 189..... |
| | | | | 188..... | 190..... |
| | | | | 189..... | 191..... |
| | | | | 190..... | 192..... |

MEMORANDUM.

Statement showing new numbers of old paragraphs of Army Regulations.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 1. | 1. | 65. | 65. | 129. | 129. |
| 2. | 2. | 66. | 66. | 130. | 130. |
| 3. | 3. | 67. | 67. | 131. | 131. |
| 4. | 4. | 68. | 68. | 132. | 132. |
| 5. | 5. | 69. | 69. | 133. | 133. |
| 6. | 6. | 70. | 70. | 134. | 134. |
| 7. | 7. | 71. | 71. | 135. | 135. |
| 8. | 8. | 72. | 72. | 136. | 136. |
| 9. | 9. | 73. | 73. | 137. | 137. |
| 10. | 10. | 74. | 74. | 138. | 138. |
| 11. | 11. | 75. | 75. | 139. | 139. |
| 12. | 12. | 76. | 76. | 140. | 140. |
| 13. | 13. | 77. | 77. | 140. | 141. |
| 14. | 14. | 78. | 78. | 141. | 142. |
| 15. | 15. | 79. | 79. | 142. | 143. |
| 16. | 16. | 80. | 80. | 143. | 144. |
| 17. | 17. | 81. | 81. | 144. | 145. |
| 18. | 18. | 82. | 82. | 145. | 146. |
| 19. | 19. | 83. | 83. | 146. | 147. |
| 20. | 20. | 84. | 84. | 147. | 148. |
| 21. | 21. | 85. | 85. | 148. | 149. |
| 22. | 22. | 86. | 86. | 149. | 150. |
| 23. | 23. | 87. | 87. | 150. | 151. |
| 24. | 24. | 88. | 88. | 151. | 152. |
| 25. | 25. | 89. | 89. | 152. | 153. |
| 26. | 26. | 90. | 90. | 153. | 154. |
| 27. | 27. | 91. | 91. | 154. | 155. |
| 28. | 28. | 92. | 92. | 155. | 156. |
| 29. | 29. | 93. | 93. | 156. | 157. |
| 30. | 30. | 94. | 94. | 157. | 158. |
| 31. | 31. | 95. | 95. | 158. | 159. |
| 32. | 32. | 96. | 96. | 159. | 160. |
| 33. | 33. | 97. | 97. | 160. | 161. |
| 34. | 34. | 98. | 98. | 161. | 162. |
| 35. | 35. | 99. | 99. | 162. | 163. |
| 36. | 36. | 100. | 100. | 163. | 164. |
| 37. | 37. | 101. | 101. | 164. | 165. |
| 38. | 38. | 102. | 102. | 165. | 166. |
| 39. | 39. | 103. | 103. | 166. | 167. |
| 40. | 40. | 104. | 104. | 167. | 168. |
| 41. | 41. | 105. | 105. | 168. | 169. |
| 42. | 42. | 106. | 106. | 169. | 170. |
| 43. | 43. | 107. | 107. | 170. | 171. |
| 44. | 44. | 108. | 108. | 171. | 172. |
| 45. | 45. | 109. | 109. | 172. | 173. |
| 46. | 46. | 110. | 110. | 173. | 174. |
| 47. | 47. | 111. | 111. | 174. | 175. |
| 48. | 48. | 112. | 112. | 175. | 176. |
| 49. | 49. | 113. | 113. | 176. | 177. |
| 50. | 50. | 114. | 114. | 177. | 178. |
| 51. | 51. | 115. | 115. | 178. | 179. |
| 52. | 52. | 116. | 116. | 179. | 180. |
| 53. | 53. | 117. | 117. | 180. | 181. |
| 54. | 54. | 118. | 118. | 181. | 182. |
| 55. | 55. | 119. | 119. | 182. | 183. |
| 56. | 56. | 120. | 120. | 183. | 184. |
| 57. | 57. | 121. | 121. | 184. | 185. |
| 58. | 58. | 122. | 122. | 185. | 186. |
| 59. | 59. | 123. | 123. | 186. | 187. |
| 60. | 60. | 124. | 124. | 187. | 188. |
| 61. | 61. | 125. | 125. | 187. | 189. |
| 62. | 62. | 126. | 126. | 188. | 190. |
| 63. | 63. | 127. | 127. | 189. | 191. |
| 64. | 64. | 128. | 128. | 190. | 192. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 191..... | 193. | 269..... | 269. | 350..... | 340. |
| 192..... | 193½. | 270..... | 270. | 351..... | 341. |
| 193..... | 194. | 271..... | 271. | 352..... | 342. |
| 194..... | Rescinded. | 272..... | 272. | 353..... | 343. |
| 195..... | 195. | 273..... | 273. | 354..... | 344. |
| 196..... | 196. | 274..... | 274. | 355..... | 345. |
| 197..... | 197. | 275..... | 275. | 356..... | Rescinded. |
| 198..... | Rescinded. | 276..... | 276. | 357..... | 346. |
| 199..... | 198. | 277..... | 277. | 358..... | 347. |
| 200..... | 199. | 278..... | 278. | 359..... | 348. |
| 201..... | 200. | 279..... | 279. | 360..... | 349. |
| 202..... | 201. | 280..... | 280. | 361..... | 350. |
| 203..... | 202. | 281..... | 281. | 362..... | 351. |
| 204..... | 203. | 282..... | 282. | 363..... | 352. |
| 205..... | 204. | 283..... | 283. | 364..... | 353. |
| 206..... | 205. | 284..... | 284. | 365..... | 354. |
| 207..... | 206. | 285..... | 285. | 366..... | 355. |
| 208..... | 207. | 286..... | 286. | 367..... | 356. |
| 209..... | 208. | 287..... | 287. | 368..... | 357. |
| 210..... | 209. | 288..... | 288. | 369..... | 358. |
| 211..... | 210. | 289..... | 289. | 370..... | 359. |
| 212..... | 211. | 290..... | 290. | 371..... | 360. |
| 213..... | 212. | 291..... | 291. | 372..... | 361. |
| 214..... | 213. | 292..... | 292. | 373..... | 362. |
| 215..... | 214. | 293..... | 293. | 374..... | 363. |
| 216..... | 215. | 294..... | 294. | 375..... | 364. |
| 217..... | 216. | 295..... | 295. | 376..... | 365. |
| 218..... | 217. | 296..... | 296. | 377..... | 366. |
| 219..... | 218. | 297..... | 297. | 378..... | 367. |
| 220..... | 219. | 298..... | 298. | 379..... | 368. |
| 221..... | 220. | 299..... | 299. | 380..... | 369. |
| 222..... | 221. | 300..... | 300. | 381..... | 370. |
| 223..... | 222. | 301..... | 301. | 382..... | 371. |
| 224..... | 223. | 302..... | 302. | 383..... | 372. |
| 225..... | 224. | 303..... | 303. | 384..... | 373. |
| 226..... | 224½. | 304..... | 304. | 385..... | 374. |
| 227..... | 225. | 305..... | 305. | 386..... | 375. |
| 228..... | 226. | 306..... | 306. | 387..... | 376. |
| 229..... | 227. | 307..... | 307. | 388..... | 377. |
| 230..... | 228. | 308..... | 308. | 389..... | 378. |
| 231..... | 229. | 309..... | 309. | 390..... | 379. |
| 232..... | 230. | 310..... | 310. | 391..... | 380. |
| 233..... | 231. | 311..... | 311. | 392..... | 381. |
| 234..... | 232. | 312..... | 312. | 393..... | 382. |
| 235..... | 233. | 313..... | 313. | 394..... | 383. |
| 236..... | 234. | 314..... | 314. | 395..... | 384. |
| 237..... | 235. | 315..... | 315. | 396..... | 385. |
| 238..... | 236. | 316..... | 316. | 397..... | 386. |
| 239..... | 237. | 317..... | 317. | 398..... | 387. |
| 240..... | 238. | 318..... | 318. | 399..... | 388. |
| 241..... | 239. | 319..... | 319. | 400..... | 389. |
| 242..... | 240. | 320..... | 320. | 401..... | 390. |
| 243..... | 241. | 321..... | 321. | 402..... | 391. |
| 244..... | 242. | 322..... | 322. | 403..... | 392. |
| 245..... | 243. | 323..... | 323. | 404..... | 393. |
| 246..... | 244. | 324..... | 324. | 405..... | 394. |
| 247..... | 245. | 325..... | 325. | 406..... | 395. |
| 248..... | 246. | 326..... | 326. | 407..... | 396. |
| 249..... | Rescinded. | 327..... | Rescinded. | 408..... | 397. |
| 250..... | 247. | 328..... | Do. | 409..... | 398. |
| 251..... | 248. | 329..... | Do. | 410..... | 399. |
| 252..... | 249. | 330..... | Do. | 411..... | 400. |
| 253..... | 250. | 331..... | 327. | 412..... | 401. |
| 254..... | 251. | 332..... | 328. | 413..... | 402. |
| 255..... | 252. | 333..... | 329. | 414..... | 403. |
| 256..... | 253. | 334..... | 330. | 415..... | 404. |
| 257..... | 254. | 335..... | Rescinded. | 416..... | 405. |
| 258..... | 255. | 336..... | Do. | 417..... | 406. |
| 259..... | 256. | 337..... | Do. | 418..... | 407. |
| 260..... | 257. | 338..... | Do. | 419..... | 408. |
| 261..... | 258. | 339..... | Do. | 420..... | 409. |
| 262..... | 259. | 340..... | Do. | 421..... | 410. |
| 263..... | 260. | 341..... | 331. | 422..... | 411. |
| 264..... | 261. | 342..... | 332. | 423..... | 412. |
| 265..... | 262. | 343..... | 333. | 424..... | 413. |
| 266..... | 263. | 344..... | 334. | 425..... | 414. |
| 267..... | 264. | 345..... | 335. | 426..... | 415. |
| 268..... | 265. | 346..... | 336. | 427..... | 416. |
| | 266. | 347..... | 337. | 428..... | 417. |
| | 267. | 348..... | 338. | | 418. |
| | 268. | 349..... | 339. | | 419. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 420. | 420. | 509. | 500. | 588. | 580. |
| 421. | 421. | 510. | 501. | 589. | 581. |
| 422. | 422. | 511. | 502. | 590. | 582. |
| 423. | 423. | 512. | 503. | 591. | 583. |
| 424. | 424. | 513. | 504. | 592. | Rescinded. |
| 425. | 425. | 514. | 505. | 593. | Do. |
| 426. | 426. | 515. | 506. | 594. | 584. |
| 427. | 427. | 516. | 507. | 595. | 585. |
| 428. | 428. | 517. | 508. | 596. | 586. |
| 429. | 429. | 518. | 509. | 597. | 587. |
| 430. | 430. | 519. | 510. | 598. | 588. |
| 431. | 431. | 520. | 511. | 599. | 589. |
| 432. | 432. | 521. | 512. | 600. | 590. |
| 433. | 433. | 522. | 513. | 601. | 591. |
| 434. | 434. | 523. | 514. | 602. | 592. |
| 435. | 435. | 524. | 515. | 603. | 593. |
| 436. | 436. | 525. | 516. | 604. | 594. |
| 437. | 437. | 526. | 517. | 605. | 595. |
| 438. | 438. | 527. | 518. | 606. | 596. |
| 439. | 439. | 528. | 519. | 607. | 597. |
| 440. | 440. | 529. | 520. | 608. | 598. |
| 441. | 441. | 530. | 521. | 609. | 599. |
| 442. | 442. | 531. | 522. | 610. | 600. |
| 443. | 443. | 532. | 523. | 611. | 601. |
| 444. | 444. | 533. | 524. | 612. | 602. |
| 445. | 445. | 534. | 525. | 613. | 603. |
| 446. | 446. | 535. | 526. | 614. | 604. |
| 447. | 447. | 536. | 527. | 615. | 605. |
| 448. | 448. | 537. | 528. | 616. | 606. |
| 449. | 449. | 538. | 529. | 617. | 607. |
| 450. | 450. | 539. | 530. | 618. | 608. |
| 451. | 451. | 540. | 531. | 619. | 609. |
| 452. | 452. | 541. | 532. | 619a. | Rescinded. |
| 453. | 453. | 542. | 533. | 620. | 610. |
| 454. | 454. | 543. | 534. | 621. | 611. |
| 455. | 455. | 544. | 535. | 622. | 612. |
| 456. | 456. | 545. | 536. | 623. | 613. |
| 457. | 457. | 546. | 537. | 624. | 614. |
| 458. | 458. | 547. | 538. | 625. | 615. |
| 459. | 459. | 548. | 539. | 626. | 616. |
| 460. | 460. | 549. | 540. | 627. | 617. |
| 461. | 461. | 550. | 541. | 628. | 618. |
| 462. | 462. | 551. | 542. | 629. | 619. |
| 463. | 463. | 552. | 543. | 630. | 620. |
| 464. | 464. | 553. | 544. | 631. | 621. |
| 465. | 465. | 554. | 545. | 632. | 622. |
| 466. | 466. | 555. | 546. | 633. | 623. |
| 467. | 467. | 556. | 547. | 634. | 624. |
| 468. | 468. | 557. | 548. | 635. | 625. |
| 469. | 469. | 558. | 549. | 636. | 626. |
| 470. | 470. | 559. | 550. | 637. | 627. |
| 471. | 471. | 560. | 551. | 638. | 628. |
| 472. | 472. | 561. | 552. | 639. | 629. |
| 473. | 473. | 562. | 553. | 640. | 630. |
| 474. | 474. | 563. | 554. | 641. | 631. |
| 475. | 475. | 564. | 555. | 642. | 632. |
| 476. | 476. | 565. | 556. | 643. | 633. |
| 477. | 477. | 566. | 557. | 644. | 634. |
| 478. | 478. | 567. | 558. | 645. | 635. |
| 479. | 479. | 568. | 559. | 646. | 636. |
| 480. | 480. | 569. | 560. | 647. | 637. |
| 481. | 481. | 570. | 561. | 648. | 638. |
| 482. | 482. | 571. | 562. | 649. | 639. |
| 483. | 483. | 572. | 563. | 650. | 640. |
| 484. | 484. | 573. | 564. | 651. | 641. |
| 485. | 485. | 574. | 565. | 652. | 642. |
| 486. | 486. | 575. | 566. | 653. | 643. |
| 487. | 487. | 576. | 567. | 654. | 644. |
| 488. | 488. | 577. | 568. | 655. | 645. |
| 489. | 489. | 578. | 569. | 656. | 646. |
| 490. | 490. | 579. | 570. | 657. | 647. |
| 491. | 491. | 580. | 571. | 658. | 648. |
| 492. | 492. | 581. | 572. | 659. | 649. |
| 493. | 493. | 582. | 573. | 660. | 650. |
| 494. | 494. | 583. | 574. | 661. | 651. |
| 495. | 495. | 584. | 575. | 662. | 652. |
| 496. | 496. | 585. | 576. | 663. | 653. |
| 497. | 497. | 586. | 577. | 664. | 654. |
| 498. | 498. | 587. | 578. | 665. | 655. |
| 499. | 499. | 588. | 579. | 666. | 656. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 667. | 656. | 748. | 737. | 827. | 812. |
| 668. | 657. | 749. | 738. | 828. | 814. |
| 669. | 658. | 750. | 739. | 829. | 815. |
| 670. | 659. | 751. | 740. | 830. | 816. |
| 671. | 660. | 752. | 741. | 831. | 817. |
| 672. | 661. | 753. | 742. | 832. | 818. |
| 673. | 662. | 754. | 743. | 833. | 819. |
| 674. | 663. | 755. | 744. | 834. | 820. |
| 675. | 664. | 756. | 745. | 835. | 821. |
| 676. | 665. | 757. | 746. | 836. | 822. |
| 677. | 666. | 758. | 747. | 837. | 823. |
| 678. | 667. | 759. | 748. | 838. | 824. |
| 679. | 668. | 760. | 749. | 839. | 825. |
| 680. | 669. | 761. | 750. | 840. | Rescinded. |
| 681. | 670. | 762. | 751. | 841. | Do. |
| 682. | 671. | 763. | 752. | 842. | 826. |
| 683. | 672. | 764. | 753. | 843. | 827. |
| 684. | 673. | 765. | 754. | 844. | 828. |
| 685. | 674. | 766. | 755. | 845. | Rescinded. |
| 686. | 675. | 767. | 756. | 846. | 829. |
| 687. | 676. | 768. | 757. | 847. | 830. |
| 688. | 677. | 769. | 758. | 848. | 831. |
| 689. | 678. | 770. | 759. | 849. | 832. |
| 690. | 679. | 771. | 760. | 850. | 833. |
| 691. | 680. | 772. | 761. | 851. | 834. |
| 692. | 681. | 773. | 762. | 852. | 835. |
| 693. | 682. | 774. | 763. | 853. | 836. |
| 694. | 683. | 775. | 764. | 854. | 837. |
| 695. | 684. | 776. | 765. | 855. | 838. |
| 696. | 685. | 777. | 766. | 856. | 839. |
| 697. | 686. | 778. | 767. | 857. | 840. |
| 698. | 687. | 779. | 768. | 858. | 841. |
| 699. | 688. | 780. | 769. | 859. | 842. |
| 700. | 689. | 781. | 770. | 860. | 843. |
| 701. | 690. | 782. | 771. | 861. | 844. |
| 702. | 691. | 783. | 772. | 862. | 845. |
| 703. | 692. | 784. | 773. | 863. | 846. |
| 704. | 693. | 785. | 774. | 864. | 847. |
| 705. | 694. | 786. | 775. | 865. | 848. |
| 706. | 695. | 786½. | 776. | 866. | 849. |
| 707. | 696. | 787. | Rescinded. | 867. | 850. |
| 708. | 697. | 788. | Do. | 868. | 851. |
| 709. | 698. | 789. | 777. | 869. | 852. |
| 710. | 699. | 789½. | 778. | 870. | 853. |
| 711. | 700. | 790. | Rescinded. | 871. | 854. |
| 712. | 701. | 791. | Do. | 872. | 855. |
| 713. | 702. | 792. | 779. | 873. | 856. |
| 714. | 703. | 793. | 780. | 874. | 857. |
| 715. | 704. | 794. | 781. | 875. | 858. |
| 716. | 705. | 795. | 782. | 876. | 859. |
| 717. | 706. | 796. | 783. | 877. | 860. |
| 718. | 707. | 797. | 784. | 878. | 861. |
| 719. | 708. | 798. | 785. | 879. | 862. |
| 720. | 709. | 799. | 786. | 880. | 863. |
| 721. | 710. | 800. | 787. | 881. | 864. |
| 722. | 711. | 801. | 788. | 882. | 865. |
| 723. | 712. | 802. | 789. | 883. | 866. |
| 724. | 713. | 803. | 790. | 884. | 867. |
| 725. | 714. | 804. | 791. | 885. | 868. |
| 726. | 715. | 805. | 792. | 886. | 869. |
| 727. | 716. | 806. | 793. | 887. | 870. |
| 728. | 717. | 807. | 794. | 888. | 871. |
| 729. | 718. | 808. | 795. | 889. | 872. |
| 730. | 719. | 809. | 796. | 890. | 873. |
| 731. | 720. | 810. | 797. | 891. | 874. |
| 732. | 721. | 811. | 798. | 892. | 875. |
| 733. | 722. | 812. | 799. | 893. | 876. |
| 734. | 723. | 813. | 800. | 894. | 877. |
| 735. | 724. | 814. | 801. | 895. | 878. |
| 736. | 725. | 815. | 802. | 896. | 879. |
| 737. | 726. | 816. | 803. | 897. | 880. |
| 738. | 727. | 817. | 804. | 898. | 881. |
| 739. | 728. | 818. | 805. | 899. | 882. |
| 740. | 729. | 819. | 806. | 900. | 883. |
| 741. | 730. | 820. | 807. | 901. | 884. |
| 742. | 731. | 821. | 808. | 902. | 885. |
| 743. | 732. | 822. | 809. | 903. | 886. |
| 744. | 733. | 823. | 810. | 904. | 887. |
| 745. | 734. | 824. | Rescinded. | 905. | 888. |
| 746. | 735. | 825. | 811. | 906. | 889. |
| 747. | 736. | 826. | 812. | 907. | 890. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 906..... | 891. | 984..... | 968. | 1062..... | 1046. |
| 909..... | 892. | 985..... | 969. | 1063..... | 1047. |
| 910..... | 893. | 986..... | 970. | 1064..... | 1048. |
| 911..... | 894. | 987..... | 971. | 1065..... | 1049. |
| 9111..... | 895. | 988..... | 972. | 1066..... | 1050. |
| 912..... | 896. | 989..... | 973. | 1067..... | 1051. |
| 9121..... | 897. | 990..... | 974. | 1068..... | 1052. |
| 912..... | 898. | 991..... | 975. | 1069..... | 1053. |
| 914..... | 899. | 992..... | 976. | 1070..... | 1054. |
| 915..... | 900. | 993..... | 977. | 1071..... | 1055. |
| 916..... | 901. | 994..... | 978. | 1072..... | 1056. |
| 917..... | 902. | 995..... | 979. | 1073..... | 1057. |
| 918..... | 903. | 996..... | 980. | 1074..... | 1058. |
| 919..... | 904. | 997..... | 981. | 1075..... | 1059. |
| 920..... | 905. | 998..... | 982. | 1076..... | 1060. |
| 921..... | 906. | 999..... | 983. | 1077..... | 1061. |
| 922..... | 907. | 1000..... | 984. | 1078..... | 1062. |
| 923..... | 908. | 1001..... | Rescinded. | 1079..... | 1063. |
| 924..... | 909. | 1002..... | 985. | 1080..... | 1064. |
| 925..... | 910. | 1003..... | 986. | 1081..... | 1065. |
| 926..... | 911. | 1004..... | 987. | 1082..... | 1066. |
| 927..... | 912. | 1005..... | 988. | 1083..... | 1067. |
| 928..... | 913. | 1006..... | 989. | 1084..... | 1068. |
| 929..... | 914. | 1007..... | 990. | 1085..... | 1069. |
| 930..... | 915. | 1008..... | 991. | 1086..... | 1070. |
| 931..... | 916. | 1009..... | 992. | 1087..... | 1071. |
| 932..... | 917. | 1010..... | 993. | 1088..... | 1072. |
| 933..... | 918. | 1011..... | 994. | 1089..... | 1073. |
| 934..... | 919. | 1012..... | 995. | 1090..... | 1074. |
| 935..... | 920. | 1013..... | 996. | 1091..... | 1075. |
| 936..... | 921. | 1014..... | 997. | 1092..... | 1076. |
| 937..... | 922. | 1015..... | 998. | 1093..... | 1077. |
| 938..... | 923. | 1016..... | 999. | 1094..... | 1078. |
| 939..... | 924. | 1017..... | 1000. | 1095..... | 1079. |
| 940..... | 925. | 1018..... | 1001. | 1096..... | 1080. |
| 941..... | 926. | 1019..... | 1002. | 1097..... | 1081. |
| 942..... | 927. | 1020..... | 1003. | 1098..... | 1082. |
| 943..... | 928. | 1021..... | 1004. | 1099..... | 1083. |
| 944..... | 929. | 1022..... | 1005. | 1100..... | 1084. |
| 945..... | 930. | 1023..... | 1006. | 1101..... | 1085. |
| 946..... | 931. | 1024..... | 1007. | 1102..... | 1086. |
| 947..... | 932. | 1025..... | 1008. | 1103..... | 1087. |
| 948..... | 933. | 1026..... | 1009. | 1104..... | 1088. |
| 949..... | 934. | 1027..... | 1010. | 1105..... | 1089. |
| 950..... | 935. | 1028..... | 1011. | 1106..... | 1090. |
| 951..... | 936. | 1029..... | 1012. | 1107..... | 1091. |
| 952..... | 937. | 1030..... | 1013. | 1108..... | 1092. |
| 953..... | 938. | 1031..... | 1014. | 1109..... | 1093. |
| 954..... | 939. | 1032..... | 1015. | 1110..... | 1094. |
| 955..... | 940. | 1033..... | 1016. | 1111..... | 1095. |
| 956..... | 941. | 1034..... | 1017. | 1112..... | 1096. |
| 957..... | 942. | 1035..... | 1018. | 1113..... | 1097. |
| 957..... | 943. | 1036..... | 1019. | 1114..... | 1098. |
| 958..... | 944. | 1037..... | 1020. | 11144..... | 1099. |
| 959..... | 945. | 1038..... | 1021. | 1115..... | 1100. |
| 960..... | 946. | 1039..... | 1022. | 1116..... | 1101. |
| 961..... | 947. | 1040..... | 1023. | 1117..... | 1102. |
| 962..... | 948. | 1041..... | 1024. | 1118..... | 1103. |
| 963..... | 949. | 1042..... | 1025. | 1119..... | 1104. |
| 964..... | 950. | 1043..... | 1026. | 1120..... | 1105. |
| 965..... | Rescinded. | 1044..... | 1027. | 1121..... | 1106. |
| 966..... | 951. | 1045..... | 1028. | 1122..... | 1107. |
| 967..... | 952. | 1046..... | 1029. | 1123..... | 1108. |
| 968..... | 953. | 1047..... | 1030. | 1124..... | 1109. |
| 969..... | 954. | 1048..... | 1031. | 1125..... | 1110. |
| 970..... | 955. | 1049..... | 1032. | 1126..... | 1111. |
| 971..... | 956. | 1050..... | 1033. | 1127..... | 1112. |
| 972..... | 957. | 1051..... | 1034. | 1128..... | 1113. |
| 973..... | Rescinded. | 1052..... | 1035. | 1129..... | 1114. |
| 974..... | 958. | 1053..... | 1036. | 1130..... | 1115. |
| 975..... | 959. | 1054..... | 1037. | 1131..... | 1116. |
| 976..... | 960. | 1055..... | 1038. | 1132..... | 1117. |
| 977..... | 961. | 1056..... | 1039. | 1133..... | 1118. |
| 978..... | 962. | 1057..... | 1040. | 1134..... | 1119. |
| 979..... | 963. | 1058..... | 1041. | 1135..... | 1120. |
| 980..... | 964. | 1059..... | 1042. | 1136..... | 1121. |
| 981..... | 965. | 1060..... | 1043. | 1137..... | 1122. |
| 982..... | 966. | 1061..... | 1044. | 1138..... | 1123. |
| 983..... | 967. | | 1045. | 1139..... | 1124. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of paragraph 1910 edition. | Number of paragraph 1913 edition. | Number of paragraph 1910 edition. | Number of paragraph 1913 edition. | Number of paragraph 1910 edition. | Number of paragraph 1913 edition. |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 1140..... | 1125. | 1220..... | Rescinded. | 1290..... | 1276. |
| 1141..... | 1126. | 1221..... | 1199. | 1300..... | 1277. |
| 1142..... | 1127. | 1222..... | 1200. | 1301..... | 1278. |
| 1143..... | 1128. | 1223..... | 1201. | 1302..... | 1279. |
| 1144..... | 1129. | 1223..... | 1202. | 1303..... | 1280. |
| 1145..... | 1130. | 1224..... | 1203. | 1304..... | 1281. |
| 1146..... | 1131. | 1225..... | 1204. | 1305..... | 1282. |
| 1147..... | 1132. | 1226..... | 1205. | 1306..... | 1283. |
| 1148..... | 1133. | 1227..... | 1206. | 1307..... | 1284. |
| 1149..... | 1134. | 1228..... | 1207. | 1308..... | 1285. |
| 1150..... | 1135. | 1229..... | 1208. | 1309..... | 1286. |
| 1151..... | 1136. | 1230..... | 1209. | 1310..... | 1287. |
| 1152..... | 1137. | 1231..... | 1210. | 1311..... | 1288. |
| 1153..... | 1138. | 1232..... | 1211. | 1312..... | 1289. |
| 1154..... | 1139. | 1233..... | Rescinded. | 1313..... | 1290. |
| 1155..... | 1140. | 1234..... | 1212. | 1314..... | 1291. |
| 1156..... | 1141. | 1235..... | 1213. | 1315..... | 1292. |
| 1157..... | 1142. | 1236..... | 1214. | 1316..... | 1293. |
| 1158..... | 1143. | 1237..... | 1215. | 1317..... | 1294. |
| 1159..... | 1144. | 1238..... | 1216. | 1318..... | 1295. |
| 1160..... | 1145. | 1239..... | 1217. | 1319..... | 1296. |
| 1161..... | 1146. | 1240..... | 1218. | 1320..... | 1297. |
| 1162..... | 1147. | 1241..... | 1219. | 1321..... | 1298. |
| 1163..... | 1148. | 1242..... | 1220. | 1322..... | 1299. |
| 1164..... | 1149. | 1243..... | 1221. | 1323..... | 1300. |
| 1165..... | 1150. | 1244..... | 1222. | 1324..... | 1301. |
| 1166..... | 1151. | 1245..... | 1223. | 1325..... | 1302. |
| 1167..... | 1152. | 1246..... | 1224. | 1326..... | 1303. |
| 1168..... | 1153. | 1247..... | 1225. | 1327..... | 1304. |
| 1169..... | 1154. | 1248..... | 1226. | 1328..... | 1306. |
| 1170..... | 1155. | 1249..... | 1227. | 1329..... | 1306. |
| 1171..... | 1156. | 1250..... | 1228. | 1330..... | 1307. |
| 1172..... | 1157. | 1251..... | 1229. | 1331..... | 1308. |
| 1173..... | 1158. | 1252..... | 1230. | 1332..... | 1309. |
| 1174..... | 1159. | 1253..... | 1231. | 1333..... | 1310. |
| 1175..... | 1160. | 1254..... | 1232. | 1334..... | 1311. |
| 1176..... | 1161. | 1255..... | 1233. | 1335..... | 1312. |
| 1177..... | 1162. | 1256..... | 1234. | 1336..... | 1313. |
| 1178..... | 1163. | 1257..... | 1235. | 1337..... | 1314. |
| 1179..... | 1164. | 1258..... | 1236. | 1338..... | 1315. |
| 1180..... | 1165. | 1259..... | 1237. | 1339..... | 1316. |
| 1181..... | 1166. | 1260..... | 1238. | 1340..... | 1317. |
| 1182..... | Rescinded. | 1261..... | 1239. | 1341..... | 1318. |
| 1183..... | 1167. | 1262..... | 1240. | 1342..... | 1319. |
| 1184..... | 1168. | 1263..... | 1241. | 1343..... | 1320. |
| 1185..... | 1169. | 1264..... | 1242. | 1344..... | 1321. |
| 1186..... | 1170. | 1265..... | 1243. | 1345..... | 1322. |
| 1187..... | 1171. | 1266..... | 1244. | 1346..... | 1323. |
| 1188..... | 1172. | 1267..... | 1245. | 1347..... | 1324. |
| 1189..... | 1173. | 1268..... | 1246. | 1348..... | 1325. |
| 1190..... | 1174. | 1269..... | 1247. | 1349..... | 1326. |
| | 1174½ | 1270..... | 1248. | 1350..... | 1327. |
| 1191..... | 1175. | 1271..... | 1249. | 1351..... | 1328. |
| 1192..... | 1176. | 1272..... | 1250. | 1352..... | 1329. |
| 1193..... | 1177. | 1273..... | 1251. | 1353..... | 1330. |
| 1194..... | 1178. | 1274..... | 1252. | 1354..... | 1331. |
| 1195..... | 1179. | 1275..... | 1253. | 1355..... | 1332. |
| 1196..... | 1180. | 1276..... | Rescinded. | 1356..... | 1333. |
| 1197..... | 1181. | 1277..... | 1254. | 1357..... | 1334. |
| 1198..... | 1182. | 1278..... | 1255. | 1358..... | 1335. |
| 1199..... | 1183. | 1279..... | 1256. | 1359..... | 1336. |
| 1200..... | 1184. | 1280..... | 1257. | 1360..... | 1337. |
| 1201..... | 1185. | 1281..... | 1258. | 1361..... | 1338. |
| 1202..... | 1186. | 1282..... | 1259. | 1362..... | 1339. |
| 1203..... | 1187. | 1283..... | 1260. | 1363..... | 1340. |
| 1204..... | 1188. | 1284..... | 1261. | 1364..... | Rescinded. |
| 1205..... | 1189. | 1285..... | 1262. | 1365..... | 1341. |
| 1206..... | 1190. | 1286..... | 1263. | 1366..... | 1342. |
| 1207..... | 1191. | 1287..... | 1264. | 1367..... | 1343. |
| 1208..... | 1192. | 1288..... | 1265. | 1367½..... | 1344. |
| 1209..... | 1193. | 1289..... | 1266. | 1368..... | 1345. |
| 1210..... | 1194. | 1290..... | 1267. | 1369..... | 1346. |
| 1211..... | Rescinded. | 1291..... | 1268. | 1370..... | 1347. |
| 1212..... | Do. | 1292..... | Rescinded. | 1371..... | 1348. |
| 1213..... | Do. | 1293..... | 1269. | 1372..... | 1349. |
| 1214..... | Do. | 1294..... | 1270. | 1373..... | 1350. |
| 1215..... | 1195. | 1295..... | 1271. | 1374..... | 1351. |
| 1216..... | 1196. | 1296..... | 1272. | 1375..... | 1352. |
| 1217..... | 1197. | 1297..... | 1273. | 1376..... | 1353. |
| 1218..... | 1198. | 1298..... | 1274. | 1377..... | 1354. |
| 1219..... | Rescinded. | 1299..... | 1275. | 1378..... | 1355. |

Statement showing new numbers of old paragraphs of Army Regulations—Continued.

| Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. | Number of para- graph 1910 edi- tion. | Number of para- graph 1913 edi- tion. |
|---|---|---|---|---|---|
| 1379. | 1356. | 1482. | 1439. | 1834. | 1502. |
| 1380. | 1357. | 1483. | 1439. | 1835. | 1503. |
| 1381. | 1358. | 1484. | 1431. | 1836. | 1504. |
| 1382. | 1359. | 1485. | 1432. | 1837. | 1505. |
| 1383. | 1360. | 1486. | 1433. | | 1506. |
| 1384. | 1361. | 1487. | 1434. | 1838. | 1507. |
| 1385. | 1362. | 1488. | 1435. | 1839. | 1508. |
| 1386. | 1363. | 1489. | 1436. | 1840. | 1509. |
| 1387. | 1364. | 1490. | 1437. | 1841. | 1510. |
| 1388. | 1365. | 1491. | 1438. | 1842. | 1511. |
| 1389. | 1366. | 1492. | 1439. | 1843. | 1512. |
| 1390. | 1367. | 1493. | 1440. | 1844. | 1513. |
| 1391. | 1368. | 1494. | 1441. | 1845. | 1514. |
| 1392. | 1369. | 1495. | 1442. | 1846. | 1515. |
| 1393. | 1370. | 1496. | 1443. | 1847. | 1516. |
| 1394. | 1371. | 1497. | 1444. | 1848. | 1517. |
| 1395. | 1372. | 1498. | 1445. | 1849. | 1518. |
| 1396. | 1373. | 1499. | 1446. | 1850. | 1519. |
| 1397. | 1374. | 1500. | 1447. | 1851. | 1520. |
| 1398. | 1375. | 1501. | 1448. | 1852. | 1521. |
| 1399. | 1376. | 1502. | 1449. | 1853. | 1522. |
| 1400. | 1377. | 1503. | 1450. | 1854. | 1523. |
| 1401. | 1378. | 1504. | 1451. | 1855. | 1524. |
| 1402. | 1379. | 1505. | 1452. | 1856. | 1525. |
| 1403. | 1380. | 1506. | 1453. | 1857. | 1526. |
| 1404. | 1381. | 1507. | 1454. | 1858. | 1527. |
| 1405. | 1382. | 1508. | 1455. | 1859. | 1528. |
| 1406. | 1383. | 1509. | 1456. | 1860. | 1529. |
| 1407. | 1384. | 1510. | 1457. | 1861. | 1530. |
| 1408. | 1385. | 1511. | 1458. | 1862. | 1531. |
| 1409. | 1386. | 1512. | 1459. | 1863. | 1532. |
| 1410. | 1387. | 1513. | 1460. | 1864. | 1533. |
| 1411. | 1388. | 1514. | 1461. | 1865. | 1534. |
| 1412. | 1389. | 1515. | 1462. | 1866. | 1535. |
| 1413. | 1390. | 1516. | 1463. | 1867. | 1536. |
| 1414. | 1391. | 1517. | 1464. | 1868. | 1537. |
| 1415. | 1392. | 1518. | 1465. | 1869. | 1538. |
| 1416. | 1393. | 1519. | 1466. | 1870. | 1539. |
| 1417. | 1394. | 1520. | 1467. | 1871. | 1540. |
| 1418. | 1395. | 1521. | 1468. | 1872. | 1541. |
| 1419. | 1396. | 1522. | 1469. | 1873. | 1542. |
| 1420. | 1397. | 1523. | 1470. | 1874. | 1543. |
| 1421. | 1398. | 1524. | 1471. | 1875. | 1544. |
| 1422. | 1399. | 1525. | 1472. | 1876. | 1545. |
| 1423. | 1400. | 1526. | 1473. | 1877. | 1546. |
| 1424. | 1401. | 1527. | 1474. | 1878. | 1547. |
| 1425. | 1402. | 1528. | 1475. | 1879. | 1548. |
| 1426. | 1403. | 1529. | 1476. | 1880. | 1549. |
| 1427. | 1404. | 1530. | 1477. | 1881. | 1550. |
| 1428. | 1405. | 1531. | 1478. | 1882. | 1551. |
| 1429. | 1406. | 1532. | 1479. | 1883. | 1552. |
| 1430. | 1407. | 1533. | 1480. | 1884. | 1553. |
| 1431. | 1408. | 1534. | 1481. | 1885. | 1554. |
| 1432. | 1409. | 1535. | 1482. | 1886. | 1555. |
| 1433. | 1410. | 1536. | 1483. | 1887. | 1556. |
| 1434. | 1411. | 1537. | 1484. | 1888. | 1557. |
| 1435. | 1412. | 1538. | 1485. | 1889. | 1558. |
| 1436. | 1413. | 1539. | 1486. | 1890. | 1559. |
| 1437. | 1414. | 1540. | 1487. | 1891. | 1560. |
| 1438. | 1415. | 1541. | 1488. | 1892. | 1561. |
| 1439. | 1416. | 1542. | 1489. | 1893. | 1562. |
| 1440. | 1417. | 1543. | 1490. | 1894. | 1563. |
| 1441. | 1418. | 1544. | 1491. | 1895. | 1564. |
| 1442. | 1419. | 1545. | 1492. | 1896. | 1565. |
| 1443. | 1420. | 1546. | 1493. | 1897. | 1566. |
| 1444. | 1421. | 1547. | 1494. | 1898. | 1567. |
| 1445. | 1422. | 1548. | 1495. | 1899. | 1568. |
| 1446. | 1423. | 1549. | 1496. | 1900. | 1569. |
| 1447. | 1424. | 1550. | 1497. | 1901. | 1570. |
| 1448. | 1425. | 1551. | 1498. | 1902. | 1571. |
| 1449. | 1426. | 1552. | 1499. | 1903. | 1572. |
| 1450. | 1427. | 1553. | 1500. | 1904. | 1573. |
| 1451. | 1428. | 1554. | 1501. | | |

INFANTRY DRILL REGULATIONS
UNITED STATES ARMY
1911

WITH CORRECTIONS TO FEBRUARY 12, 1917
(CHANGES NO. 18)

**War Department,
Office of the Chief of Staff,
Washington, November 19, 1913.**

The following system of Infantry Drill Regulations, 1911, with corrections to November, 1913, including the Manual of the Bayonet, is approved and herewith published for the information and government of the Regular Army and the Organized Militia of the United States. With a view to insure uniformity throughout the Army, all infantry drill formations not embraced in this system are prohibited, and those herein prescribed will be strictly observed.

By order of the Secretary of War:

**LEONARD WOOD,
Major General, Chief of Staff.**

INFANTRY DRILL REGULATIONS

UNITED STATES ARMY, 1911

DEFINITIONS.

Alignment. A straight line upon which several elements are formed, or are to be formed; or the dressing of several elements upon a straight line.

Base. The element on which a movement is regulated.

Battle Sight. The position of the rear sight when the leaf is laid down.

Center. The middle point or element of a command.

Column. A formation in which the elements are placed one behind another.

Deploy. To extend the front. In general to change from column to line, or from close order to extended order.

Depth. The space from head to rear of any formation, including the leading and rear elements. The depth of a man is assumed to be 12 inches.

Distance. Space between elements in the direction of depth. Distance is measured from the back of the man in front to the breast of the man in rear. The distance between ranks is 40 inches in both line and column.

Element. A file, squad, platoon, company, or larger body, forming part of a still larger body.

File. Two men, the front-rank man and the corresponding man of the rear rank. The front-rank man is the file leader. A file which has no rear-rank man is a blank file. The term file applies also to a single man in a single-rank formation.

File Closers. Such officers and noncommissioned officers of a company as are posted in rear of the line. For convenience, all men posted in the line of file closers.

Flank. The right or left of a command in line or in column; also the element on the right or left of the line.

Formation. Arrangement of the elements of a command. The placing of all fractions in their order in line, in column, or for battle.

Front. The space, in width, occupied by an element, either in line or in column. The front of a man is assumed to be 22 inches. Front also denotes the direction of the enemy.

Guide. An officer, noncommissioned officer, or private upon whom the command or elements thereof regulates its march.

Head. The leading element of a column.

Interval. Space between elements of the same line. The interval between men in ranks is 4 inches and is measured from elbow to elbow. Between companies, squads, etc., it is measured from the left elbow of the left man or guide of the group on the right, to the right elbow of the right man or guide of the group on the left.

Left. The left extremity or element of a body of troops.

Line. A formation in which the different elements are abreast of each other.

Order, Close. The formation in which the units, in double rank, are arranged in line or in column with normal intervals and distances.

Order, Extended. The formation in which the units are separated by intervals greater than in close order.

Pace. Thirty inches; the length of the full step in quick time.

Point of Rest. The point at which a formation begins. Specifically, the point toward which units are aligned in successive movements.

Rank. A line of men placed side by side.

Right. The right extremity or element of a body of troops.

PART I.

DRILL.

INTRODUCTION.

1. Success in battle is the ultimate object of all military training; success may be looked for only when the training is intelligent and thorough.

2. Commanding officers are accountable for the proper training of their respective organizations within the limits prescribed by regulations and orders.

The excellence of an organization is judged by its field efficiency. The field efficiency of an organization depends primarily upon its effectiveness as a whole. Thoroughness and uniformity in the training of the units of an organization are indispensable to the efficiency of the whole; it is by such means alone that the requisite teamwork may be developed.

3. Simple movements and elastic formations are essential to correct training for battle.

4. The Drill Regulations are furnished as a guide. They provide the principles for training and for increasing the probability of success in battle.

In the interpretation of the regulations, the spirit must be sought. Quibbling over the minutiae of form is indicative of failure to grasp the spirit.

5. The principles of combat are considered in Part II of these regulations. They are treated in the various schools included in Part I only to the extent necessary to indicate the functions of the various commanders and the division of responsibility between them. The amplification necessary to a proper understanding of their application is to be sought in Part II.

6. The following important distinctions must be observed:

(a) Drills executed at attention and the ceremonies are disciplinary exercises designed to teach precise and soldierly movement, and to inculcate that prompt and subconscious obedience which is essential to proper military control. To this end, smartness and precision should be exacted in the execution of every detail. Such drills should be frequent, but short.

(b) The purpose of extended order drill is to teach the mechanism of deployment, of the firings, and, in general, of the employment of troops in combat. Such drills are in the nature of disciplinary exercises and should be frequent, thorough, and exact in order to habituate men to the firm control of their leaders. Extended order drill is executed at ease. The company is the largest unit which executes extended order drill.

(c) Field exercises are for instruction in the duties incident to campaign. Assumed situations are employed. Each exercise should conclude with a discussion, on the ground, of the exercise and principles involved.

(d) The combat exercise, a form of field exercise of the company, battalion, and larger units, consists of the application of tactical principles to assumed situations, employing in the execution the appropriate formations and movements of close and extended order.

Combat exercises must simulate, as far as possible, the battle conditions assumed. In order to familiarize both officers and men with such conditions, companies and battalions will frequently be consolidated to provide war-strength organizations. Officers and noncommissioned officers not required to complete the full quota of the units participating are assigned as observers or umpires.

The firing line can rarely be controlled by the voice alone; thorough training to insure the proper use of prescribed signals is necessary.

The exercise should be followed by a brief drill at attention in order to restore smartness and control.

7. In field exercises the enemy is said to be imaginary when his position and force are merely assumed; outlined when his position and force are indicated by a few men; represented when a body of troops acts as such.

GENERAL RULES FOR DRILLS AND FORMATIONS.

8. When the preparatory command consists of more than one part, its elements are arranged as follows:

(1) For movements to be executed successively by the subdivisions or elements of an organization: (a) Description of the movement; (b) how executed, or on what element executed.

(2) For movements to be executed simultaneously by the subdivisions of an organization: (a) The designation of the subdivisions; (b) the movement to be executed.

9. Movements that may be executed toward either flank are explained as toward but one flank, it being necessary to substitute the word "left" for "right," and the reverse, to have the explanation of the corresponding movement toward the other flank. The commands are given for the execution of the movements toward either flank. The substitute word of the command is placed within parentheses.

10. Any movement may be executed either from the halt or when marching, unless otherwise prescribed. If at a halt, the command for movements involving marching need not be prefaced by forward, as 1. **Column right (left)**, 2. **MARCH**.

11. Any movement not specially excepted may be executed in double time.

If at a halt, or if marching in quick time, the command double time precedes the command of execution.

12. In successive movements executed in double time the leading or base unit marches in quick time when not otherwise prescribed; the other units march in double time to their places in the formation ordered and then conform to the gait of the leading or base unit. If marching in double time, the command double time is omitted. The leading or base unit marches in quick time; the other units continue at double time to their places in the formation ordered and then conform to the gait of the leading or base unit.

13. To hasten the execution of a movement begun in quick time, the command: 1. **Double time**, 2. **MARCH**, is given. The leading or base unit continues to march in quick time, or remains at halt if already halted; the other units complete the execution of the movement in double time and then conform to the gait of the leading or base unit.

14. To stay the execution of a movement when marching, for the correction of errors, the command: 1. **In place**, 2. **HALT**, is given. All halt and stand fast, without changing the position of the pieces. To resume the movement the command: 1. **Resume**, 2. **MARCH**, is given.

15. To revoke a preparatory command, or, being at a halt, to begin anew a movement improperly begun, the command, **AS YOU WERE**, is given, at which the movement ceases and the former position is resumed.

16. Unless otherwise announced, the guide of a company or subdivision of a company in line is right; of a battalion in line or line of subdivisions or of a deployed line, center; of a rank in column of squads, toward the side of the guide of the company.

To march with guide other than as prescribed above, or to change the guide: Guide (right, left, or center).

In successive formations into line, the guide is toward the point of rest; in platoons or larger subdivisions it is so announced.

The announcement of the guide, when given in connection with a movement, follows the command of execution for that movement. Exception: 1. **As skirmishers, guide right (left or center)**, 2. **MARCH**.

17. The turn on the fixed pivot by subdivisions is used in all formations from line into column and the reverse.

The turn on the moving pivot is used by subdivisions of a column in executing changes of direction.

18. Partial changes of direction may be executed:

By interpolating in the preparatory command the word **half**, as **Column half right (left)**, or **Right (left) half turn**. A change of direction of 45° is executed.

By the command: **INCLINE TO THE RIGHT (LEFT)**. The guide, or guiding element, moves in the indicated direction and the remainder of the command conforms. This movement effects slight changes of direction.

19. The designations **line of platoons**, **line of companies**, **line of battalions**, etc., refer to the formations in which the platoons, companies, battalions, etc., each in column of squads, are in line.

20. Full distance in column of subdivisions is such that in forming line to the right or left the subdivisions will have their proper intervals.

In column of subdivisions the guide of the leading subdivision is charged with the step and direction; the guides in rear preserve the trace, step, and distance.

21. In close order, all details, detachments, and other bodies of troops are habitually formed in double rank.

To insure uniformity of interval between files when falling in, and in alignments, each man places the palm of the left hand upon the hip, fingers pointing downward. In the first case the hand is dropped by the side when the next man on the left has his interval; in the second case, at the command **front**.

22. The posts of officers, noncommissioned officers, special units (such as band or machine-gun company), etc., in the various formations of the company, battalion, or regiment, are shown in plates.

In all changes from one formation to another involving a change of post on the part of any of these, posts are promptly taken by the most convenient route as soon as practicable after the command of execution for the movement; officers and noncommissioned officers who have prescribed duties in connection with the movement ordered, take their new posts when such duties are completed.

As instructors, officers and noncommissioned officers go wherever their presence is necessary. As file closers it is their duty to rectify mistakes and insure steadiness and promptness in the ranks.

23. Except at ceremonies, the special units have no fixed places. They take places as directed; in the absence of directions, they conform as nearly as practicable to the plates, and in subsequent movements maintain their relative positions with respect to the flank or end of the command on which they were originally posted.

24. General, field, and staff officers are habitually mounted. The staff of an officer forms in single rank 3 paces in rear of him, the right of the rank extending 1 pace to the right of a point directly in rear of him. Members of the staff are arranged in order from right to left as follows: General staff officers, adjutant, aids, other staff officers, arranged in each classification in order of rank, the senior on the right. The flag of the general officer and the orderlies are 3 paces in rear of the staff, the flag on the right. When necessary to reduce the front of the staff and orderlies, each line executes **twos right** or **fours right**, as explained in the Cavalry Drill Regulations, and follows the commander.

When not otherwise prescribed, staff officers draw and return saber with their chief.

25. In making the about, an officer, mounted, habitually turns to the left.

When the commander faces to give commands, the staff, flag, and orderlies do not change position.

26. When making or receiving official reports, or on meeting out of doors, all officers will salute.

Military courtesy requires the junior to salute first, but when the salute is introductory to a report made at a military ceremony or formation, to the representative of a common superior (as, for example, to the adjutant, officer of the day, etc.), the officer making the report, whatever his rank, will salute first; the officer to whom the report is made will acknowledge by saluting that he has received and understood the report.

27. For ceremonies, all mounted enlisted men of a regiment or smaller unit, except those belonging to the machine-gun organizations, are consolidated into a detachment; the senior present commands if no officer is in charge. The detachment is formed as a platoon or squad of cavalry in line or column of fours; noncommissioned staff officers are on the right or in the leading ranks.

28. For ceremonies, such of the noncommissioned staff officers as are dismounted are formed 5 paces in rear of the color, in order of rank from right to left. In column of squads they march as file closers.

29. Other than for ceremonies, noncommissioned staff officers and orderlies accompany their immediate chiefs unless otherwise directed. If mounted, the noncommissioned staff officers are ordinarily posted on the right or at the head of the orderlies.

30. In all formations and movements a noncommissioned officer commanding a platoon or company carries his piece as the men do, if he is so armed, and takes the same post as an officer in like situation. When the command is formed in line for ceremonies, a noncommissioned officer commanding a company takes post on the right of the right guide after the company has been aligned.

ORDERS, COMMANDS, AND SIGNALS.

31. Commands only are employed in drill at attention. Otherwise either a command, signal, or order is employed, as best suits the occasion, or one may be used in conjunction with another.

32. Signals should be freely used in instruction, in order that officers and men may readily know them. In making arm signals the saber, rifle, or headdress may be held in the hand.

33. Officers and men fix their attention at the first word of command, the first note of the bugle or whistle, or the first motion of the signal. A signal includes both the preparatory command and the command of execution; the movement commences as soon as the signal is understood, unless otherwise prescribed.

34. Except in movements executed at attention, commanders or leaders of subdivisions repeat orders, commands, or signals whenever such repetition is deemed necessary to insure prompt and correct execution.

Officers, battalion noncommissioned staff officers, platoon leaders, guides, and musicians are equipped with whistles.

The major and his staff will use a whistle of distinctive tone; the captain and company musicians a second and distinctive whistle; the platoon leaders and guides a third distinctive whistle.

35. Prescribed signals are limited to such as are essential as a substitute for the voice under conditions which render the voice inadequate.

Before or during an engagement special signals may be agreed upon to facilitate the solution of such special difficulties as the particular situation is likely to develop, but it must be remembered that simplicity and certainty are indispensable qualities of a signal.

ORDERS.

36. In these regulations an order embraces instructions or directions given orally or in writing in terms suited to the particular occasion and not prescribed herein.

Orders are employed only when the commands prescribed herein do not sufficiently indicate the will of the commander.

Orders are more fully described in paragraphs 378 to 383, inclusive.

COMMANDS.

37. In these regulations a command is the will of the commander expressed in the phraseology prescribed herein.

38. There are two kinds of commands:

The preparatory command, such as forward, indicates the movement that is to be executed.

The command of execution, such as **MARCH**, **HALT**, or **ARMS**, causes the execution.

Preparatory commands are distinguished by black letters, lower case, those of execution by **CAPITALS**.

Where it is not mentioned in the text who gives the commands prescribed, they are to be given by the commander of the unit concerned.

The preparatory command should be given at such an interval of time before the command of execution as to admit of being properly understood; the command of execution should be given at the instant the movement is to commence.

The tone of command is animated, distinct, and of a loudness proportioned to the number of men for whom it is intended.

Each preparatory command is enunciated distinctly, with a rising inflection at the end, and in such manner that the command of execution may be more energetic.

The command of execution is firm in tone and brief.

39. Majors and commanders of units larger than a battalion repeat such commands of their superiors as are to be executed by their units, facing their units for that purpose. The battalion is the largest unit that executes a movement at the command of execution of its commander.

40. When giving commands to troops it is usually best to face toward them.

Indifference in giving commands must be avoided, as it leads to laxity in execution. Commands should be given with spirit at all times.

BUGLE SIGNALS.

41. The authorized bugle signals are published in Part V of these regulations. The following bugle signals may be used off the battle field, when not likely to convey information to the enemy:

Attention. Troops are brought to attention.

Attention to Orders. Troops fix their attention.

Forward, March. Used also to execute quick time from double time.

Double Time, March.

To the Rear, March. In close order, execute squads right about.

Halt.

Assemble, March.

The following bugle signals may be used on the battle field:

Fix Bayonets.

Charge.

Assemble, March.

These signals are used only when intended for the entire firing line; hence they can be authorized only by the commander of a unit (for example, a regiment or brigade) which occupies a distinct section of the battle field. Exception: Fix bayonet. (See par. 318.)

The following bugle signals are used in exceptional cases on the battle field. Their principal uses are in field exercises and practice firing.

Commence Firing. Officers charged with fire direction and control open fire as soon as practicable. When given to a firing line, the signal is equivalent to fire at will.

Cease Firing. All parts of the line execute cease firing at once.

These signals are not used by units smaller than a regiment, except when such unit is independent or detached from its regiment.

WHISTLE SIGNALS.

42. Attention to Orders. A short blast of the whistle. This signal is used on the march or in combat when necessary to fix the attention of troops, or of their commanders or leaders, preparatory to giving commands, orders, or signals.

When the firing line is firing, each squad leader suspends firing and fixes his attention at a short blast of his platoon leader's whistle. The platoon leader's subsequent commands or signals are repeated and enforced by the squad leader. If a squad leader's attention is attracted by a whistle other than that of his platoon leader, or if there are no orders or commands to convey to his squad, he resumes firing at once.

Suspend Firing. A long blast of the whistle.

All other whistle signals are prohibited.

ARM SIGNALS.

43. The following arm signals are prescribed. In making signals either arm may be used. Officers who receive signals on the firing line "repeat back" at once to prevent misunderstanding.

Forward, March. Carry the hand to the shoulder; straighten and hold the arm horizontally, thrusting it in direction of march.

This signal is also used to execute quick time from double time.

Halt. Carry the hand to the shoulder; thrust the hand upward and hold the arm vertically.

Double Time, March. Carry the hand to the shoulder; rapidly thrust the hand upward the full extent of the arm several times.

Squads Right, March. Raise the arm laterally until horizontal; carry it to a vertical position above the head and swing it several times between the vertical and horizontal positions.

Squads Left, March. Raise the arm laterally until horizontal; carry it down-

ward to the side and swing it several times between the downward and horizontal positions.

Squads Right About, March (if in close order) or, To the Rear, March (if in skirmish line). Extend the arm vertically above the head; carry it laterally downward to the side and swing it several times between the vertical and downward positions.

Change Direction or Column Right (Left), March. The hand on the side toward which the change of direction is to be made is carried across the body to the opposite shoulder, forearm horizontal; then swing in a horizontal plane, arm extended, pointing in the new direction.

As Skirmishers, March. Raise both arms laterally until horizontal.

As Skirmishers, Guide Center, March. Raise both arms laterally until horizontal; swing both simultaneously upward until vertical and return to the horizontal; repeat several times.

As Skirmishers, Guide Right (Left), March. Raise both arms laterally until horizontal; hold the arm on the side of the guide steadily in the horizontal position; swing the other upward until vertical and return it to the horizontal; repeat several times.

Assemble, March. Raise the arm vertically to its full extent and describe horizontal circles.

Range, or Change Elevation. To announce range, extend the arm toward the leaders or men for whom the signal is intended, fist closed; by keeping the fist closed battle sight is indicated; by opening and closing the fist, expose thumb and fingers to a number equal to the hundreds of yards; to add 50 yards describe a short horizontal line with forefinger. To change elevation, indicate the amount of increase or decrease by fingers as above; point upward to indicate increase and downward to indicate decrease.

What Range Are You Using? or What is the Range? Extend the arms toward the person addressed, one hand open, palm to the front, resting on the other hand, fist closed.

Are You Ready? or I Am Ready. Raise the hand, fingers extended and joined, palm toward the person addressed.

Commence Firing. Move the arm extended in full length, hand palm down, several times through a horizontal arc in front of the body.

Fire Faster. Execute rapidly the signal "Commence firing."

Fire Slower. Execute slowly the signal "Commence firing."

To Swing the Cone of Fire to the Right or Left. Extend the arm in full length to the front, palm to the right (left); swing the arm to right (left), and point in the direction of the new target.

Fix Bayonet. Simulate the movement of the right hand in "Fix bayonet" (paragraph 95).

Suspend Firing. Raise and hold the forearm steadily in a horizontal position in front of the forehead, palm of the hand to the front.

Cease Firing. Raise the forearm as in suspend firing and swing it up and down several times in front of the face.

Platoon. Extend the arm horizontally toward the platoon leader; describe small circles with the hand. (See par. 44.)

Squad. Extend the arm horizontally toward the platoon leader; swing the hand up and down from the wrist. (See par. 44.)

Rush. Same as double time.

44. The signals platoon and squad are intended primarily for communication between the captain and his platoon leaders. The signal platoon or squad indicates that the platoon commander is to cause the signal which follows to be executed by platoon or squad.

FLAG SIGNALS.

45. The signal flags described below are carried by the company musicians in the field. (See Signal Book, page 596, par. 146.)

46. In addition to their use in visual signaling, these flags serve to mark the assembly point of the company when disorganized by combat, and to mark the location of the company in bivouac and elsewhere, when such use is desirable.

47. For communication between the firing line and the reserve or commander in rear, the subjoined signals (Signal Corps codes) are prescribed and should be memorized. In transmission, their concealment from the enemy's view should be insured. In the absence of signal flags, the headdress or other substitute may be used. (See Signal Book, page 593, par. 47.)

SCHOOL OF THE SOLDIER.

48. The instructor explains briefly each movement, first executing it himself if practicable. He requires the recruits to take the proper positions unassisted and does not touch them for the purpose of correcting them, except they are unable to correct themselves. He avoids keeping them too long at the same movement, although each should be understood before passing to another. He exacts by degrees the desired precision and uniformity.

49. In order that all may advance as rapidly as their abilities permit, the recruits are grouped according to proficiency as instruction progresses. Those who lack aptitude and quickness are separated from the others and placed under experienced drill masters.

INSTRUCTION WITHOUT ARMS.

50. For preliminary instruction a number of recruits, usually not exceeding three or four, are formed as a squad in single rank.

POSITION OF THE SOLDIER, OR ATTENTION.

51. Heels on the same line and as near each other as the conformation of the man permits.

Feet turned out equally and forming an angle of about 45°.

Knees straight without stiffness.

Hips level and drawn back slightly; body erect and resting equally on hips; chest lifted and arched; shoulders square and falling equally.

Arms and hands hanging naturally, thumb along the seam of the trousers.

Head erect and squarely to the front, chin drawn in so that the axis of the head and neck is vertical; eyes straight to the front.

Weight of the body resting equally upon the heels and balls of the feet.

THE RESTS.

52. Being at a halt, the commands are: **FALL OUT; REST; AT EASE;** and, 1. **Parade,** 2. **REST.**

At the command fall out, the men may leave the ranks, but are required to remain in the immediate vicinity. They resume their former places, at attention, at the command fall in.

At the command rest each man keeps one foot in place, but is not required to preserve silence or immobility.

At the command at ease each man keeps one foot in place and is required to preserve silence but not immobility.

53. 1. Parade, 2. REST. Carry the right foot 6 inches straight to the rear, left knee slightly bent; clasp the hands, without constraint, in front of the center of the body, fingers joined, left hand uppermost, left thumb clasped by the thumb and forefinger of the right hand; preserve silence and steadiness of position.

54. To resume the attention: 1. Squad, 2. ATTENTION.

The men take the position of the soldier.

EYES RIGHT OR LEFT:

55. 1. Eyes, 2. RIGHT (LEFT), 3. FRONT.

At the command right, turn the head to the right oblique, eyes fixed on the line of eyes of the men in, or supposed to be in, the same rank. At the command front, turn the head and eyes to the front.

FACINGS.

56. To the flank: 1. Right (left), 2. FACE.

Raise slightly the left heel and right toe; face to the right, turning on the right heel, assisted by a slight pressure on the ball of the left foot; place the left foot by the side of the right. Left face is executed on the left heel in the corresponding manner.

Right (left) half face is executed similarly, facing 45°.

"To face in marching" and advance, turn on the ball of either foot and step off with the other foot in the new line of direction; to face in marching without gaining ground in the new direction, turn on the ball of either foot and mark time.

57. To the rear: 1. About, 2. FACE.

Carry the toe of the right foot about a half foot-length to the rear and slightly to the left of the left heel without changing the position of the left foot; face to the rear, turning to the right on the left heel and right toe; place the right heel by the side of the left.

SALUTE WITH THE HAND.

58. 1. Hand, 2. SALUTE.

Raise the right hand smartly till the tip of the forefinger touches the lower part of the headdress or forehead above the right eye, thumb and fingers extended and joined, palm to the left, forearm inclined at about 45°, hand and wrist straight; at the same time look toward the person saluted. (TWO) Drop the arm smartly by the side.

For rules governing salutes, see "Honors and Salutes," paragraphs 758-765.

STEPS AND MARCHINGS.

59. All steps and marchings executed from a halt, except right step, begin with the left foot.

60. The length of the full step in quick time is 30 inches, measured from heel to heel, and the cadence is at the rate of 120 steps per minute.

The length of the full step in double time is 36 inches; the cadence is at the rate of 180 steps per minute.

The instructor, when necessary, indicates the cadence of the step by calling one, two, three, four, or left, right, the instant the left and right foot, respectively, should be planted.

61. All steps and marchings and movements involving march are executed in quick time unless the squad be marching in double time, or double time be added to the command; in the latter case double time is added to the preparatory command. Example: 1. **Squad right, double time, 2. MARCH** (School of the Squad).

QUICK TIME.

62. Being at a halt, to march forward in quick time: 1. **Forward, 2. MARCH.**

At the command forward, shift the weight of the body to the right leg, left knee straight.

At the command march, move the left foot smartly straight forward 30 inches from the right, sole near the ground, and plant it without shock; next, in like manner, advance the right foot and plant it as above; continue the march. The arms swing naturally.

63. Being at a halt, or in march in quick time, to march in double time: 1. **Double time, 2. MARCH.**

If at a halt, at the first command shift the weight of the body to the right leg. At the command march, raise the forearms, fingers closed, to a horizontal position along the waist line; take up an easy run with the step and cadence of double time, allowing a natural swinging motion to the arms.

If marching in quick time, at the command march, given as either foot strikes the ground, take one step in quick time, and then step off in double time.

64. To resume the quick time: 1. **Quick time, 2. MARCH.**

At the command march, given as either foot strikes the ground, advance and plant the other foot in double time; resume the quick time, dropping the hands by the sides.

TO MARK TIME.

65. Being in march: 1. **Mark time, 2. MARCH.**

At the command march, given as either foot strikes the ground, advance and plant the other foot; bring up the foot in rear and continue the cadence by alternately raising each foot about 2 inches and planting it on line with the other.

Being at a halt, at the command march, raise and plant the feet as described above.

THE HALF STEP.

66. 1. **Half step, 2. MARCH.**

Take steps of 15 inches in quick time, 18 inches in double time.

67. Forward, half step, halt, and mark time may be executed one from the other in quick or double time.

To resume the full step from half step or mark time: 1. **Forward, 2. MARCH.**

SIDE STEP.

68. Being at a halt or mark time: 1. **Right (left) step, 2. MARCH.**

Carry and plant the right foot 15 inches to the right; bring the left foot beside it and continue the movement in the cadence of quick time.

The side step is used for short distances only and is not executed in double time.

If at order arms, the side step is executed at trail without command.

BACK STEP.

69. Being at a halt or mark time: 1. **Backward, 2. MARCH.**

Take steps of 15 inches straight to the rear.

The back step is used for short distances only and is not executed in double time.

If at order arms, the back step is executed at trail without command.

TO HALT.

70. To arrest the march in quick or double time: 1. **Squad, 2. HALT.**

At the command halt, given as either foot strikes the ground, plant the other foot as in marching; raise and place the first foot by the side of the other. If in double time, drop the hands by the sides.

TO MARCH BY THE FLANK.

71. Being in march: 1. **By the right (left) flank, 2. MARCH.**

At the command march, given as the right foot strikes the ground, advance and plant the left foot, then face to the right in marching and step off in the new direction with the right foot.

TO MARCH TO THE REAR.

72. Being in march: 1. **To the rear, 2. MARCH.**

At the command march, given as the right foot strikes the ground, advance and plant the left foot; turn to the right about on the balls of both feet and immediately step off with the left foot.

If marching in double time, turn to the right about, taking four steps in place, keeping the cadence, and then step off with the left foot.

CHANGE STEP.

73. Being in march: 1. **Change step, 2. MARCH.**

At the command march, given as the right foot strikes the ground, advance and plant the left foot; plant the toe of the right foot near the heel of the left and step off with the left foot.

The change on the right foot is similarly executed, the command march being given as the left foot strikes the ground.

MANUAL OF ARMS.

74. As soon as practicable the recruit is taught the use, nomenclature (See Description of U. S. Rifle, page 674), and care of his rifle; when fair progress has been made in the instruction without arms, he is taught the manual of arms; instruction without arms and that with arms alternate.

75. The following rules govern the carrying of the piece:

First. The piece is not carried with cartridges in either the chamber or the magazine except when specifically ordered. When so loaded, or supposed to be loaded, it is habitually carried locked; that is, with the safety lock turned to the "safe." At all other times it is carried unlocked, with the trigger pulled.

Second. Whenever troops are formed under arms, pieces are immediately inspected at the commands: 1. **Inspection, 2. ARMS; 3. Order (Right shoulder, port), 4. ARMS.**

A similar inspection is made immediately before dismissal.

If cartridges are found in the chamber or magazine they are removed and placed in the belt.

Third. The cut-off is kept turned "off" except when cartridges are actually used.

Fourth. The bayonet is not fixed except in bayonet exercise, on guard, or for combat.

Fifth. Fall in is executed with the piece at the order arms. Fall out, rest, and at ease are executed as without arms. On resuming attention the position of order arms is taken.

Sixth. If at the order, unless otherwise prescribed, the piece is brought to the right shoulder at the command march, the three motions corresponding with the first three steps. Movements may be executed at the trail by prefacing the preparatory command with the words at trail; as, 1. **At trail, forward, 2. MARCH**; the trail is taken at the command march.

When the facings, alignments, open and close ranks, taking interval or distance, and assemblings are executed from the order, raise the piece to the trail while in motion and resume the order on halting.

Seventh. The piece is brought to the order on halting. The execution of the order begins when the halt is completed.

Eighth. A disengaged hand in double time is held as when without arms.

76. The following rules govern the execution of the manual of arms:

First. In all positions of the left hand at the balance (center of gravity, bayonet unfixed) the thumb clasps the piece; the sling is included in the grasp of the hand.

Second. In all positions of the piece "diagonally across the body" the position of the piece, left arm and hand are the same as in port arms.

Third. In resuming the order from any position in the manual, the motion next to the last concludes with the butt of the piece about 3 inches from the ground, barrel to the rear, the left hand above and near the right, steadying the piece, fingers extended and joined, forearm and wrist straight and inclining downward, all fingers of the right hand grasping the piece. To complete the order, lower the piece gently to the ground with the right hand, drop the left quickly by the side, and take the position of order arms.

Allowing the piece to drop through the right hand to the ground, or other similar abuse of the rifle to produce effect in executing the manual, is prohibited.

Fourth. The cadence of the motions is that of quick time; the recruits are first required to give their whole attention to the details of the motions, the cadence being gradually acquired as they become accustomed to handling their pieces. The instructor may require them to count aloud in cadence with the motions.

Fifth. The manual is taught at a halt and the movements are, for the purpose of instruction, divided into motions and executed in detail; in this case the command of execution determines the prompt execution of the first motion, and the commands, two, three, four, that of the other motions.

To execute the movements in detail, the instructor first cautions: By the numbers; all movements divided into motions are then executed as above explained until he cautions: Without the numbers; or commands movements other than those in the manual of arms.

Sixth. Whenever circumstances require, the regular positions of the manual of arms and the firings may be ordered without regard to the previous position of the piece.

Under exceptional conditions of weather or fatigue the rifle may be carried in any manner directed.

77. **Position of Order Arms, Standing.** The butt rests evenly on the ground, barrel to the rear, toe of the butt on a line with toe of, and touching, the right shoe, arms and hands hanging naturally, right hand holding the piece between the thumb and fingers.

78. Being at order arms: 1. **Present, 2. ARMS.**

With the right hand carry the piece in front of the center of the body, barrel to the rear and vertical, grasp it with the left hand at the balance, forearm horizontal and resting against the body. (TWO) Grasp the small of the stock with the right hand.

79. Being at order arms: 1. Port, 2. ARMS.

With the right hand raise and throw the piece diagonally across the body, grasp it smartly with both hands; the right, palm down, at the small of the stock; the left, palm up, at the balance; barrel up, sloping to the left and crossing opposite the junction of the neck with the left shoulder; right forearm horizontal; left forearm resting against the body; the piece in a vertical plane parallel to the front.

80. Being at present arms: 1. Port, 2. ARMS.

Carry the piece diagonally across the body and take the position of port arms.

81. Being at port arms: 1. Present, 2. ARMS.

Carry the piece to a vertical position in front of the center of the body and take the position of present arms.

82. Being at present or port arms: 1. Order, 2. ARMS.

Let go with the right hand; lower and carry the piece to the right with the left hand; regrasp it with the right hand just above the lower band; let go with the left hand, and take the next to the last position in coming to the order. (TWO) Complete the order.

83. Being at order arms: 1. Right shoulder, 2. ARMS.

With the right hand raise and throw the piece diagonally across the body; carry the right hand quickly to the butt, embracing it, the heel between the first two fingers. (TWO) Without changing the grasp of the right hand, place the piece on the right shoulder, barrel up and inclined at an angle of about 45° from the horizontal, trigger guard in the hollow of the shoulder, right elbow near the side, the piece in a vertical plane perpendicular to the front; carry the left hand, thumb and fingers extended and joined, to the small of the stock, tip of the forefinger touching the cocking piece, wrist straight and elbow down. (THREE) Drop the left hand by the side.

84. Being at right shoulder arms: 1. Order, 2. ARMS.

Press the butt down quickly and throw the piece diagonally across the body, the right hand retaining the grasp of the butt. (TWO), (THREE) Execute order arms as described from port arms.

85. Being at port arms: 1. Right shoulder, 2. ARMS.

Change the right hand to the butt. (TWO), (THREE) As in right shoulder arms from order arms.

86. Being at right shoulder arms: 1. Port, 2. ARMS.

Press the butt down quickly and throw the piece diagonally across the body, the right hand retaining its grasp of the butt. (TWO) Change the right hand to the small of the stock.

87. Being at right shoulder arms: 1. Present, 2. ARMS.

Execute port arms. (THREE) Execute present arms.

88. Being at present arms: 1. Right shoulder, 2. ARMS.

Execute port arms. (TWO), (THREE), (FOUR) Execute right shoulder arms as from port arms.

89. Being at port arms: 1. Left shoulder, 2. ARMS.

Carry the piece with the right hand and place it on the left shoulder, barrel up, trigger guard in the hollow of the shoulder; at the same time grasp the butt with the left hand, heel between first and second fingers, thumb and fingers closed on the stock. (TWO) Drop the right hand by the side.

Being at left shoulder arms: 1. Port, 2. ARMS.

Grasp the piece with the right hand at the small of the stock. (TWO) Carry the piece to the right with the right hand, regrasp it with the left, and take the position of port arms.

Left shoulder arms may be ordered directly from the order, right shoulder or present, or the reverse. At the command arms execute port arms and continue in cadence to the position ordered.

90. Being at order arms: 1. Parade, 2. REST.

Carry the right foot 6 inches straight to the rear, left knee slightly bent; carry the muzzle in front of the center of the body, barrel to the left; grasp the piece with the left hand just below the stacking swivel, and with the right hand below and against the left.

Being at parade rest: 1. Squad, 2. **ATTENTION.**

Resume the order, the left hand quitting the piece opposite the right hip.

91. Being at order arms: 1. Trail, 2. ARMS.

Raise the piece, right arm slightly bent, and incline the muzzle forward so that the barrel makes an angle of about 30° with the vertical.

When it can be done without danger or inconvenience to others, the piece may be grasped at the balance and the muzzle lowered until the piece is horizontal; a similar position in the left hand may be used.

92. Being at trail arms: 1. Order, 2. ARMS.

Lower the piece with the right hand and resume the order.

RIFLE SALUTE.

93. Being at right shoulder arms: 1. Rifle, 2. SALUTE.

Carry the left hand smartly to the small of the stock, forearm horizontal, palm of hand down, thumb and fingers extended and joined, forefinger touching end of cocking piece; look toward the person saluted. (TWO) Drop left hand by the side; turn head and eyes to the front.

94. Being at order or trail arms: 1. Rifle, 2. SALUTE.

Carry the left hand smartly to the right side, palm of the hand down, thumb and fingers extended and joined, forefinger against piece near the muzzle; look toward the person saluted. (TWO) Drop the left hand by the side; turn the head and eyes to the front.

For rules governing salutes, see "Honors and Salutes" (par. 758-765.)

THE BAYONET.

95. Being at order arms: 1. Fix, 2. BAYONET.

If the bayonet scabbard is carried on the belt: Execute parade rest; grasp the bayonet with the right hand, back of hand toward the body; draw the bayonet from the scabbard and fix it on the barrel, glancing at the muzzle; resume the order.

If the bayonet is carried on the haversack: Draw the bayonet with the left hand and fix it in the most convenient manner.

96. Being at order arms: 1. Unfix, 2. BAYONET.

If the bayonet scabbard is carried on the belt: Execute parade rest; grasp the handle of the bayonet firmly with the right hand, pressing the spring with the forefinger of the right hand; raise the bayonet until the handle is about 12 inches above the muzzle of the piece; drop the point to the left, back of the hand toward the body, and, glancing at the scabbard, return the bayonet, the blade passing between the left arm and the body; regrasp the piece with the right hand and resume the order.

If the bayonet scabbard is carried on the haversack: Take the bayonet from the rifle with the left hand and return it to the scabbard in the most convenient manner.

If marching or lying down, the bayonet is fixed and unfixed in the most expeditious and convenient manner and the piece returned to the original position.

Fix and unfix bayonet are executed with promptness and regularity but not in cadence.

97. CHARGE BAYONET. Whether executed at halt or in motion, the bayonet is held toward the opponent as in the position of guard in the Manual for Bayonet Exercise.

Exercises for instruction in bayonet combat are prescribed in the Manual for Bayonet Exercise.

THE INSPECTION.

98. Being at order arms: 1. Inspection, 2. ARMS.

At the second command take the position of port arms. (TWO) Seize the bolt handle with the thumb and forefinger of the right hand, turn the handle up, draw the bolt back, and glance at the chamber. Having found the chamber empty, or having emptied it, raise the head and eyes to the front.

99. Being at inspection arms: 1. Order (Right shoulder, port), 2. ARMS.

At the preparatory command push the bolt forward, turn the handle down, pull the trigger, and resume port arms. At the command arms, complete the movement ordered.

TO DISMISS THE SQUAD.

100. Being at halt: 1. Inspection, 2. ARMS, 3. Port, 4. ARMS, 5. DISMISSED.

SCHOOL OF THE SQUAD.

101. Soldiers are grouped into squads for purposes of instruction, discipline, control, and order.

102. The squad proper consists of a corporal and seven privates.

The movements in the School of the Squad are designed to make the squad a fixed unit and to facilitate the control and movement of the company. If the number of men grouped is more than 3 and less than 12, they are formed as a squad of 4 files, the excess above 8 being posted as file closers. If the number grouped is greater than 11, 2 or more squads are formed and the group is termed a platoon.

For the instruction of recruits, these rules may be modified.

103. The corporal is the squad leader, and when absent is replaced by a designated private. If no private is designated, the senior in length of service acts as leader.

The corporal, when in ranks, is posted as the left man in the front rank of the squad.

When the corporal leaves the ranks to lead his squad, his rear rank man steps into the front rank, and the file remains blank until the corporal returns to his place in ranks, when his rear rank man steps back into the rear rank.

104. In battle officers and sergeants endeavor to preserve the integrity of squads; they designate new leaders to replace those disabled, organize new squads when necessary, and see that every man is placed in a squad.

Men are taught the necessity of remaining with the squad to which they belong and, in case it be broken up or they become separated therefrom, to attach themselves to the nearest squad and platoon leaders, whether these be of their own or of another organization.

105. The squad executes the halt, rests, facings, steps and marchings, and the manual of arms as explained in the School of the Soldier.

TO FORM THE SQUAD.

106. To form the squad the instructor places himself 3 paces in front of where the center is to be and commands: **FALL IN.**

The men assemble at attention, pieces at the order, and are arranged by the corporal in double rank, as nearly as practicable in order of height from right to left, each man dropping his left hand as soon as the man on his left has his interval. The rear rank forms with distance of 40 inches.

The instructor then commands: **COUNT OFF.**

At this command all except the right file execute eyes right, and beginning on the right, the men in each rank count one, two, three, four; each man turns his head and eyes to the front as he counts.

Pieces are then inspected.

ALIGNMENTS.

107. To align the squad, the base file or files having been established: 1. **Right (left), 2. DRESS, 3. FRONT.**

At the command dress all men place the left hand upon the hip (whether dressing to the right or left); each man, except the base file, when on or near the new line executes eyes right, and, taking steps of 2 or 3 inches, places himself so that his right arm rests lightly against the arm of the man on his right, and so that his eyes and shoulders are in line with those of the men on his right; the rear rank men cover in file.

The instructor verifies the alignment of both ranks from the right flank and orders up or back such men as may be in rear, or in advance, of the line; only the men designated move.

At the command front, given when the ranks are aligned, each man turns his head and eyes to the front and drops his left hand by his side.

In the first drills the basis of the alignment is established on, or parallel to, the front of the squad; afterwards, in oblique directions.

Whenever the position of the base file or files necessitates a considerable movement by the squad, such movement will be executed by marching to the front or oblique, to the flank or backward, as the case may be, without other command, and at the trail.

108. To preserve the alignment when marching: **GUIDE RIGHT (LEFT).**

The men preserve their intervals from the side of the guide, yielding to pressure from that side and resisting pressure from the opposite direction; they recover intervals, if lost, by gradually opening out or closing in; they recover alignment by slightly lengthening or shortening the step; the rear-rank men cover their file leaders at 40 inches.

In double-rank, the front-rank man on the right, or designated flank, conducts the march; when marching faced to the flank, the leading man of the front rank is the guide.

TO TAKE INTERVALS AND DISTANCES.

109. Being in line at a halt: 1. **Take interval, 2. To the right (left), 3. MARCH, 4. Squad, 5. HALT.**

At the second command the rear-rank men march backward 4 steps and halt; at the command march all face to the right and the leading man of each rank steps off; the other men step off in succession, each following the preceding man at 4 paces, rear-rank men marching abreast of their file leaders.

At the command halt, given when all have their intervals, all halt and face to the front.

110. Being at intervals, to assemble the squad: 1. **Assemble, to the right (left), 2. MARCH.**

The front-rank man on the right stands fast, the rear-rank man on the right closes to 40 inches. The other men face to the right, close by the shortest line, and face to the front.

111. Being in line at a halt and having counted off: 1. **Take distance, 2. MARCH, 3. Squad, 4. HALT.**

At the command march No. 1 of the front rank moves straight to the front; Nos. 2, 3, and 4 of the front rank and Nos. 1, 2, 3, and 4 of the rear rank, in the order named, move straight to the front, each stepping off so as to follow the preceding man at 4 paces. The command halt is given when all have their distances.

In case more than one squad is in line, each squad executes the movement as above. The guide of each rank of numbers is right.

112. Being at distances, to assemble the squad: 1. **Assemble, 2. MARCH.**

No. 1 of the front rank stands fast; the other numbers move forward to their proper places in line.

TO STACK AND TAKE ARMS.

113. Being in line at a halt: **STACK ARMS.**

Each even number of the front rank grasps his piece with the left hand at the upper band and rests the butt between his feet, barrel to the front, muzzle inclined slightly to the front and opposite the center of the interval on his right, the thumb and forefinger raising the stacking swivel; each even number of the rear rank then passes his piece, barrel to the rear, to his file leader, who grasps it between the bands with his right hand and throws the butt about 2 feet in advance of that of his own piece and opposite the right of the interval, the right hand slipping to the upper band, the thumb and forefinger raising the stacking swivel, which he engages with that of his own piece; each odd number of the front rank raises his piece with the right hand, carries it well forward, barrel to the front; the left hand, guiding the stacking swivel, engages the lower hook of the swivel of his own piece with the free hook of that of the even number of the rear rank; he then turns the barrel outward into the angle formed by the other two pieces and lowers the butt to the ground, to the right of and against the toe of his right shoe.

The stacks made, the loose pieces are laid on them by the even numbers of the front rank.

When each man has finished handling pieces, he takes the position of the soldier.

114. Being in line behind the stacks: **TAKE ARMS.**

The loose pieces are returned by the even numbers of the front rank; each even number of the front rank grasps his own piece with the left hand, the piece of his rear-rank man with his right hand, grasping both between the hands; each odd number of the front rank grasps his piece in the same way with the right hand, disengages it by raising the butt from the ground and then, turning the piece to the right, detaches it from the stack; each even number of the front rank disengages and detaches his piece by turning it to the left, and then passes the piece of his rear-rank man to him, and all resume the order.

115. Should any squad have Nos. 2 and 3 blank files, No. 1 rear rank takes the place of No. 2 rear rank in making and breaking the stack; the stacks made or broken, he resumes his post.

Pieces not used in making the stack are termed loose pieces.

Pieces are never stacked with the bayonet fixed.

THE OBLIQUE MARCH.

116. For the instruction of recruits, the squad being in column or correctly aligned, the instructor causes the squad to face half right or half left, points out to the men their relative positions, and explains that these are to be maintained in the oblique march.

117. 1. Right (left) oblique, 2. MARCH.

Each man steps off in a direction 45° to the right of his original front. He preserves his relative position, keeping his shoulders parallel to those of the guide (the man on the right front of the line or column), and so regulates his steps that the ranks remain parallel to their original front.

At the command halt the men halt faced to the front.

To resume the original direction: 1. **Forward**, 2. **MARCH**.

The men half face to the left in marching and then move straight to the front.

If at half step or mark time while obliquing, the oblique march is resumed by the commands: 1. **Oblique**, 2. **MARCH**.

TO TURN ON MOVING PIVOT.**118. Being in line: 1. Right (left) turn, 2. MARCH.**

The movement is executed by each rank successively and on the same ground. At the second command, the pivot man of the front rank faces to the right in marching and takes the half step; the other men of the rank oblique to the right until opposite their places in line, then execute a second right oblique and take the half step on arriving abreast of the pivot man. All glance toward the marching flank while at half step and take the full step without command as the last man arrives on the line.

Right (left) half turn is executed in a similar manner. The pivot man makes a half change of direction to the right and the other men make quarter changes in obliquing.

TO TURN ON FIXED PIVOT.**119. Being in line, to turn and march: 1. Squad right (left), 2. MARCH.**

At the second command, the right flank man in the front rank faces to the right in marching and marks time; the other front rank men oblique to the right, place themselves abreast of the pivot, and mark time. In the rear rank the third man from the right, followed in column by the second and first, moves straight to the front until in rear of his front-rank man, when all face to the right in marching and mark time; the other number of the rear rank moves straight to the front four paces and places himself abreast of the man on his right. Men on the new line glance toward the marching flank while marking time and, as the last man arrives on the line, both ranks execute forward, march, without command.

120. Being in line, to turn and halt: 1. Squad right (left), 2. MARCH, 3. Squad, 4. HALT.

The third command is given immediately after the second. The turn is executed as prescribed in the preceding paragraph except that all men, on arriving on the new line, mark time until the fourth command is given, when all halt. The fourth command should be given as the last man arrives on the line.

121. Being in line, to turn about and march: 1. Squad right (left) about, 2. MARCH.

At the second command, the front rank twice executes squad right, initiating the second squad right when the man on the marching flank has arrived abreast of the rank. In the rear rank the third man from the right, followed by the second and first in column, moves straight to the front until on the prolonga-

tion of the line to be occupied by the rear rank; changes direction to the right; moves in the new direction until in rear of his front-rank man, when all face to the right in marching, mark time, and glance toward the marching flank. The fourth man marches on the left of the third to his new position; as he arrives on the line, both ranks execute forward, march, without command.

122. Being in line, to turn about and halt: 1. **Squad right (left) about, 2. MARCH, 3. Squad, 4. HALT.**

The third command is given immediately after the second. The turn is executed as prescribed in the preceding paragraph except that all men, on arriving on the new line, mark time until the fourth command is given, when all halt. The fourth command should be given as the last man arrives on the line.

TO FOLLOW THE CORPORAL.

123. Being assembled or deployed, to march the squad without unnecessary commands, the corporal places himself in front of it and commands: **FOLLOW ME.**

If in line or skirmish line, No. 2 of the front rank follows in the trace of the corporal at about 3 paces; the other men conform to the movements of No. 2, guiding on him and maintaining their relative positions.

If in column, the head of the column follows the corporal.

TO DEPLOY AS SKIRMISHERS.

124. Being in any formation, assembled: 1. **As skirmishers, 2. MARCH.**

The corporal places himself in front of the squad, if not already there. Moving at a run, the men place themselves abreast of the corporal at half-pace intervals, Nos. 1 and 2 on his right, Nos. 3 and 4 on his left, rear-rank men on the right of their file leaders, extra men on the left of No. 4; all then conform to the corporal's gait.

When the squad is acting alone, skirmish line is similarly formed on No. 2 of the front rank, who stands fast or continues the march, as the case may be; the corporal places himself in front of the squad when advancing and in rear when halted.

When deployed as skirmishers, the men march at ease, pieces at the trail unless otherwise ordered.

The corporal is the guide when in the line; otherwise No. 2 front rank is the guide.

125. The normal interval between skirmishers is one-half pace, resulting practically in one man per yard of front. The front of a squad thus deployed as skirmishers is about 10 paces.

TO INCREASE OR DIMINISH INTERVALS.

126. If assembled, and it is desired to deploy at greater than the normal interval; or if deployed, and it is desired to increase or decrease the interval: 1. **As skirmishers, (so many) paces, 2. MARCH.**

Intervals are taken at the indicated number of paces. If already deployed, the men move by the flank toward or away from the guide.

THE ASSEMBLY.

127. Being deployed: 1. **Assemble, 2. MARCH.**

The men move toward the corporal and form in their proper places.

If the corporal continues to advance, the men move in double time, form, and follow him.

The assembly while marching to the rear is not executed.

KNEELING AND LYING DOWN.

128. If standing: **KNEEL.**

Half face to the right; carry the right toe about 1 foot to the left rear of the left heel; kneel on right knee, sitting as nearly as possible on the right heel; left forearm across left thigh; piece remains in position of order arms, right hand grasping it above the lower band.

129. If standing or kneeling: **LIE DOWN.**

Kneel, but with right knee against left heel; carry back the left foot and lie flat on the belly, inclining body about 35° to the right; piece horizontal, barrel up, muzzle off the ground and pointed to the front; elbows on the ground; left hand at the balance, right hand grasping the small of the stock opposite the neck. This is the position of order arms, lying down.

130. If kneeling or lying down: **RISE.**

If kneeling, stand up, faced to the front, on the ground marked by the left heel.

If lying down, raise body on both knees; stand up, faced to the front, on the ground marked by the knees.

131. If lying down: **KNEEL.**

Raise the body on both knees; take the position of kneel.

132. In double rank, the positions of kneeling and lying down are ordinarily used only for the better utilization of cover.

When deployed as skirmishers, a sitting position may be taken in lieu of the position kneeling.

LOADINGS AND FIRINGS.

133. The commands for loading and firing are the same whether standing, kneeling, or lying down. The firings are always executed at a halt.

When kneeling or lying down in double rank, the rear rank does not load, aim, or fire.

The instruction in firing will be preceded by a command for loading.

Loadings are executed in line and skirmish line only.

134. Pieces having been ordered loaded are kept loaded without command until the command unload, or inspection arms, fresh clips being inserted when the magazine is exhausted.

135. The aiming point or target is carefully pointed out. This may be done before or after announcing the sight setting. Both are indicated before giving the command for firing, but may be omitted when the target appears suddenly and is unmistakable; in such case battle sight is used if no sight setting is announced.

136. The target or aiming point having been designated and the sight setting announced, such designation or announcement need not be repeated until a change of either or both is necessary.

Troops are trained to continue their fire upon the aiming point or target designated, and at the sight setting announced, until a change is ordered.

137. If the men are not already in the position of load, that position is taken at the announcement of the sight setting; if the announcement is omitted, the position is taken at the first command for firing.

138. When deployed, the use of the sling as an aid to accurate firing is discretionary with each man.

TO LOAD.

139. Being in line or skirmish line at halt: 1. With dummy (blank or ball) cartridges, 2. LOAD.

At the command load each front-rank man or skirmisher faces half right and carries the right foot to the right, about 1 foot, to such position as will insure the greatest firmness and steadiness of the body; raises, or lowers, the piece and drops it into the left hand at the balance, left thumb extended along the stock muzzle at the height of the breast, and turns the cut-off up. With the right hand he turns and draws the bolt back, takes a loaded clip and inserts the end in the clip slots, places the thumb on the powder space of the top cartridge, the fingers extending around the piece and tips resting on the magazine floor plate; forces the cartridges into the magazine by pressing down with the thumb; without removing the clip, thrusts the bolt home, turning down the handle; turns the safety lock to the "safe" and carries the hand to the small of the stock. Each rear rank man moves to the right front, takes a similar position opposite the interval to the right of his front rank man, muzzle of the piece extending beyond the front rank, and loads.

A skirmish line may load while moving, the pieces being held as nearly as practicable in the position of load.

If kneeling or sitting, the position of the piece is similar; if kneeling, the left forearm rests on the left thigh; if sitting the elbows are supported by the knees. If lying down, the left hand steadies and supports the piece at the balance, the toe of the butt resting on the ground, the muzzle off the ground.

For reference, these positions (standing, kneeling, and lying down) are designated as that of load.

140. For instruction in loading: 1. Simulate, 2. LOAD.

Executed as above described except that the cut-off remains "off" and the handling of cartridges is simulated.

The recruits are first taught to simulate loading and firing; after a few lessons dummy cartridges may be used. Later, blank cartridges may be used.

141. The rifle may be used as a single loader by turning the magazine "off." The magazine may be filled in whole or in part while "off" or "on" by pressing cartridges singly down and back until they are in the proper place. The use of the rifle as a single loader is, however, to be regarded as exceptional.

TO UNLOAD.

142. UNLOAD.

Take the position of load, turn the safety lock up and move bolt alternately back and forward until all the cartridges are ejected. After the last cartridge is ejected the chamber is closed by first thrusting the bolt slightly forward to free it from the stud holding it in place when the chamber is open, pressing the follower down and back to engage it under the bolt and then thrusting the bolt home; the trigger is pulled. The cartridges are then picked up, cleaned, and returned to the belt and the piece is brought to the order.

TO SET THE SIGHT.

143. RANGE, ELEVEN HUNDRED (EIGHTY-FIFTY, etc.), or BATTLE SIGHT.

The sight is set at the elevation indicated. The instructor explains and verifies sight settings.

TO FIRE BY VOLLEY.**144. 1. READY, 2. AIM, 3. Squad, 4. FIRE.**

At the command ready turn the safety lock to the "ready;" at the command aim raise the piece with both hands and support the butt firmly against the hollow of the right shoulder, right thumb, clasping the stock, barrel horizontal, left elbow well under the piece, right elbow as high as the shoulder; incline the head slightly forward and a little to the right, cheek against the stock, left eye closed, right eye looking through the notch of the rear sight so as to perceive the object aimed at, second joint of forefinger resting lightly against the front of the trigger and taking up the slack; top of front sight is carefully raised into, and held in, the line of sight.

Each rear-rank man aims through the interval to the right of his file leader and leans slightly forward to advance the muzzle of his piece beyond the front rank.

In aiming kneeling, the left elbow rests on the left knee, point of elbow in front of kneecap. In aiming sitting, the elbows are supported by the knees.

In aiming lying down, raise the piece with both hands; rest on both elbows and press the butt firmly against the right shoulder.

At the command fire press the finger against the trigger; fire without deraiding the aim and without lowering or turning the piece; lower the piece in the position of Load and load.

145. To continue the firing: 1. AIM, 2. Squad, 3. FIRE.

Each command is executed as previously explained. Load (from magazine) is executed by drawing back and thrusting home the bolt with the right hand, leaving the safety lock at the "ready."

TO FIRE AT WILL.**146. FIRE AT WILL.**

Each man, independently of the others, comes to the ready, aims carefully and deliberately at the aiming point or target, fires, loads, and continues the firing until ordered to suspend or cease firing.

147. To increase (decrease) the rate of fire in progress the instructor shouts: FASTER (SLOWER).

Men are trained to fire at the rate of about three shots per minute at effective ranges and five or six at close ranges, devoting the minimum of time to loading and the maximum to deliberate aiming. To illustrate the necessity for deliberation, and to habituate men to combat conditions, small and comparatively indistinct targets are designated.

TO FIRE BY CLIP.**148. CLIP FIRE.**

Executed in the same manner as fire at will, except that each man, after having exhausted the cartridges then in the piece, suspends firing.

TO SUSPEND FIRING.

149. The instructor blows a long blast of the whistle and repeats same, if necessary, or commands: **SUSPEND FIRING.**

Firing stops; pieces are held, loaded and locked, in a position of readiness for instant resumption of firing, rear sights unchanged. The men continue to observe the target or aiming point, or the place at which the target disappeared, or at which it is expected to reappear.

This whistle signal may be used as a preliminary to cease firing.

TO CEASE FIRING.**150. CEASE FIRING.**

Firing stops; pieces not already there are brought to the position of load; those not loaded, are loaded; sights are laid, pieces are locked and brought to the order.

Cease firing is used for long pauses, to prepare for changes of position, or to steady the men.

151. Commands for suspending or ceasing fire may be given at any time after the preparatory command for firing whether the firing has actually commenced or not.

THE USE OF COVER.

152. The recruit should be given careful instruction in the individual use of cover.

It should be impressed upon him that, in taking advantage of natural cover, he must be able to fire easily and effectively upon the enemy; if advancing on an enemy, he must do so steadily and as rapidly as possible; he must conceal himself as much as possible while firing and while advancing. While setting his sight, he should be under cover or lying prone.

153. To teach him to fire easily and effectively, at the same time concealing himself from the view of the enemy, he is practiced in simulated firing in the prone, sitting, kneeling, and crouching positions, from behind hillocks, trees, heaps of earth or rocks, from depressions, gullies, ditches, doorways, or windows. He is taught to fire around the right side of his concealment whenever possible, or, when this is not possible, to rise enough to fire over the top of his concealment.

When these details are understood, he is required to select cover with reference to an assumed enemy and to place himself behind it in proper position for firing.

154. The evil of remaining too long in one place, however good the concealment, should be explained. He should be taught to advance from cover to cover, selecting cover in advance before leaving his concealment.

It should be impressed upon him that a man running rapidly toward an enemy furnishes a poor target. He should be trained in springing from a prone position behind concealment, running at top speed to cover and throwing himself behind it. He should also be practiced in advancing from cover to cover by crawling, or by lying on the left side, rifle grasped in the right hand, and pushing himself forward with the right leg.

155. He should be taught that, when fired on while acting independently, he should drop to the ground, seek cover, and then endeavor to locate his enemy.

156. The instruction of the recruit in the use of cover is continued in the combat exercises of the company, but he must then be taught that the proper advance of the platoon or company and the effectiveness of its fire is of greater importance than the question of cover for individuals. He should also be taught that he may not move about or shift his position in the firing line except the better to see the target.

OBSERVATION.

157. The ability to use his eyes accurately is of great importance to the soldier. The recruit should be trained in observing his surrounding from positions and when on the march.

He should be practiced in pointing out and naming military features of the

ground; in distinguishing between living beings; in counting distant groups of objects or beings; in recognizing colors and forms.

158. In the training of men in the mechanism of the firing line, they should be practiced in repeating to one another target and aiming point designations and in quickly locating and pointing out a designated target. They should be taught to distinguish, from a prone position, distant objects, particularly troops, both with the naked eye and with field glasses. Similarly, they should be trained in estimating distances.

SCHOOL OF THE COMPANY.

159. The captain is responsible for the theoretical and practical instruction of his officers and noncommissioned officers, not only in the duties of their respective grades, but in those of the next higher grades.

160. The company in line is formed in double rank with the men arranged, as far as practicable, according to height from right to left, the tallest on the right.

The original division into squads is effected by the command: **COUNT OFF**. The squads, successively from the right, count off as in the School of the Squad, corporals placing themselves as Nos. 4 of the front rank. If the left squad contains less than six men, it is either increased to that number by transfers from other squads or is broken up and its members assigned to other squads and posted in the line of file closers. These squad organizations are maintained, by transfers if necessary, until the company becomes so reduced in numbers as to necessitate a new division into squads. No squad will contain less than six men.

161. The company is further divided into two, three, or four platoons, each consisting of not less than two nor more than four squads. In garrison or ceremonies the strength of platoons may exceed four squads.

162. At the formation of the company the platoons or squads are numbered consecutively from right to left and these designations do not change.

For convenience in giving commands and for reference, the designations, right, center, left, when in line, and leading, center, rear, when in column, are applied to platoons or squads. These designations apply to the actual right, left, center, head, or rear, in whatever direction the company may be facing. The center squad is the middle or right middle squad of the company.

The designation "So-and-so's" squad or platoon may also be used.

163. Platoons are assigned to the lieutenants and noncommissioned officers, in order of rank, as follows: 1, right; 2, left; 3, center (right center); 4, left center.

The noncommissioned officers next in rank are assigned as guides, one to each platoon. If sergeants still remain, they are assigned to platoons as additional guides. When the platoon is deployed, its guide, or guides, accompany the platoon leader.

During battle, these assignments are not changed; vacancies are filled by noncommissioned officers of the platoon, or by the nearest available officers or noncommissioned officers arriving with reenforcing troops.

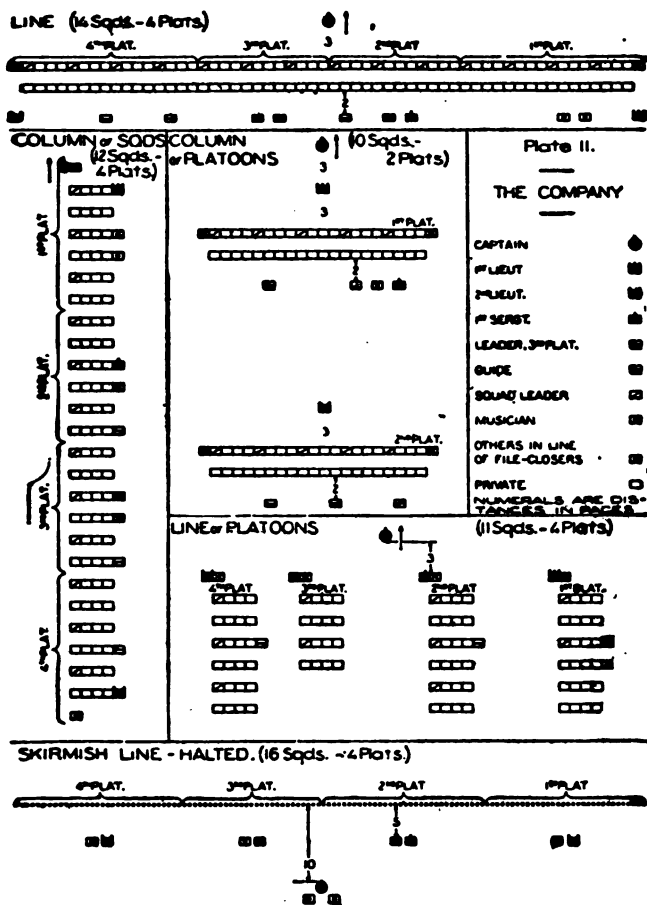
164. The first sergeant is never assigned as a guide. When not commanding a platoon, he is posted as a file closer opposite the third file from the outer flank of the first platoon; and when the company is deployed he accompanies the captain.

The quartermaster sergeant, when present, is assigned according to his rank as a sergeant.

Enlisted men below the grade of sergeant, armed with the rifle, are in ranks unless serving as guides; when not so armed, they are posted in the line of file closers.

Musicians, when required to play, are at the head of the column. When the company is deployed, they accompany the captain.

165. The company executes the halt, rests, facings, steps and marchings, manual of arms, loadings and firings, takes intervals and distances and assembles, increases and diminishes intervals, resumes attention, obliques, resumes



the direct march, preserves alignments, kneels, lies down, rises, stacks and takes arms, as explained in the Schools of the Soldier and the Squad, substituting in the commands company for squad.

The same rule applies to platoons, detachments, details, etc., substituting their designation for squad in the commands. In the same manner these execute the movements prescribed for the company, whenever possible, substituting their designation for company in the commands.

166. A company so depleted as to make division into platoons impracticable is led by the captain as a single platoon, but retains the designation of company. The lieutenants and first sergeants assist in fire control; the other sergeants place themselves in the firing line as skirmishers.

CLOSE ORDER.**RULES.**

167. The guides of the right and left, or leading and rear, platoons, are the right and left, or leading and rear, guides, respectively, of the company when it is in line or in column of squads. Other guides are in the line of file closers.

In platoon movements the post of the platoon guide is at the head of the platoons, if the platoon is in column, and on the guiding flank if in line. When a platoon has two guides their original assignment to flanks of the platoon does not change.

168. The guides of a column of squads place themselves on the flank opposite the file closers. To change the guides and file closers to the other flank, the captain commands: 1. **File closers on left (right) flank**; 2. **MARCH**. The file closers dart through the column; the captain and guides change.

In column of squads, each rank preserves the alignment toward the side of the guide.

169. Men in the line of file closers do not execute the loadings or firings.

Guides and enlisted men in the line of file closers execute the manual of arms during the drill unless specially excused, when they remain at the order. During ceremonies they execute all movements.

170. In taking intervals and distances, unless otherwise directed, the right and left guides, at the first command, place themselves in the line of file closers, and, with them, take a distance of 4 paces from the rear rank. In taking intervals, at the command march, the file closers face to the flank and each steps off with the file nearest him. In assembling the guides and file closers resume their positions in line.

171. In movements executed simultaneously by platoons (as platoons right or platoons, column right), platoon leaders repeat the preparatory command (platoon right, etc.), applicable to their respective platoons. The command of execution is given by the captain only.

TO FORM THE COMPANY.

172. At the sounding of the assembly the first sergeant takes position 6 paces in front of where the center of the company is to be, faces it, draws saber, and commands: **FALL IN**.

The right guide of the company places himself, facing to the front, where the right of the company is to rest, and at such point that the center of the company will be 6 paces from and opposite the first sergeant; the squads form in their proper places on the left of the right guide, superintended by the other sergeants, who then take their posts.

The first sergeant commands: **REPORT**. Remaining in position at the order, the squad leaders, in succession from the right, salute and report: All present; or, Private(s) — absent. The first sergeant does not return the salutes of the squad leaders; he then commands: 1. **Inspection**, 2. **ARMS**, 3. **Order**, 4. **ARMS**, faces about, salutes the captain, reports: Sir, all present or accounted for, or the names of the unauthorized absentees, and, without command, takes his post.

If the company can not be formed by squads, the first sergeant commands: 1. **Inspection**, 2. **ARMS**, 3. **Right shoulder**, 4. **ARMS**, and calls the roll. Each man, as his name is called, answers here and executes order arms. The sergeant then effects the division into squads and reports the company as prescribed above.

The captain places himself 12 paces in front of the center of, and facing, the

company in time to receive the report of the first sergeant, whose salute he returns, and then draws saber.

The lieutenants take their posts when the first sergeant has reported and draw saber with the captain. The company, if not under arms, is formed in like manner omitting reference to arms.

173. For the instruction of platoon leaders and guides, the company, when small, may be formed in single rank. In this formation close order movements only are executed. The single rank executes all movements as explained for the front rank of a company.

TO DISMISS THE COMPANY.

174. Being in line at a halt, the captain directs the first sergeant: Dismiss the company. The officers fall out; the first sergeant places himself faced to the front, 3 paces to the front and 2 paces from the nearest flank of the company, salutes, faces toward opposite flank of the company and commands: 1. **Inspection**, 2. **ARMS**, 3. **Port**, 4. **ARMS**, 5. **DISMISSED**.

ALIGNMENTS.

175. The alignments are executed as prescribed in the School of the Squad, the guide being established instead of the flank file. The rear-rank man of the flank file keeps his head and eyes to the front and covers his file leader.

At each alignment the captain places himself in prolongation of the line, 2 paces from and facing the flank toward which the dress is made, verifies the alignment, and commands: **FRONT**.

Platoon leaders take a like position when required to verify alignments.

MOVEMENTS ON THE FIXED PIVOT.

176. Being in line, to turn the company: 1. **Company right (left)**, 2. **MARCH**, 3. **Company**, 4. **HALT**; or, 3. **Forward**, 4. **MARCH**.

At the second command the right-flank man in the front rank faces to the right in marching and marks time; the other front-rank men oblique to the right, place themselves abreast of the pivot, and mark time; in the rear rank the third man from the right, followed in column by the second and first, moves straight to the front until in rear of his front-rank man, when all face to the right in marching and mark time; the remaining men of the rear rank move straight to the front 4 paces, oblique to the right, place themselves abreast of the third man, cover their file leaders, and mark time; the right guide steps back, takes post on the flank, and marks time.

The fourth command is given when the last man is 1 pace in rear of the new line.

The command halt may be given at any time after the movement begins; only those halt who are in the new position. Each of the others halts upon arriving on the line, aligns himself to the right, and executes front without command.

177. Being in line, to form column of platoons, or the reverse: 1. **Platoons right (left)**, 2. **MARCH**, 3. **Company**, 4. **HALT**; or, 3. **Forward**, 4. **MARCH**.

Executed by each platoon as described for the company.

Before forming line the captain sees that the guides on the flank toward which the movement is to be executed are covering. This is effected by previously announcing the guide to that flank.

178. Being in line, to form column of squads, or the reverse; or, being in line of platoons, to form column of platoons, or the reverse: 1. **Squads right (left)**, 2. **MARCH**; or, 1. **Squads right (left)**, 2. **MARCH**, 3. **Company**, 4. **HALT**.

Executed by each squad as described in the School of the Squad.

If the company or platoons be formed in line toward the side of the file closers, they dart through the column and take posts in rear of the company at the second command. If the column of squads be formed from line, the file closers take posts on the pivot flank; abreast of and 4 inches from the nearest rank.

MOVEMENTS ON THE MOVING PIVOT.

179. Being in line, to change direction: 1. **Right (Left) turn**, 2. **MARCH**, 3. **Forward**, 4. **MARCH**.

Executed as described in the School of the Squad, except that the men do not glance toward the marching flank and that all take the full step at the fourth command. The right guide is the pivot of the front rank. Each rear-rank man obliques on the same ground as his file leader.

180. Being in column of 2 platoons, to change direction: 1. **Column right (left)**, 2. **MARCH**.

At the first command the leader of the leading platoon commands: **Right turn**. At the command march the leading platoon turns to the right on moving pivot; its leader commands: 1. **Forward**, 2. **MARCH**, on completion of the turn. Rear platoons march squarely up to the turning point of the leading platoon and turn at command of their leaders.

181. Being in column of squads, to change direction: 1. **Column right (left)**, 2. **MARCH**.

At the second command the front rank of the leading squad turns to the right on moving pivot as in the School of the Squad; the other ranks, without command, turn successively on the same ground and in a similar manner.

182. Being in column of squads, to form line of platoons or the reverse: 1. **Platoons, column right (left)**, 2. **MARCH**.

Executed by each platoon as described for the company.

183. Being in line, to form column of squads and change direction: 1. **Squads right (left)**, column right (left), 2. **MARCH**; or, 1. **Right (Left) by squads**, 2. **MARCH**.

In the first case the right squad initiates the column right as soon as it has completed the squad right.

In the second case, at the command march, the right squad marches forward; the remainder of the company executes squads right, column left, and follows the right squad. The right guide, when he has posted himself in front of the right squad, takes four steps, then resumes the full step; the right squad conforms.

184. Being in line, to form line of platoons: 1. **Squads right (left)**, platoons, column right (left), 2. **MARCH**; or, 1. **Platoons, right (left) by squads**, 2. **MARCH**.

Executed by each platoon as described for the company in the preceding paragraph.

FACING OR MARCHING TO THE REAR.

185. Being in line, line of platoons, or in column of platoons or squads, to face or march to the rear: 1. **Squads right (left) about**, 2. **MARCH**; or, 1. **Squads right (left) about**, 2. **MARCH**, 3. **Company**, 4. **HALT**.

Executed by each squad as described in the School of the Squad.

If the company or platoons be in column of squads, the file closers turn

about toward the column and take their posts; if in line, each darts through the nearest interval between squads.

186. To march to the rear for a few paces: 1. **About**, 2. **FACE**, 3. **Forward**, 4. **MARCH**.

If in line, the guides place themselves in the rear rank, now the front rank; the file closers, on facing about, maintain their relative positions. No other movement is executed until the line is faced to the original front.

ON THE RIGHT (LEFT) INTO LINE.

187. Being in column of platoons or squads, to form line on right or left; 1. **On right (left) into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**.

At the first command the leader of the leading unit commands: **Right turn**. The leaders of the other units command: **Forward**, if at a halt. At the second command the leading unit turns to the right on moving pivot. The command halt is given when the leading unit has advanced the desired distance in the new direction; it halts; its leader then commands: **Right dress**.

The units in rear continue to march straight to the front; each, when opposite the right of its place in line, executes right turn at the command of its leader; each is halted on the line at the command of its leader, who then commands: **Right dress**. All dress on the first unit in line.

If executed in double time, the leading squad marches in double time until halted.

FRONT INTO LINE.

188. Being in column of platoons or squads, to form line to the front: 1. **Right (Left) front into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**.

At the first command the leaders of the units in rear of the leading one command: **Right oblique**. If at a halt, the leader of the leading unit commands: **Forward**. At the second command the leading unit moves straight forward; the rear units oblique as indicated. The command halt is given when the leading units has advanced the desired distance; it halts; its leader then commands: **Left dress**. Each of the rear units, when opposite its place in line, resumes the original direction at the command of its leader; each is halted on the line at the command of its leader, who then commands: **Left dress**. All dress on the first unit in line.

189. Being in column of squads to form column of platoons, or being in line of platoons, to form the company in line: 1. **Platoons, right (left) front into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**.

Executed by each platoon as described for the company. In forming the company in line, the dress is on the left squad of the left platoon. In forming column of platoons, platoon leaders verify the alignment before taking their posts; the captain commands front when the alignments have been verified.

When front into line is executed in double time the commands for halting and aligning are omitted and the guide is toward the side of the first unit in line.

AT EASE AND ROUTE STEP.

190. The column of squads is the habitual column of route, but route step and at ease are applicable to any marching formation.

191. To march at route step: 1. **Route step**, 2. **MARCH**.

Sabers are carried at will or in the scabbard; the men carry their pieces at will, keeping the muzzles elevated; they are not required to preserve silence, nor to keep the step. The ranks cover and preserve their distance. If halted from route step, the men stand at rest.

192. To march at ease: 1. **At ease**, 2. **MARCH**.

The company marches as in route step, except that silence is preserved; when halted, the men remain at ease.

193. Marching at route step or at ease: 1. **Company**, 2. **ATTENTION**.

At the command attention the pieces are brought to the right shoulder and the cadenced step in quick time is resumed.

TO DIMINISH THE FRONT OF A COLUMN OF SQUADS.

194. Being in column of squads: 1. **Right (Left) by twos**, 2. **MARCH**.

At the command march, all files except the two right files of the leading squad execute in place halt; the two left files of the leading squad oblique to the right when disengaged and follow the right files at the shortest practicable distance. The remaining squads follow successively in like manner.

195. Being in column of squads or twos: 1. **Right (Left) by file**, 2. **MARCH**.

At the command march, all files execute in place halt, except the right file of the leading two or squad. The left file or files of the leading two or squad oblique successively to the right when disengaged and each follows the file on its right at the shortest practicable distance. The remaining twos or squads follow successively in like manner.

196. Being in column of files or twos, to form column of squads; or, being in column files, to form column of twos: 1. **Squads (Twos), right (left) front into line**, 2. **MARCH**.

At the command march, the leading file or files halt. The remainder of the squad, or two, obliques to the right and halts on line with the leading file or files. The remaining squads or twos close up and successively form in rear of the first in like manner.

The movement described in this paragraph will be ordered right or left, so as to restore the files to their normal relative positions in the two or squad.

• **197.** The movements prescribed in the three preceding paragraphs are difficult of execution at attention and have no value as disciplinary exercises.

198. Marching by twos or files can not be executed without serious delay and waste of road space. Every reasonable precaution will be taken to obviate the necessity for these formations.

EXTENDED ORDER.

RULES FOR DEPLOYMENT.

199. The command guide right (left or center) indicates the base squad for the deployment; if in line it designates the actual right (left or center) squad; if in column the command guide right (left) designates the leading squad, and the command guide center designates the center squad. After the deployment is completed, the guide is center without command, unless otherwise ordered.

200. At the preparatory command for forming skirmish line, from either column of squads or line, each squad leader (except the leader of the base squad, when his squad does not advance), cautions his squad, Follow me or By the right (left) flank, as the case may be; at the command march, he steps in front of his squad and leads it to its place in line.

201. Having given the command for forming skirmish line, the captain, if necessary, indicates to the corporal of the base squad the point on which the squad is to march; the corporal habitually looks to the captain for such directions.

202. The base squad is deployed as soon as it has sufficient interval. The other squads are deployed as they arrive on the general line; each corporal halts in his place in line and commands or signals, as skirmishers; the squad deploys and halts abreast of him.

If tactical considerations demand it, the squad is deployed before arriving on the line.

203. Deployed lines preserve a general alignment toward the guide. Within their respective fronts, individuals or units march so as best to secure cover or to facilitate the advance, but the general and orderly progress of the whole is paramount.

On halting, a deployed line faces to the front (direction of the enemy) in all cases and takes advantage of cover, the men lying down if necessary.

204. The company in skirmish line advances, halts, moves by the flank, or to the rear, obliques, resumes the direct march, passes from quick to double time and the reverse by the same commands and in a similar manner as in close order; if at a halt, the movement by the flank or to the rear is executed by the same commands as when marching. Company right (left, half right, half left) is executed as explained for the front rank, skirmish intervals being maintained.

205. A platoon or other part of the company is deployed and marched in the same manner as the company, substituting in the commands, platoon (detachment, etc.) for company.

DEPLOYMENTS.

206. Being in line, to form skirmish to the front: 1. **As skirmishers, guide right (left or center), 2. MARCH.**

If marching, the corporal of the base squad moves straight to the front; when that squad has advanced the desired distance, the captain commands: 1. **Company, 2. HALT.** If the guide be right (left), the other corporals move to the left (right) front, and, in succession from the base, place their squads on the line; if the guide be center, the other corporals move to the right or left front, according as they are on the right or left of the center squad, and in succession from the center squad place their squads on the line.

If at a halt, the base squad is deployed without advancing; the other squads may be conducted to their proper places by the flank; interior squads may be moved when squads more distant from the base have gained comfortable marching distance.

207. Being in column of squads, to form skirmish line to the front: 1. **As skirmishers, guide right (left or center), 2. MARCH.**

If marching, the corporal of the base squad deploys it and moves straight to the front; if at a halt, he deploys his squad without advancing. If the guide be right (left), the other corporals move to the left (right) front, and, in succession from the base, place their squads on the line; if the guide be center, the corporals in front of the center squad move to the right (if at a halt, to the right rear), the corporals in rear of the center squad move to the left front, and each, in succession from the base, places his squad on the line.

The column of twos or files is deployed by the same commands and in like manner.

208. The company in line or in column of squads may be deployed in an oblique direction by the same commands. The captain points out the desired direction; the corporal of the base squad moves in the direction indicated; the other corporals conform.

209. To form skirmish line to the flank or rear the line or the column of squads is turned by squads to the flank or rear and then deployed as described.

210. The intervals between men are increased or decreased as described in the School of the Squad, adding to the preparatory commands, **guide right** (left or center) if necessary.

THE ASSEMBLY.

211. The captain takes his post in front of, or designates the element on which the company is to assemble and commands: 1. **Assemble**, 2. **MARCH**.

If in skirmish line the men move promptly toward the designated point and the company is re-formed in line. If assembled by platoons, these are conducted to the designated point by platoon leaders, and the company is re-formed in line.

Platoons may be assembled by the command: 1. **Platoons, assemble**, 2. **MARCH**.

Executed by each platoon as described for the company.

One or more platoons may be assembled by the command: 1. **Such platoon(s), assemble**, 2. **MARCH**.

Executed by the designated platoon or platoons as described for the company.

THE ADVANCE.

212. The advance of a company into an engagement (whether for attack or defense) is conducted in close order, preferably column of squads, until the probability of encountering hostile fire makes it advisable to deploy. After deployment, and before opening fire, the advance of the company may be continued in skirmish line or other suitable formation, depending upon circumstances. The advance may often be facilitated, or better advantage taken of cover, or losses reduced by the employment of the platoon or squad columns or by the use of a succession of thin lines. The selection of the method to be used is made by the captain or major, the choice depending upon conditions arising during the progress of the advance. If the deployment is found to be premature, it will generally be best to assemble the company and proceed in close order.

Patrols are used to provide the necessary security against surprise.

213. Being in skirmish line: 1. **Platoon columns**, 2. **MARCH**.

The platoon leaders move forward through the center of their respective platoons; men to the right of the platoon leader march to the left and follow him in file, those to the left march in like manner to the right; each platoon leader thus conducts the march of his platoon in double column or files; platoon guides follow in rear of their respective platoons to insure prompt and orderly execution of the advance.

214. Being in skirmish line: 1. **Squad columns**, 2. **MARCH**.

Each squad leader moves to the front; the members of each squad oblique toward and follow their squad leader in single file at easy marching distances.

215. Platoon columns are profitably used where the ground is so difficult or cover so limited as to make it desirable to take advantage of the few favorable routes; no two platoons should march within the area of burst of a single shrapnel.¹ Squad columns are of value principally in facilitating the advance over rough or brush-grown ground; they afford no material advantage in securing cover.

216. To deploy platoon or squad columns: 1. **As skirmishers**, 2. **MARCH**.

Skirmishers move to the right or left front and successively place themselves in their original positions on the line.

¹ Ordinarily about 20 yards wide.

217. Being in platoon or squad columns: 1. Assemble, 2. MARCH.

The platoon or squad leaders signal assemble. The men of each platoon or squad, as the case may be, advance and, moving to the right and left, take their proper places in line, each unit assembling on the leading element of the column and re-forming in line. The platoon or squad leaders conduct their units toward the element or point indicated by the captain, and to their places in line; the company is re-formed in line.

218. Being in skirmish line, to advance by a succession of thin lines: 1. (Such numbers), forward, 2. MARCH.

The captain points out in advance the selected position in front of the line occupied. The designated number of each squad moves to the front; the line thus formed preserves the original intervals as nearly as practicable; when this line has advanced a suitable distance (generally from 100 to 250 yards, depending upon the terrain and the character of the hostile fire), a second is sent forward by similar commands, and so on at irregular distances until the whole line has advanced. Upon arriving at the indicated position, the first line is halted. Successive lines, upon arriving, halt on line with the first and the men take their proper places in the skirmish line.

Ordinarily each line is made up of one man per squad and the men of a squad are sent forward in order from right to left as deployed. The first line is led by the platoon leader of the right platoon, the second by the guide of the right platoon, and so on in order from right to left.

The advance is conducted in quick time unless conditions demand a faster gait.

The company having arrived at the indicated position, a further advance by the same means may be advisable.

219. The advance in a succession of thin lines is used to cross a wide stretch swept, or likely to be swept, by artillery fire or heavy, long-range rifle fire which can not profitably be returned. Its purpose is the building up of a strong skirmish line preparatory to engaging in a fire fight. This method of advancing results in serious (though temporary) loss of control over the company. Its advantage lies in the fact that it offers a less definite target, hence is less likely to draw fire.

220. The above are suggestions. Other and better formations may be devised to fit particular cases. The best formation is the one which advances the line farthest with the least loss of men, time, and control.

THE FIRE ATTACK.

221. The principles governing the advance of the firing line in attack are considered in the School of the Battalion.

When it becomes impracticable for the company to advance as a whole by ordinary means, it advances by rushes.

222. Being in skirmish line: 1. By platoon (two platoons, squad, four men, etc.), from the right (left), 2. RUSH.

The platoon leader on the indicated flank carefully arranges the details for a prompt and vigorous execution of the rush and puts it into effect as soon as practicable. If necessary, he designates the leader for the indicated fraction. When about to rush, he causes the men of the fraction to cease firing and to hold themselves flat, but in readiness to spring forward instantly. (The leader of the rush at the signal of the platoon leader, if the latter be not the leader of the rush) commands: **Follow me**, and, running at top speed, leads the fraction to the new line, where he halts it and causes it to open fire. The leader of the rush selects the new line if it has not been previously designated.

The first fraction having established itself on the new line, the next like fraction is sent forward by its platoon leader, without further command of the captain, and so on, successively, until the entire company is on the line established by the first rush.

If more than one platoon is to join in one rush, the junior platoon leader conforms to the action of the senior.

A part of the line having advanced, the captain may increase or decrease the size of the fractions to complete the movement.

223. When the company forms a part of the firing line, the rush of the company as a whole is conducted by the captain, as described for a platoon in the preceding paragraph. The captain leads the rush; platoon leaders lead their respective platoons; platoon guides follow the line to insure prompt and orderly execution of the advance.

224. When the foregoing method of rushing, by running, becomes impracticable, any method of advance that brings the attack closer to the enemy, such as crawling, should be employed.

For regulations governing the charge, see paragraphs 318 and 319.

THE COMPANY IN SUPPORT.

225. To enable it to follow or reach the firing line, the support adopts suitable formations, following the principles explained in paragraphs 212-218.

The support should be kept assembled as long as practicable. If after deploying a favorable opportunity arises to hold it for some time in close formation, it should be reassembled. It is redeployed when necessary.

226. The movements of the support as a whole and the dispatch of reinforcements from it to the firing line are controlled by the major.

A reinforcement of less than one platoon has little influence and will be avoided whenever practicable.

The captain of a company in support is constantly on the alert for the major's signals or commands.

227. A reinforcement sent to the firing line joins it deployed as skirmishers. The leader of the reinforcement places it in an interval in the line, if one exists, and commands it thereafter as a unit. If no such suitable interval exists, the reinforcement is advanced with increased intervals between skirmishers; each man occupies the nearest interval in the firing line, and each then obeys the orders of the nearest squad leader and platoon leader.

228. A reinforcement joins the firing line as quickly as possible without exhausting the men.

229. The original platoon division of the companies in the firing line should be maintained and should not be broken up by the mingling of reinforcements.

Upon joining the firing line, officers and sergeants accompanying a reinforcement take over the duties of others of like grade who have been disabled, or distribute themselves so as best to exercise their normal functions. Conditions will vary and no rules can be prescribed. It is essential that all assist in mastering the increasing difficulties of control.

THE COMPANY ACTING ALONE.

230. In general, the company, when acting alone, is employed according to the principles applicable to the battalion acting alone; the captain employs platoons as the major employs companies, making due allowance for the difference in strength.

The support may be smaller in proportion or may be dispensed with.

231. The company must be well protected against surprise. Combat patrols on the flanks are specially important. Each leader of a flank platoon details a man to watch for the signals of the patrol or patrols on his flank.

FIRE.

232. Ordinarily pieces are loaded and extra ammunition is issued before the company deploys for combat.

In close order the company executes the firings at the command of the captain, who posts himself in rear of the center of the company.

Usually the firings in close order consist of saluting volleys only.

233. When the company is deployed, the men execute the firings at the command of their platoon leaders; the latter give such commands as are necessary to carry out the captain's directions, and, from time to time, add such further commands as are necessary to continue, correct, and control the fire ordered.

234. The voice is generally inadequate for giving commands during fire and must be replaced by signal of such character that proper fire direction and control is assured. To attract attention, signals must usually be preceded by the whistle signal (short blast). A fraction of the firing line about to rush should, if practicable, avoid using the long blast signal as an aid to cease firing. Officers and men behind the firing line can not ordinarily move freely along the line, but must depend on mutual watchfulness and the proper use of the prescribed signals. All should post themselves so as to see their immediate superiors and subordinates.

235. The musicians assist the captain by observing the enemy, the target, and the fire effect, by transmitting commands or signals, and by watching for signals.

236. Firing with blank cartridges at an outlined or represented enemy at distances less than 100 yards is prohibited.

237. The effect of fire and the influence of the ground in relation thereto, and the individual and collective instruction in marksmanship, are treated in the Small-Arms Firing Manual.

RANGES.

238. For convenience of reference, ranges are classified as follows:

0 to 600 yards, close range.

600 to 1,200 yards, effective range.

1,200 to 2,000 yards, long range.

2,000 yards and over, distant range.

239. The distance to the target must be determined as accurately as possible and the sights set accordingly. Aside from training and morale, this is the most important single factor in securing effective fire at the longer ranges.

240. Except in a deliberately prepared defensive position, the most accurate and only practicable method of determining the range will generally be to take the mean of several estimates.

Five or six officers or men, selected from the most accurate estimators in the company, are designated as range estimators and are specially trained in estimating distances.

Whenever necessary and practicable, the captain assembles the range estimators, points out the target to them, and adopts the mean of their estimates. The range estimators then take their customary posts.

CLASSES OF FIRING.

241. Volley firing has limited application. In defense it may be used in the early stages of the action if the enemy presents a large, compact target. It may be used by troops executing fire of position. When the ground near the target is such that the strike of bullets can be seen from the firing line, ranging volleys may be used to correct the sight setting.

In combat, volley firing is executed habitually by platoon.

242. Fire at will is the class of fire normally employed in attack or defense.

243. Clip fire has limited application. It is principally used: 1. In the early stages of combat, to steady the men by habituating them to brief pauses in firing. 2. To produce a short burst of fire.

THE TARGET.

244. Ordinarily the major will assign to the company an objective in attack or sector in defense; the company's target will lie within the limits so assigned. In the choice of target, tactical considerations are paramount; the nearest hostile troops within the objective or sector will thus be the usual target. This will ordinarily be the hostile firing line; troops in rear are ordinarily proper targets for artillery, machine guns, or, at times, infantry employing fire of position.

Change of target should not be made without excellent reasons therefor, such as the sudden appearance of hostile troops under conditions which make them more to be feared than the troops comprising the former target.

245. The distribution of fire over the entire target is of special importance.

The captain allots a part of the target to each platoon, or each platoon leader takes as his target that part which corresponds to his position in the company. Men are so instructed that each fires on that part of the target which is directly opposite him.

246. All parts of the target are equally important. Care must be exercised that the men do not slight its less visible parts. A section of the target not covered by fire represents a number of the enemy permitted to fire coolly and effectively.

247. If the target can not be seen with the naked eye, platoon leaders select an object in front of or behind it, designate this as the aiming target, and direct a sight setting which will carry the cone of fire into the target.

248. When the company is large enough to be divided into platoons, it is impracticable for the captain to command it directly in combat. His efficiency in managing the firing line is measured by his ability to enforce his will through the platoon leaders. Having indicated clearly what he desires them to do, he avoids interfering except to correct serious errors or omissions.

249. The captain directs the fire of the company or of designated platoons. He designates the target, and, when practicable, allots a part of the target to each platoon. Before beginning the fire action he determines the range, announces the sight setting, and indicates the class of fire to be employed and the time to open fire. Thereafter, he observes the fire effect, corrects material errors in sight setting, prevents exhaustion of the ammunition supply, and causes the distribution of such extra ammunition as may be received from the rear.

FIRE CONTROL.

250. In combat the platoon is the fire unit. From 20 to 35 rifles are as many as one leader can control effectively.

251. Each platoon leader puts into execution the commands or directions of

the captain, having first taken such precautions to insure correct sight setting and clear description of the target or aiming target as the situation permits or requires; thereafter, he gives such additional commands or directions as are necessary to exact compliance with the captain's will. He corrects the sight setting when necessary. He designates an aiming target when the target can not be seen with the naked eye.

252. In general, platoon leaders observe the target and the effect of their fire and are on the alert for the captain's commands or signals; they observe and regulate the rate of fire. The platoon guides watch the firing line and check every breach of fire discipline. Squad leaders transmit commands and signals when necessary, observe the conduct of their squads and abate excitement, assist in enforcing fire discipline and participate in the firing.

253. The best troops are those that submit longest to fire control. Loss of control is an evil which robs success of its greatest results. To avoid or delay such loss should be the constant aim of all.

Fire control implies the ability to stop firing, change the sight setting and target, and resume a well directed fire.

FIRE DISCIPLINE.

254. "Fire discipline implies, besides a habit of obedience, a control of the rifle by the soldier, the result of training, which will enable him in action to make hits instead of misses. It embraces taking advantage of the ground; care in setting the sight and delivery of fire; constant attention to the orders of the leaders, and careful observation of the enemy; an increase of fire when the target is favorable, and a cessation of fire when the enemy disappears; economy of ammunition." (Small-Arms Firing Manual.)

In combat, shots which graze the enemy's trench or position and thus reduce the effectiveness of his fire have the approximate value of hits; such shots only, or actual hits, contribute toward fire superiority.

Fire discipline implies that, in a firing line without leaders, each man retains his presence of mind and directs effective fire upon the proper target.

255. To create a correct appreciation of the requirements of fire discipline, men are taught that the rate of fire should be as rapid as is consistent with accurate aiming; that the rate will depend upon the visibility, proximity, and size of the target; and that the proper rate will ordinarily suggest itself to each trained man, usually rendering cautions or commands unnecessary.

In attack the highest rate of fire is employed at the halt preceding the assault, and in pursuing fire.

256. In an advance by rushes, leaders of troops in firing positions are responsible for the delivery of heavy fire to cover the advance of each rushing fraction. Troops are trained to change slightly the direction of fire so as not to endanger the flanks of advanced portions of the firing line.

257. In defense, when the target disappears behind cover, platoon leaders suspend fire, prepare their platoons to fire upon the point where it is expected to reappear, and greet its reappearance instantly with vigorous fire.

SCHOOL OF THE BATTALION

258. The battalion being purely a tactical unit, the major's duties are primarily those of an instructor in drill and tactics and of a tactical commander. He is responsible for the theoretical and practical training of the battalion. He supervises the training of the companies of the battalion with a view to insuring the thoroughness and uniformity of their instruction.

In the instruction of the battalion as a whole, his efforts will be directed chiefly to the development of tactical efficiency, devoting only such time to the mechanism of drill and to the ceremonies as may be necessary in order to insure precision, smartness, and proper control.

259. The movements explained herein are on the basis of a battalion of four companies ; they may be executed by a battalion or two or more companies, not exceeding six.

260. The companies are generally arranged from right to left according to the rank of the captains present at the formation. The arrangement of the companies may be varied by the major or higher commander.

After the battalion is formed, no cognizance is taken of the relative order of the companies.

261. In whatever direction the battalion faces, the companies are designated numerically from right to left in line, and from head to rear in column, first company, second company, etc.

The terms right and left apply to actual right and left as the line faces; if the about by squads be executed when in line, the right company becomes the left company and the right center becomes the left center company.

The designation center company indicates the right center or the actual center company according as the number of companies is even or odd.

262. The band and other special units, when attached to the battalion, take the same post with respect to it as if it were the nearest battalion shown in Plate IV.

CLOSE ORDER.

RULES.

263. Captains repeat such preparatory commands as are to be immediately executed by their companies, as forward, squads rights, etc.; the men execute the commands march, halt, etc., if applying to their companies, when given by the major. In movements executed in route step or at ease the captains repeat the command of execution, if necessary. Captains do not repeat the major's commands in executing the manual of arms, nor those commands which are not essential to the execution of a movement by their companies, as column of squads, first company, squads right, etc.

In giving commands or cautions captains may prefix the proper letter designations of their companies, as **A Company, HALT ; B Company, squads right, etc.**

264. At the command guide center (right or left), captains command: **Guide right or left**, according to the positions of their companies. Guide center designates the left guide of the center company.

265. When the companies are to be dressed, captains place themselves on that flank toward which the dress is to be made, as follows :

The battalion in line: Beside the guide (or the flank file of the front rank, if the guide is not in line) and facing to the front.

The battalion in column of companies: Two paces from the guide, in prolongation of and facing down the line.

Each captain, after dressing his company, commands: **FRONT**, and takes his post.

The battalion being in line and unless otherwise prescribed, at the captain's command dress, or at the command halt, when it is prescribed that the company shall dress, the guide on the flank away from the point of rest, with his piece at right shoulder, dresses promptly on the captain and the companies beyond. During the dress he moves, if necessary, to the right and left only; the captain

dresses the company on the line thus established. The guide takes the position of order arms at the command front.

266. The battalion executes the halt, rests, facings, steps and marchings, manual of arms, resumes attention, kneels, lies down, rises, stacks and takes arms, as explained in the Schools of the Soldier and Squad, substituting in the commands battalion for squad.

The battalion executes squads right (left), squads right (left) about, route step and at ease, and obliques and resumes the direct march, as explained in the School of the Company.

267. The battalion in column of platoons, squads, twos, or files changes direction; in column of squads forms column of twos or files and re-forms columns of twos or squads, as explained in the School of the Company.

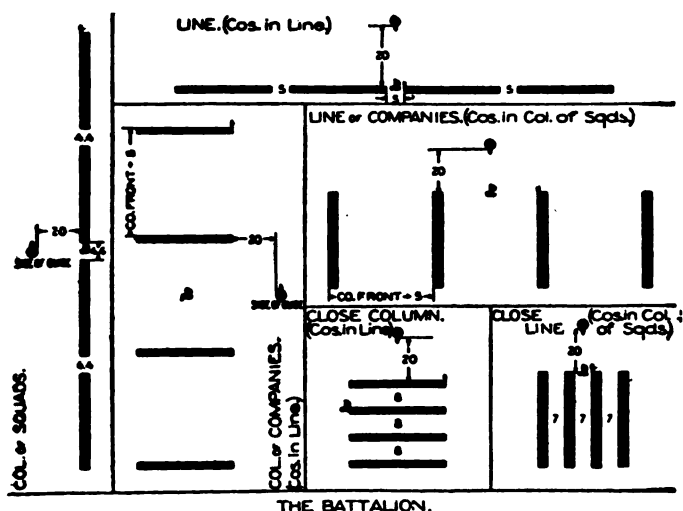


Plate III.

MAJOR (WITH STAFF ETC.) GUIDE AND DIRECTION- THE COLOR- NUMERALS ARE DISTANCES OR INTERVALS IN PAGES.

268. When the formation admits of the simultaneous execution by companies or platoons or movements in the School of the Company the major may cause such movement to be executed by prefixing, when necessary, companies (platoons) to the commands prescribed therein: as 1. Companies, right front into line, 2. MARCH. To complete such simultaneous movements, the commands halt or march, if prescribed, are given by the major. The command front, when prescribed, is given by the captains.

269. The battalion as a unit executes the loadings and firings only in firing saluting volleys. The commands are as for the company, substituting battalion for company. At the first command for loading, the captains take post in rear of the center of their respective companies. At the conclusion of the firing, the captains resume their posts in line.

On other occasions, when firing in close order is necessary, it is executed by company or other subdivision under instructions from the major.

TO FORM THE BATTALION.

270. For purposes other than ceremonies: The battalion is formed in column of squads. The companies having been formed, the adjutant posts himself so as to be facing the column, when formed, and 6 paces in front of the place to

be occupied by the leading guide of the battalion; he draws saber; adjutant's call is sounded or the adjutant signals assemble.

The companies are formed, at attention, in column of squads in their proper order. Each captain, after halting his company, salutes the adjutant; the adjutant returns the salute and, when the last captain has saluted, faces the major and reports: Sir, the battalion is formed. He then joins the major.

271. For ceremonies or when directed: The battalion is formed in line.

The companies having been formed, the adjutant posts himself so as to be 6 paces to the right of the right company when line is formed, and faces in the direction in which the line is to extend. He draws saber; adjutant's call is sounded; the band plays if present.

The right company is conducted by its captain so as to arrive from the rear, parallel to the line; its right and left guides precede it on the line about 20 paces, taking post facing to the right at order arms, so that their elbows will be against the breasts of the right and left files of their company when it is dressed. The guides of the other companies successively prolong the line to the left in like manner and the companies approach their respective places in line as explained for the right company. The adjutant, from his post, causes the guides to cover.

When about 1 pace in rear of the line, each company is halted and dressed to the right against the arms of the guides.

The band, arriving from the rear, takes its place in line when the right company is halted; it ceases playing when the left company has halted.

When the guides of the left company have been posted, the adjutant, moving by the shortest route, takes post facing the battalion midway between the post of the major and the center of the battalion.

The major staff, noncommissioned staff, and orderlies take their posts.

When all parts of the line have been dressed, and officers and others have reached their posts, the adjutant commands: 1. **Guides**, 2. **POSTS**, 3. **Present**, 4. **ARMS**. At the second command guides take their places in the line. The adjutant then turns about and reports to the major: Sir, the battalion is formed; the major directs the adjutant: Take your post, Sir; draws saber and brings the battalion to the order. The adjutant takes his post, passing to the right of the major.

TO DISMISS THE BATTALION.

272. DISMISS YOUR COMPANIES.

Staff and noncommissioned staff officers fall out; each captain marches his company off and dismisses it.

TO RECTIFY THE ALIGNMENT.

273. Being in line at a halt, to align the battalion: 1. **Center (right or left)**, 2. **DRESS**.

The captains dress their companies successively toward the center (right or left) guide of the battalion, each as soon as the captain next toward the indicated guide commands: **Front**. The captains of the center companies (if the dress is **center**) dress them without waiting for each other.

274. To give the battalion a new alignment: 1. **Guides center (right or left) company on the line**, 2. **Guides on the line**, 3. **Center (right or left)**, 4. **DRESS**, 5. **Guides**, 6. **POSTS**.

At the first command, the designated guides place themselves on the line (par. 271) facing the center (right or left). The major establishes them in the direction he wishes to give the battalion.

At the second command, the guides of the other companies take posts, facing the center (right or left), so as to prolong the line.

At the command dress, each captain dresses his company to the flank toward which the guides of his company face.

At the command posts, given when all companies have completed the dress, the guides return to their posts.

TO RECTIFY THE COLUMN.

275. Being in column of companies, or in close column, at a halt, if the guides do not cover or have not their proper distances, and it is desired to correct them, the major commands: 1. **Right (left)**, 2. **DRESS**.

Captains of companies in rear of the first place their right guides so as to cover at the proper distance; each captain aligns his company to the right and commands: **FRONT**.

ON RIGHT (LEFT) INTO LINE.

276. Being in column of squads or companies: 1. **On right (left) into line**, 2. **MARCH**, 3. **Battalion**, 4. **HALT**.

Being in column of squads: At the first command, the captain of the leading company commands: **Squads right**. If at a halt each captain in rear commands: **Forward**. At the second command the leading company marches in line to the right; the companies in rear continue to march to the front and form successively on the left, each, when opposite its place, being marched in line to the right.

The fourth command is given when the first company has advanced the desired distance in the new direction; it halts and is dressed to the right by its captain; the others complete the movement, each being halted 1 pace in rear of the line established by the first company, and then dressed to the right.

Being in column of companies: At the first command, the captain of the first company commands: **Right turn**. If at a halt, each captain in rear commands: **Forward**. Each of the captains in rear of the leading company gives the command: 1. **Right turn**, in time to add, 2. **MARCH**, when his company arrives opposite the right of its place in line.

The fourth command is given and the movement completed as explained above.

Whether executed from column of squads or column of companies, each captain places himself so as to march beside the right guide after his company forms line or changes direction to the right.

If executed in double time, the leading company marches in double time until halted.

FRONT INTO LINE.

277. Being in column of squads or companies: 1. **Right (Left) front into line**, 2. **MARCH**.

Being in column of squads: At the first command, the captain of the leading company commands: **Column right**; the captains of the companies in rear, **column half right**. At the second command the leading company executes **column right**, and as the last squad completes the change of direction, is formed in line to the left, halted, and dressed to the left. Each of the companies in rear is conducted by the most convenient route to the rear of the right of the preceding company, thence to the right, parallel to and 1 pace in rear of the new line; when opposite its place, it is formed in line to the left, halted, and dressed to the left.

Being in column of companies: If marching, the captain of the leading company gives the necessary commands to halt his company at the second command; if at a halt, the leading company stands fast. At the first command, the captain of each company in rear commands: **Squads right, or Right by squads**, and after the second command conducts his company by the most convenient route to its place in line, as described above.

Whether executed from column of squads or column of companies, each captain halts when opposite or at the point where the left of his company is to rest.

TO FORM COLUMN OF COMPANIES SUCCESSIVELY TO THE RIGHT OR LEFT.

278. Being in column of squads: 1. **Column of companies, first company, squads right (left), 2. MARCH.**

The leading company executes squads right and moves forward. The other companies move forward in column of squads and successively march in line to the right on the same ground as the leading company and in such manner that the guide covers the guide of the preceding company.

TO FORM COLUMN OF SQUADS SUCCESSIVELY TO THE RIGHT OR LEFT.

279. Being in column of companies: 1. **Column of squads, first company, squads right (left), 2. MARCH.**

The leading company executes squads right and moves forward. The other companies move forward in column of companies and successively march in column of squads to the right on the same ground as the leading company.

TO CHANGE DIRECTION.

280. Being in column of companies or close column: 1. **Column right (left), 2. MARCH.**

The captain of the first company commands: **Right turn.**

The leading company turns to the right on moving pivot, the captain adding: 1. **Forward, 2. MARCH**, upon its completion.

The other companies march squarely up to the turning point; each changes direction by the same commands and means as the first and in such manner that the guide covers the guide of the preceding company.

281. Being in line of companies or close line: 1. **Battalion right (left), 2. MARCH, 3. Battalion, 4. HALT.**

The right company changes direction to the right; the other companies are conducted by the shortest line to their places abreast of the first.

The fourth command is given when the right company has advanced the desired distance in the new direction; that company halts; the others halt successively upon arriving on the line.

282. Being in column of squads, the battalion changes direction by the same commands and in the manner prescribed for the company.

MASS FORMATIONS.

283. Being in line, line of companies, column of companies or column of squads: 1. **Close on first (fourth) company, 2. MARCH.**

If at a halt, the indicated company stands fast; if marching, it is halted; each of the other companies is conducted toward it and is halted in proper order

in close column if the indicated company be in line, or in close line if the indicated company be in column of squads.

If the battalion is in line, companies form successively in rear of the indicated company; if in column of squads, companies in rear of the leading company form on the left of it.

In close column formed from line on the first company, the left guides cover; formed on the fourth company, right guides cover. If formed on the leading company, the guide remains as before the formation. In close line, the guides are halted abreast of the guide of the leading company.

The battalion in column closes on the leading company only.

TO EXTEND THE MASS.

284. Being in close column or in close line: 1. **Extend on first (fourth) company, 2. MARCH.**

Being in close line: If at a halt, the indicated company stands fast; if marching, it halts; each of the other companies is conducted away from the indicated company and is halted in its proper order in line of companies.

Being in close column, the extension is made on the fourth company only. If marching, the leading company continues to march; companies in rear are halted and successively resume the march in time to follow at full distance. If at halt, the leading company marches; companies in rear successively march in time to follow at full distance.

Close column is not extended in double time.

285. Being in close column: 1. **Right (Left) front into line, 2. MARCH.** Executed as from column of companies.

286. Being in close column: 1. **Column of squads, first (fourth) company, squads right (left), 2. MARCH.**

The designated company marches in column of squads to the right. Each of the other companies executes the same movement in time to follow the preceding company in column.

287. Being in close line: 1. **Column of squads, first (fourth) company, forward, 2. MARCH.**

The designated company moves forward. The other companies (halting if in march) successively take up the march and follow in column.

ROUTE STEP AND AT EASE.

288. The battalion marches in route step and at ease as prescribed in the School of the Company. When marching in column of companies or platoons, the guides maintain the trace and distance.

In route marches the major marches at the head of the column; when necessary, the file closers may be directed to march at the head and rear of their companies.

ASSEMBLY.

289. The battalion being wholly or partially deployed, or the companies being separated: 1. **Assemble, 2. MARCH.**

The major places himself opposite to or designates the element or point on which the battalion is to assemble. Companies are assembled and marched to the indicated point. As the companies arrive the major or adjutant indicates the formation to be taken.

COMBAT PRINCIPLES.**ORDERS.**

290. The following references to orders are applicable to attack or defense.

291. In extended order, the company is the largest unit to execute movements by prescribed commands or means. The major, assembling his captains if practicable, directs the disposition of the battalion by means of tactical orders. He controls its subsequent movements by such orders or commands as are suitable to the occasion.

292. In every disposition of the battalion for combat the major's order should give subordinates sufficient information of the enemy, of the position of supporting and neighboring troops, and of the object sought to enable them to conform intelligently to the general plan.

The order should then designate the companies which are to constitute the firing line and those which are to constitute the support. In attack it should designate the direction or the objective, the order and front of the companies on the firing line, and should designate the right or left company as base company. In defense, it should describe the front of each company, and, if necessary, the sector to be observed by each.

293. When the battalion is operating alone, the major provides for the reconnaissance and protection of his flanks; if part of a larger force, the major makes similar provisions, when necessary, without orders from higher authority, unless such authority has specifically directed other suitable reconnaissance and protection.

294. When the battalion is deployed upon the initiative of the major, he will indicate whether extra ammunition shall be issued; if deployed in pursuance of orders of higher authority, the major will cause the issue of extra ammunition, unless such authority has given directions to the contrary.

DEPLOYMENT.

295. The following principles of deployment are applicable to attack or defense.

296. A premature deployment involves a long, disorganizing and fatiguing advance of the skirmish line, and should be avoided. A greater evil is to be caught by heavy fire when in dense column or other close order formation; hence advantage should be taken of cover in order to retain the battalion in close order formation until exposure to heavy hostile fire may reasonably be anticipated.

297. The major regulates the depth of the deployment and the extent and density of the firing line, subject to such restrictions as a senior may have imposed.

Companies or designated subdivisions and detachments are conducted by their commanders in such manner as best to accomplish the mission assigned to them under the major's orders. Companies designated for the firing line march independently to the place of deployment, form skirmish line, and take up the advance. They conform, in general, to the base company.

298. The commander of a battalion, whether it is operating alone or as part of a larger force, should hold a part of his command out of the firing line. By the judicious use of this force the major can exert an influence not otherwise possible over his firing line and can control, within reasonable limits, an action once begun. So if his battalion be assigned to the firing line the major will cause one, two, or three companies to be deployed on the firing line, retaining the remaining companies or company as a support for that firing line.

The division of the battalion into firing line and support will depend upon the front to be covered and the nature and anticipated severity of the action.

299. If the battalion be part of a larger command, the number of companies in the firing line will generally be determinable from the regimental commander's order; the remainder constitutes the support. If the battalion is acting alone, the support must be strong enough to maintain the original fire power of the firing line, to protect the flanks, and to perform the functions of a reserve, whatever be the issue of the action. See paragraph 346.

300. If the battalion is operating alone, the support may, according to circumstances, be held in one or two bodies and placed behind the center, or one or both flanks of the firing line, or echeloned beyond a flank. If the battalion is part of a larger force, the support is generally held in one body.

301. The distance between the firing line and the supporting group or groups will vary between wide limits; it should be as short as the necessity for protection from heavy losses will permit. When cover is available, the support should be as close as 50 to 100 yards; when such cover is not available, it should not be closer than 300 yards. It may be as far as 500 yards in rear if good cover is there obtainable and is not obtainable at a lesser distance.

302. In exceptional cases, as in a meeting engagement, it may be necessary to place an entire battalion or regiment in the firing line at the initial deployment, the support being furnished by other troops. Such deployment causes the early mingling of the larger units, thus rendering leadership and control extremely difficult. The necessity for such deployment will increase with the inefficiency of the commander and of the service of information.

FIRE.

303. Fire direction and fire control are functions of company and platoon commanders. The major makes the primary apportionment of the target—in defense, by assigning sectors of fire; in attack, by assigning the objective. In the latter case each company in the firing line takes as its target that part of the general objective which lies in its front.

304. The major should indicate the point or time at which the fire fight is to open. He may do this in his order for deployment or he may follow the firing line close enough to do so at the proper time. If it be impracticable for him to do either, the senior officer with the firing line, in each battalion, selects the time for opening fire.

ATTACK.

305. The battalion is the attack unit, whether operating alone or as part of a larger unit.

306. If his battalion be one of several in the firing line, the major, in executing his part of the attack, pushes his battalion forward as vigorously as possible within the front, or section, assigned to it. The great degree of independence allowed to him as to details demands, in turn, the exercise of good judgment on his part. Better leadership, better troops, and more favorable terrain enable one battalion to advance more rapidly in attack than another less fortunate, and such a battalion will insure the further advance of the others. The leading battalion should not, however, become isolated; isolation may lead to its destruction.

307. The deployment having been made, the firing line advances without firing. The predominant idea must be to close with the enemy as soon as possible without ruinous losses. The limited supply of ammunition and the uncertainty of resupply, the necessity for securing fire superiority in order to

advance within the shorter ranges, and the impossibility of accomplishing this at ineffective ranges, make it imperative that fire be not opened as long as the advance can be continued without demoralizing losses. The attack which halts to open fire at extreme range (over 1,200 yards) is not likely ever to reach its destination. Every effort should be made, by using cover or inconspicuous formations, or by advancing the firing line as a whole, to arrive within 800 yards of the enemy before opening fire.

308. Except when the enemy's artillery is able to effect an unusual concentration of fire, its fire upon deployed infantry causes losses which are unimportant when compared with those inflicted by his infantry; hence the attacking infantry should proceed to a position as described above, and from which an effective fire can be directed against the hostile infantry with a view to obtaining fire superiority. The effectiveness of the enemy's fire must be reduced so as to permit further advance. The more effective the fire to which the enemy is subjected the less effective will be his fire.

309. Occasionally the fire of adjacent battalions, or of infantry employing fire of position, or of supporting artillery, will permit the further advance of the entire firing line from this point, but it will generally be necessary to advance by rushes of fractions of the line.

The fraction making the rush should be as large as the hostile fire and the necessity for maintaining fire superiority will permit. Depending upon circumstances, the strength of the fraction may vary from a company to a few men.

The advance is made as rapidly as possible without losing fire superiority. The smaller the fraction which rushes, the greater the number of rifles which continue to fire upon the enemy. On the other hand, the smaller the fraction which rushes, the slower will be the progress of the attack.

310. Enough rifles must continue in action to insure the success of each rush. Frequently the successive advances of the firing line must be effected by rushes of fractions of decreased size; that is, advances by rushes may first be made by company, later by half company or platoon, and finally by squads or files; but no subsequent opportunity to increase the rate of advance, such as better cover or a decrease of the hostile fire, should be overlooked.

311. Whenever possible, the rush is begun by a flank fraction of the firing line. In the absence of express directions from the major, each captain of a flank company determines when an advance by rushes shall be attempted. A flank company which inaugurates an advance by rushes becomes the base company, if not already the base. An advance by rushes having been inaugurated on one flank, the remainder of the firing line conforms; fractions rush successively from that flank and halt on the line established by the initial rush.

The fractions need not be uniform in size; each captain indicates how his company shall rush, having due regard to the ground and the state of the fire fight.

312. A fraction about to rush is sent forward when the remainder of the line is firing vigorously; otherwise the chief advantage of this method of advancing is lost.

The length of the rush will vary from 30 to 80 yards, depending upon the existence of cover, positions for firing, and the hostile fire.

313. When the entire firing line of the battalion has advanced to the new line, fresh opportunities to advance are sought as before.

314. Two identical situations will never confront the battalion; hence at drill it is prohibited to arrange the details of an advance before the preceding one has been concluded, or to employ a fixed or prearranged method of advancing by rushes.

315. The major posts himself so as best to direct the reënforcing of the firing

line from the support. When all or nearly all of the support has been absorbed by the firing line, he joins, and takes full charge of, the latter.

316. The reënforcing of the firing line by driblets of a squad or a few men has no appreciable effect. The firing line requires either no reënforcement or a strong one. Generally one or two platoons will be sent forward under cover of a heavy fire of the firing line.

317. To facilitate control and to provide intervals in which reënforcements may be placed, the companies in the firing line should be kept closed in on their centers as they become depleted by casualties during the advance.

When this is impracticable, reënforcements must mingle with and thicken the firing line. In battle the latter method will be the rule rather than the exception, and to familiarize the men with such conditions the combat exercises of the battalion should include both methods of reënforcing. Occasionally, to provide the necessary intervals for reënforcing by either of these methods, the firing line should be thinned by causing men to drop out and simulate losses during the various advances. Under ordinary conditions the depletion of the firing line for this purpose will be from one-fifth to one-half of its strength.

318. The major or senior officer in the firing line determines when bayonets shall be fixed and gives the proper command or signal. It is repeated by all parts of the firing line. Each man who was in the front rank prior to deployment, as soon as he recognizes the command or signal, suspends firing, quickly fixes his bayonet, and immediately resumes firing; after which the other men suspend firing, fix bayonets, and immediately resume firing. The support also fixes bayonets. The concerted fixing of the bayonet by the firing line at drill does not simulate battle conditions and should not be required. It is essential that there be no marked pause in the firing. Bayonets will be fixed generally before or during the last, or second last, advance preceding the charge.

319. Subject to orders from higher authority, the major determines the point from which the charge is to be made. The firing line having arrived at that point and being in readiness, the major causes the charge to be sounded. The signal is repeated by the musicians of all parts of the line. The company officers lead the charge. The skirmishers spring forward shouting, run with bayonets at charge, and close with the enemy.

The further conduct of the charging troops will depend upon circumstances: they may halt and engage in bayonet combat or in pursuing fire; they may advance a short distance to obtain a field of fire or to drive the enemy from the vicinity; they may assemble or reorganize, etc. If the enemy vacates his position every effort should be made to open fire at once on the retreating mass, reorganization of the attacking troops being of secondary importance to the infliction of further losses upon the enemy and to the increase of his confusion. In combat exercises the major will assume a situation and terminate the assault accordingly.

DEFENSE.

320. In defense, as in attack, the battalion is the tactical unit best suited to independent assignment. Defensive positions are usually divided into sections and a battalion assigned to each.

321. The major locates such fire, communicating, and cover trenches and obstacles as are to be constructed. He assigns companies to construct them and details the troops to occupy them.

322. The major reënforces the firing line in accordance with the principles applicable to, and explained in connection with, the attack, maintaining no more rifles in the firing line than are necessary to prevent the enemy's advance.

323. The supply of ammunition being usually ample, fire is opened as soon as it is possible to break up the enemy's formation, stop his advance, or inflict material loss, but this rule must be modified to suit the ammunition supply.

324. The major causes the firing line and support to fix bayonets when an assault by the enemy is imminent. Captains direct this to be done if they are not in communication with the major and the measure is deemed advisable.

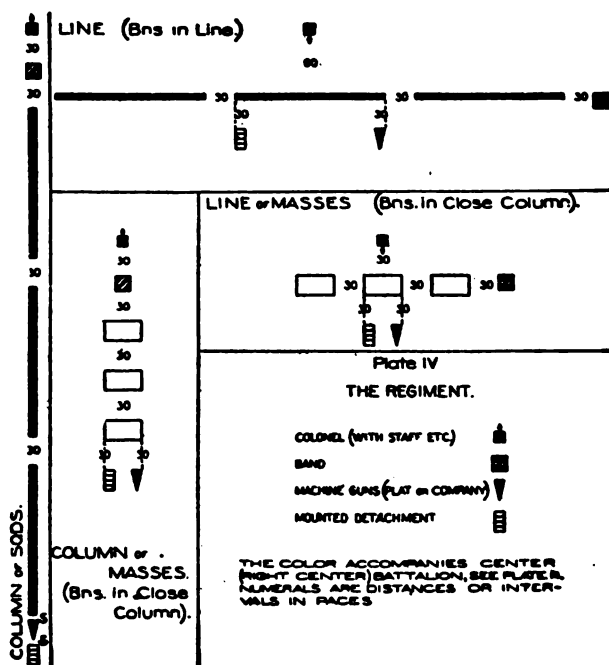
Fire alone will not stop a determined, skillfully conducted attack. The defender must have equal tenacity; if he can stay in his trench or position and cross bayonets, he will at least have neutralized the hostile first line, and the combat will be decided by reserves.

325. If ordered or compelled to withdraw under hostile infantry fire or in the presence of hostile infantry, the support will be posted so as to cover the retirement of the firing line.

326. When the battalion is operating alone, the support must be strong and must be fed sparingly into the firing line, especially if a counterattack is planned. Opportunities for counterattack should be sought at all times.

THE REGIMENT.

327. Normally, the regiment consists of three battalions, but these regulations are applicable to a regiment of two or more battalions. Special units, such as band, machine-gun company, and mounted scouts, have special formations for their own use. Movements herein prescribed are for the battalions; special units conform thereto unless otherwise prescribed or directed.



328. The colonel is responsible for the theoretical instruction and practical training of the regiment as a whole. Under his immediate supervision the training of the units of the regiment is conducted by their respective commanders.

329. The colonel either gives his commands or orders orally, by bugle or by signal, or communicates them by staff officers or orderlies.

Each major gives the appropriate commands or orders, and, in close-order movements, causes his battalion to execute the necessary movements at his command of execution. Each major ordinarily moves his battalion from one formation to another, in column of squads, in the most convenient manner, and, in the presence of the enemy, in the most direct manner consistent with cover.

Commanders of the special units observe the same principles as to commands and movements. They take places in the new formation as directed by the colonel; in the absence of such directions they conform as nearly as practicable to Plate IV, maintaining their relative positions with respect to the flank or end of the regiment on which they are originally posted.

330. When the regiment is formed, and during ceremonies, the lieutenant colonel is posted 2 paces to the left of, and 1 pace less advanced than the colonel. In movements subsequent to the formation of the regiment and other than ceremonies, the lieutenant colonel is on the left of the colonel.

331. In whatever formation the regiment may be, the battalions retain their permanent administrative designations of first, second, third battalion. For convenience, they may be designated, when in line, as right, center, or left battalion; when in column, as leading, center, or rear battalion. These designations apply to the actual positions of the battalions in line or column.

332. Except at ceremonies, or when rendering honors, or when otherwise directed, after the regiment is formed, the battalions march and stand at ease during subsequent movements.

CLOSE ORDER.

TO FORM THE REGIMENT.

333. Unless otherwise directed, the battalions are posted from right to left, or from head to rear, according to the rank of the battalion commanders present, the senior on the right or at the head. A battalion whose major is in command of the regiment retains its place.

334. For ordinary purposes, the regiment is formed in column of squads or in column of masses.

The adjutant informs the majors what the formation is to be. The battalions and special units having been formed, he posts himself and draws saber. Adjutant's call is sounded, or the adjutant signals assemble.

If forming in column of squads, the adjutant posts himself so as to be facing the column when formed, and 6 paces in front of the place to be occupied by the leading guide of the regiment; if forming in column of masses, he posts himself so as to be facing the right guides of the column when formed, and 6 paces in front of the place to be occupied by the right guide of the leading company. Later, he moves so as best to observe the formation.

The battalions are halted, at attention, in column of squads or close column, as the case may be, successively from the front in their proper order and places. The band takes its place when the leading battalion has halted. Other special units take their places in turn when the rear battalion has halted.

The majors and the commanders of the machine-gun company and mounted scouts (or detachment) each, when his command is in place, salutes the adjutant and commands: **At ease**; the adjutant returns the salutes. When all have saluted and the band is in place, the adjutant rides to the colonel, reports: **Sir, the regiment is formed, and takes his post.** The colonel draws saber.

The formation in column of squads may be modified to the extent demanded by circumstances. Prior to the formation the adjutant indicates the point where the head of the column is to rest and the direction in which it is to face; he then posts himself so as best to observe the formation. At adjutant's call or assemble the leading battalion marches to, and halts at, the indicated point. The other battalions take positions from which they may conveniently follow in their proper places.

335. For ceremonies, or when directed, the regiment is formed in line or line of masses.

The adjutant posts himself so as to be 6 paces to the right of the right or leading company of the right battalion when the regiment is formed and faces in the direction in which the line is to extend. Adjutant's call is sounded; the band plays.

The adjutant indicates to the adjutant of the right battalion the point of rest and the direction in which the line is to extend, and then takes post facing the regiment midway between the post of the colonel and the center of the regiment. Each of the other battalion adjutants precedes his battalion to the line and marks its point of rest.

The battalions, arriving from the rear, each in line or close column as the case may be, are halted on the line successively from right to left in their proper order and places. Upon halting, each major commands: 1. **Right**, 2. **DRESS**. The battalion adjutant assists in aligning the battalion and then takes his post.

The band, arriving from the rear, takes its place in line when the right battalion has halted; it ceases playing when the left battalion has halted. The machine-gun company and the mounted scouts (or detachment) take their places in line after the center battalion has halted.

The colonel and those who accompany him take post.

When all parts of the line have been dressed, and officers and all others have reached their posts, the adjutant commands: 1. **Present**, 2. **ARMS**. He then turns about and reports to the colonel: Sir, the regiment is formed; the colonel directs the adjutant: Take your post. Sir, draws saber and brings the regiment to the order. The adjutant takes his post, passing to the right of the colonel.

TO DISMISS THE REGIMENT.

336. Being in any formation: **DISMISS YOUR BATTALIONS**. Each major marches his battalion off and dismisses it.

MOVEMENTS BY THE REGIMENT.

337. The regiment executes the halt, rests, facings, steps and marchings, manual of arms, resumes attention, kneels, lies down, rises, stacks and takes arms, as explained in the Schools of the Soldier and Squad, substituting in the commands, when necessary, battalions for squad.

The regiment executes squads right (left), squads right (left) about, route step and at ease, obliques and resumes the direct march as explained in the School of the Company.

The regiment in column of files, twos, squads, or platoons, changes direction, and in column of squads forms column of twos or files and re-forms column of twos or squads, as explained in the School of the Company. In column of companies, it changes direction as explained in the School of the Battalion.

338. When the formation admits of the simultaneous execution, by battalions, companies, or platoons, of movements prescribed in the School of the

Company or Battalion, the colonel may cause such movements to be executed by prefixing, where necessary, battalions (companies, platoons) to the commands prescribed therein.

339. The column of squads is the usual column of march; to shorten the column, if conditions permit, a double column of squads may be used, the companies of each battalion marching abreast in two columns. Preliminary to an engagement, the regiment or its units will be placed in the formation best suited to its subsequent tactical employment.

340. To assume any formation, the colonel indicates to the majors the character of the formation desired, the order of the battalions, and the point of rest. Each battalion is conducted by its major, and is placed in its proper order in the formation, by the most convenient means and route.

Having halted in a formation, no movements for this purpose of correcting minor discrepancies in alignments, intervals, or distances are made unless specially directed by the colonel or necessitated by conditions of cover.

341. To correct intervals, distances, and alignments, the colonel directs one or more of the majors to rectify their battalions. Each major so directed causes his battalion to correct its alignment, intervals, and distances, and places it in its proper position in the formation.

COMBAT PRINCIPLES.

342. The regiment is deployed by the colonel's order to the commanders of battalions and special units. The order should give them information of the situation and of the proposed plan of action. In attack, the order should assign to each battalion not in reserve its objective or line of advance. In defense, it should assign to each its sector. In either case it should designate the troops for, and the position of, the reserve and prescribe the employment of the machine guns and mounted scouts.

Both in attack and defense the order may fix the front to be covered in the deployment.

Encroachment upon the proper functions of subordinates and unnecessary details should be studiously avoided. When the regiment deploys, the colonel habitually places the band at the disposal of the surgeon for employment in caring for the wounded.

343. The regiment, when operating alone and attacking, should undertake an enveloping attack if it does not result in overextension.

Assuming a regiment of 1,500 rifles, an extension of more than 1,000 yards between its extreme flanks when making an enveloping attack alone is seldom justifiable; when part of a battle line, a front of 500 yards can rarely be exceeded.

344. In defense the front occupied when acting alone or posted on or near the flank of a battle line should seldom exceed 600 yards; when posted as an interior regiment, the front may be increased to 800 yards. The front may be somewhat longer than in the attack, since smaller battalion supports are justifiable. When the regiment is operating alone, however, the regimental reserve should be as strong in the defense as in the attack unless the flanks are secure.

345. The colonel should always hold out a reserve—generally one battalion; but when the regiment is operating alone, it is generally advisable to hold out more at first.

346. Whereas the support held out in each battalion of the firing line is intended to thicken the diminishing firing line at the proper times and sometimes to lengthen it, the reserve held out in a regiment operating alone is used for this purpose only as a last resort. Its primary functions are: In attack,

to protect the flanks, to improve fully the advantage following a victory, or to cover defeat; in defense, to prolong the firing line, to effect a counterattack, or to cover withdrawal. It is the colonel's chief means of influencing an action once begun. It should be conserved to await the proper moment for its employment; the combat will seldom come to a successful issue without its employment in some form.

The reserve of a regiment operating as part of a large force becomes a local reserve. It replaces depleted supports and in attack strengthens and protects the firing line in the charge.

THE BRIGADE.

347. The brigade does not engage in prescribed drills. It engages in route marches and battle or other tactical exercises. These are conducted pursuant to commands or orders formulated to suit the conditions of the proposed movement or exercise, and, in general, in accordance with the principles applicable to the regiment.

348. A brigade of about 4,000 rifles, as part of a general battle line, would be deployed on a front of not more than 1,200 yards in attack or 1,600 yards in defense.

When acting alone the distance between extreme flanks in an enveloping attack should not exceed 2,000 yards at the time the attacking infantry opens fire.

When acting alone, the front in defense should not exceed 1,600 yards.

These limits apply to the original deployment of the brigade for combat and presuppose an enemy of equal or nearly equal training and morale. The limits necessitated by the subsequent progress of the combat can not be foreseen.

349. Units larger than the brigade are generally composed of all arms. Combined tactics are considered in the Field Service Regulations.

PART II.

COMBAT.

INTRODUCTION.

350. Part II of these regulations treats only of the basic principles of combat tactics as applied to infantry and to the special units, such as machine guns and mounted scouts, which form a part of infantry regiments and battalions.

The combat tactics of the arms combined are considered in Field Service Regulations.

351. Modern combat demands the highest order of training, discipline, leadership, and morale on the part of the infantry. Complicated maneuvers are impracticable; efficient leadership and a determination to win by simple and direct methods must be depended upon for success.

352. The duties of infantry are many and difficult. All infantry must be fit to cope with all conditions that may arise. Modern war requires but one kind of infantry—good infantry.

353. The infantry must take the offensive to gain decisive results. Both sides are therefore likely to attempt it, though not necessarily at the same time or in the same part of a long battle line.

In the local combats which make up the general battle the better endurance, use of ground, fire efficiency, discipline, and training will win. It is the duty of the infantry to win the local successes which enable the commanding general to win the battle.

354. The infantry must have the tenacity to hold every advantage gained, the individual and collective discipline and skill needed to master the enemy's fire, the determination to close with the enemy in attack, and to meet him with the bayonet in defense. Infantry must be trained to bear the heaviest burdens and losses, both of combat and march.

Good infantry can defeat an enemy greatly superior in numbers, but lacking in training, discipline, leadership, and morale.

355. It is impossible to establish fixed forms or to give general instructions that will cover all cases. Officers and noncommissioned officers must be so trained that they can apply suitable means and methods to each case as it arises. Study and practice are necessary to acquire proper facility in this respect. Theoretical instruction can not replace practical instruction; the former supplies correct ideas and gives to practical work an interest, purpose, and definiteness not otherwise obtainable.

356. After the mechanism of extended order drill has been learned with precision in the company, every exercise should be, as far as practicable, in the nature of a maneuver (combat exercise) against an imaginary, outlined, or represented enemy.

Company extended order drill may be conducted without reference to a tactical situation, but a combat exercise, whatever may be the size of the unit employed, should be conducted under an assumed tactical situation.

357. An effective method of conducting a combat exercise is to outline the enemy with a few men equipped with flags. The umpire or inspector states the situation, and the commander leads his troops with due regard to the assumptions made.

Changes in the situation, the results of reconnaissance, the character of ar-

tillery fire, etc., are made known to the commander when necessary by the umpire or inspector, who, in order to observe and influence the conduct of the exercise, remains in rear of the firing line. From this position he indicates, with the aid of prearranged signals, the character of the fire and movements of the hostile infantry. These signals are intended for the men outlining the enemy. These men repeat the signals; all officers and men engaged in the exercise and in sight of the outlined enemy are thus informed of the enemy's action and the exercise is conducted accordingly.

Assistant umpires, about one for each company in the firing line, may assist in indicating hostile fire and movements and in observing the conduct of the exercise.

An outlined enemy may be made to attack or defend.

Situations should be simple and natural. During or after the exercise the umpire or inspector should call attention to any improper movements or incorrect methods of execution. He will prohibit all movements of troops or individuals that would be impossible if the enemy were real. The slow progress of events to be expected on the battle field can hardly be simulated, but the umpire or inspector will prevent undue haste and will attempt to enforce a reasonably slow rate of progress.

The same exercise should not be repeated over the same ground and under the same situation. Such repetitions lead to the adoption of a fixed mode of attack or defense and develop mere drill masters. Fixed or prearranged systems are prohibited.

LEADERSHIP.

GENERAL CONSIDERATIONS.

358. The art of leadership consists of applying sound tactical principles to concrete cases on the battle field.

Self-reliance, initiative, aggressiveness, and a conception of teamwork are the fundamental characteristics of successful leadership.

359. A correct grasp of the situation and a definite plan of action form the soundest basis for a successful combat.

A good plan once adopted and put into execution should not be abandoned unless it becomes clear that it can not succeed. Afterthoughts are dangerous, except as they aid in the execution of details in the original plan.

360. Combats that do not promise success or some real advantage to the general issue should be avoided; they cause unnecessary losses, impair the morale of one's own troops, and raise that of the enemy.

361. Complicated maneuvers are not likely to succeed in war. All plans and the methods adopted for carrying them into effect must be simple and direct.

362. Order and cohesion must be maintained within the units if success is to be expected.

363. Officers must show themselves to be true leaders. They must act in accordance with the spirit of their orders and must require of their troops the strictest discipline on the field of battle.

364. The best results are obtained when leaders know the capacity and traits of those whom they command; hence in making detachments units should not be broken up, and a deployment that would cause an intermingling of the larger units in the firing line should be avoided.

365. Leading is difficult when troops are deployed. A high degree of training and discipline and the use of close order formations to the fullest extent possible are therefore required.

366. In order to lighten the severe physical strain inseparable from infantry service in campaign, constant efforts must be made to spare the troops unnecessary hardship and fatigue; but when necessity arises, the limit of endurance must be exacted.

367. When officers or men belonging to fighting troops leave their proper places to carry back, or to care for, wounded during the progress of the action, they are guilty of skulking. This offense must be repressed with the utmost vigor.

368. The complete equipment of the soldier is carried into action unless the weather or the physical condition of the men renders such measure a severe hardship. In any event, only the pack¹ will be laid aside. The determination of this question rests with the regimental commander. The complete equipment affords to men lying prone considerable protection against shrapnel.

369. The post of the commander must be such as will enable him to observe the progress of events and to communicate his orders. Subordinate commanders, in addition, must be in position to transmit the orders of superiors.

Before entering an action the commander should be as far to the front as possible in order that he personally may see the situation, order the deployment, and begin the action strictly in accordance with his own wishes.

During the action, he must, as a rule, leave to the local leaders the detailed conduct of the firing line, posting himself either with his own reserve or in such a position that he is in constant, direct, and easy communication with it.

A commander takes full and direct charge of his firing line only when the line has absorbed his whole command.

When their troops are victorious, all commanders should press forward in order to clinch the advantage gained and to use their reserves to the best advantage.

370. The latitude allowed to officers is in direct proportion to the size of their commands. Each should see to the general execution of his task, leaving to the proper subordinates the supervision of details, and interfering only when mistakes are made that threaten to seriously prejudice the general plan.

TEAMWORK.

371. The comparatively wide fronts of deployed units increase the difficulties of control. Subordinates must therefore be given great latitude in the execution of their tasks. The success of the whole depends largely upon how well each subordinate coördinates his work with the general plan.

A great responsibility is necessarily thrown upon subordinates, but responsibility stimulates the right kind of an officer.

372. In a given situation it is far better to do any intelligent thing consistent with the aggressive execution of the general plan than to search hesitatingly for the ideal. This is the true rule of conduct for subordinates who are required to act upon their own initiative.

A subordinate who is reasonably sure that his intended action is such as would be ordered by the commander, were the latter present and in possession of the facts, has enough encouragement to go ahead confidently. He must possess the loyalty to carry out the plans of his superior and the keenness to recognize and to seize opportunities to further the general plan.

373. Independence must not become license. Regardless of the number of subordinates who are apparently supreme in their own restricted spheres, there is but one battle and but one supreme will to which all must conform.

Every subordinate must therefore work for the general result. He does all

¹The "pack" includes blanket, poncho, and shelter tent.

in his power to insure coöperation between the subdivisions under his command. He transmits important information to adjoining units or to superiors in rear and, with the assistance of information received, keeps himself and his subordinates duly posted as to the situation.

374. When circumstances render it impracticable to consult the authority issuing an order, officers should not hesitate to vary from such order when it is clearly based upon an incorrect view of the situation, is impossible of execution, or has been rendered impracticable on account of changes which have occurred since its promulgation. In the application of this rule the responsibility for mistakes rests upon the subordinate, but unwillingness to assume responsibility on proper occasions is indicative of weakness.

Superiors should be careful not to censure an apparent disobedience where the act was done in the proper spirit and to advance the general plan.

375. When the men of two or more units intermingle in the firing line, all officers and men submit at once to the senior. Officers and platoon guides seek to fill vacancies caused by casualties. Each seizes any opportunity to exercise the functions consistent with his grade, and all assist in the maintenance of order and control.

Every lull in the action should be utilized for as complete restoration of order in the firing line as the ground or other conditions permit.

376. Any officer or noncommissioned officer who becomes separated from his proper unit and can not rejoin must at once place himself and his command at the disposal of the nearest higher commander.

Anyone having completed an assigned task must seek to rejoin his proper command. Failing in this, he should join the nearest troops engaged with the enemy.

377. Soldiers are taught the necessity of remaining with their companies, but those who become detached must join the nearest company and serve with it until the battle is over or reorganization is ordered.

ORDERS.

378. Commands are deployed and enter the combat by the orders of the commander to the subordinate commanders.

The initial combat orders of the division are almost invariably written; those of the brigade are generally so. The written order is preferable and is used whenever time permits.

If time permits, subsequent orders are likewise written, either as field orders or messages.

379. The initial combat orders of regiments and smaller units are given verbally. For this purpose the subordinates for whom the orders are intended are assembled, if practicable, at a place from which the situation and plan can be explained.

Subsequent orders are verbal or in the form of verbal or written messages. Verbal messages should not be used unless they are short and unmistakable.

380. The initial combat order of any commander or subordinate is based upon his definite plan for executing the task confronting him.

Whenever possible the formation of the plan is preceded by a personal reconnaissance of the terrain and a careful consideration of all information of the enemy.

381. The combat order gives such information of the enemy and of neighboring or supporting friendly troops as will enable subordinates to understand the situation.

The general plan of action is stated in brief terms, but enough of the commander's intentions is divulged to guide the subsequent actions of the subordinates.

Clear and concise instructions are given as to the action to be taken in the combat by each part of the command. In this way the commander assigns tasks, fronts, objectives, sectors or areas, etc., in accordance with his plan. If the terms employed convey definite ideas and leave no loopholes, the conduct of subordinates will generally be correspondingly satisfactory.

Such miscellaneous matter relating to special troops, trains, ammunition, and future movements of the commander is added as concerns the combat itself.

Combat orders should prescribe communication, reconnaissance, flank protection, etc., when some special disposition is desired or when an omission on the part of a subordinate may reasonably be feared.

382. When issuing orders, a commander should indicate clearly what is to be done by each subordinate, but not how it is to be done. He should not encroach upon the functions of a subordinate by prescribing details of execution unless he has good reason to doubt the ability or judgment of the subordinate, and can not substitute another.

Although general in its terms, an order must be definite and must be the expression of a fixed decision. Ambiguity or vagueness indicates either vacillation or the inability to formulate orders.

383. Usually the orders of a commander are intended for, and are given to, the commanders of the next lower units, but in an emergency a commander should not hesitate to give orders directly to any subordinate. In such case he should promptly inform the intermediate commander concerned.

COMMUNICATION.

384. Communication is maintained by means of staff officers, messengers, relay systems, connecting files, visual signals, telegraph, or telephone.

385. The signal corps troops of the division establish lines of information from division to brigade headquarters. The further extension of lines of information in combat by signal troops is exceptional.

386. Each regiment, employing its own personnel, is responsible for the maintenance of communication from the colonel back to the brigade and forward to the battalions. For this purpose the regiment uses the various means which may be furnished it. The staff and orderlies, regimental and battalion, are practiced in the use of these means and in messenger service. Orderlies carry signal flags.

387. Connection between the firing line and the major or colonel is practically limited to the prescribed flag, arm, and bugle signals. Other means can only be supplemental. Company musicians carry company flags and are practiced in signaling.

388. The artillery generally communicates with the firing line by means of its own staff officers or through an agent who accompanies some unit in or near the front. The infantry keeps him informed as to the situation and affords him any reasonable assistance. When the infantry is dependent upon the artillery for fire support, perfect coördination through this representative is of great importance.

COMBAT RECONNAISSANCE.

389. Combat reconnaissance is of vital importance and must not be neglected. By proper preliminary reconnaissance, deployments on wrong lines, or in a wrong direction, and surprises may generally be prevented.

390. Troops deployed and under fire can not change front and thus they suffer greatly when enfiladed. Troops in close order formation may suffer

heavy losses in a short time if subjected to hostile fire. In both formations troops must be protected by proper reconnaissance and warning.

391. The difficulty of reconnaissance increases in proportion to the measures adopted by the enemy to screen himself.

The strength of the reconnoitering party is determined by the character of the information desired and the nature of the hostile screen. In exceptional cases as much as a battalion may be necessary in order to break through the hostile screen and enable the commander or officer in charge to reconnoiter in person.

A large reconnoitering party is conducted so as to open the way for small patrols, to serve as a supporting force or rallying point for them, and to receive and transmit information. Such parties maintain signal communication with the main body if practicable.

392. Each separate column moving forward to deploy must reconnoiter to its front and flank and keep in touch with adjoining columns. The extent of the reconnaissance to the flank depends upon the isolation of the columns.

393. Before an attack a reconnaissance must be made to determine the enemy's position, the location of his flanks, the character of the terrain, the nature of the hostile field works, etc., in order to prevent premature deployment and the resulting fatigue and loss of time.

It will frequently be necessary to send forward a thin skirmish line in order to induce the enemy to open fire and reveal his position.

394. It will frequently be impossible to obtain satisfactory information until after the action has begun. The delay that may be warranted for the purpose of reconnaissance depends upon the nature of the attack and the necessity for promptness. For example, in a meeting engagement, and sometimes in a holding attack, the reconnaissance may have to be hasty and superficial, whereas in an attack against an enemy carefully prepared for defense there will generally be both time and necessity for thorough reconnaissance.

395. In defense, reconnaissance must be kept up to determine the enemy's line of advance, to ascertain his dispositions, to prevent his reconnaissance, etc.

Patrols or parties posted to prevent hostile reconnaissance should relieve the main body of the necessity of betraying its position by firing on small bodies of the enemy.

396. Reconnaissance continues throughout the action.

A firing or skirmish line can take care of its front, but its flanks are especially vulnerable to modern firearms. The moral effect of flanking fire is as great as the physical effect. Hence, combat patrols to give warning or covering detachments to give security are indispensable on exposed flanks. This is equally true in attack or defense.

397. The fact that cavalry patrols are known to be posted in a certain direction does not relieve infantry commanders of the responsibility for reconnaissance and security.

To be surprised by an enemy at short range is an unpardonable offense.

398. The commander of a battalion on a flank of a general line invariably provides for the necessary reconnaissance and security on that flank unless higher authority has specifically ordered it. In any event, he sends out combat patrols as needed.

Where his battalion is on a flank of one section of the line and a considerable interval lies between his battalion and the next section, he makes similar provision.

399. Battalion commanders in the first line establish patrols to observe and report the progress or conduct of adjoining troops when these can not be seen.

FIRE SUPERIORITY.**PURPOSE AND NATURE.**

400. In a decisive battle success depends on gaining and maintaining fire superiority. Every effort must be made to gain it early and then to keep it.

Attacking troops must first gain fire superiority in order to reach the hostile position. Over open ground attack is possible only when the attacking force has a decided fire superiority. With such superiority the attack is not only possible, but success is probable and without ruinous losses.

Defending troops can prevent a charge only when they can master the enemy's fire and inflict heavy losses upon him.

401. To obtain fire superiority it is necessary to produce a heavy volume of accurate fire. Every increase in the effectiveness of the fire means a corresponding decrease in the effectiveness of the enemy's fire.

The volume and accuracy of fire will depend upon several considerations:

(a) The number of rifles employed. On a given front the greatest volume of fire is produced by a firing line having only sufficient intervals between men to permit the free use of their rifles. The maximum density of a firing line is therefore about one man per yard of front.

(b) The rate of fire affects its volume; an excessive rate reduces its accuracy.

(c) The character of the target influences both volume and accuracy. Larger dimensions, greater visibility, and shorter range increase the rate of fire; greater density increases the effect.

(d) Training and discipline have an important bearing on the rate or volume of fire, but their greatest influence is upon accuracy.

The firing efficiency of troops is reduced by fatigue and adverse psychological influences.

(e) Fire direction and control improve collective accuracy. The importance of fire direction increases rapidly with the range. Control exerts a powerful influence at all ranges.

FIRE DIRECTION AND CONTROL.**OPENING FIRE.**

402. Beyond effective ranges important results can be expected only when the target is large and distinct and much ammunition is used.

Long-range fire is permissible in pursuit on account of the moral effect of any fire under the circumstances. At other times such fire is of doubtful value.

403. In attack, the desire to open fire when losses are first felt must be repressed. Considerations of time, target, ammunition, and morale make it imperative that the attack withhold its fire and press forward to a first firing position close to the enemy. The attacker's target will be smaller and fainter than the one he presents to the enemy.

404. In defense, more ammunition is available, ranges are more easily determined, and the enemy usually presents a larger target. The defender may therefore open fire and expect results at longer ranges than the attacker, and particularly if the defenders intend a delaying action only.

If the enemy has a powerful artillery, it will often be best for the defending infantry to withhold its fire until the enemy offers a specially favorable target. Vigorous and well-directed bursts of fire are then employed. The troops should therefore be given as much artificial protection as time and means permit, and at an agreed signal expose themselves as much as necessary and open fire.

405. In unexpected, close encounters a great advantage accrues to the side which first opens rapid and accurate fire with battle sight.

USE OF GROUND.

406. The position of the firers must afford a suitable field of fire.

The ground should permit constant observation of the enemy, and yet enable the men to secure some cover when not actually firing.

Troops whose target is for the moment hidden by unfavorable ground, either move forward to better ground or seek to execute cross fire on another target.

407. The likelihood of a target being hit depends to a great extent upon its visibility. By skillful use of ground, a firing line may reduce its visibility without loss of fire power. Sky lines are particularly to be avoided.

CHOICE OF TARGET.

408. The target chosen should be the hostile troops most dangerous to the firers. These will usually be the nearest hostile infantry. When no target is specially dangerous, that one should be chosen which promises the most hits.

409. Frequent changes of target impair the fire effect. Random changes to small, unimportant targets impair fire discipline and accomplish nothing. Attention should be confined to the main target until substantial reason for change is apparent.

410. An opportunity to deliver flanking fire, especially against artillery protected in front by shields, is an example warranting change of target and should never be overlooked. Such fire demoralizes the troops subjected to it, even if the losses inflicted are small. In this manner a relatively small number of rifles can produce important results.

THE RANGE.

411. Beyond close range, the correct setting of the rear sight is of primary importance, provided the troops are trained and well in hand. The necessity for correct sight setting increases rapidly with the range. Its importance decreases as the quality of the troops decrease, for the error in sight setting, except possibly at very long ranges, becomes unimportant when compared with the error in holding and aiming.

412. In attack, distances must usually be estimated and corrections made as errors are observed. Mechanical range finders and ranging volleys are practicable at times.

In defense, it is generally practicable to measure more accurately the distances to visible objects and to keep a record of them for future use.

DISTRIBUTION OF FIRE AND TARGET.

413. The purpose of fire superiority is to get hits whenever possible, but at all events to keep down the enemy's fire and render it harmless. To accomplish this the target must be covered with fire throughout its whole extent. Troops who are not fired upon will fire with nearly peace-time accuracy.

The target is roughly divided and a part is assigned to each unit. No part of the target is neglected. In attack, by a system of overlapping in assigning targets to platoons, the entire hostile line can be kept under fire even during a rush.

OBSERVATION.

414. The correctness of the sight setting and the distribution of fire over the target can be verified only by careful observation of the target, the adjacent ground, and the effect upon the enemy.

415. Observation only can determine whether the fire fight is being properly conducted. If the enemy's fire is losing in accuracy and effect, the observer realizes that his side is gaining superiority. If the enemy's fire remains or becomes effective and persistent, he realizes that corrective measures are necessary to increase either volume or accuracy, or both.

DISCIPLINE.

416. Discipline makes good direction and control possible and is the distinguishing mark of trained troops.

417. The discipline necessary in the firing line will be absent unless officers and noncommissioned officers can make their will known to the men. In the company, therefore, communication must be by simple signals which, in the roar of musketry, will attract the attention and convey the correct meaning.

EXPENDITURE OF AMMUNITION.

418. In attack the supply is more limited than in defense. Better judgment must be exercised in expenditure. Ordinarily, troops in the firing line of an attack can not expect to have that day more ammunition than they carry into the combat, except such additions as come from the distribution of ammunition of dead and wounded and the surplus brought by reinforcements.

419. When a certain fire effect is required, the necessary ammunition must be expended without hesitation. Several hours of firing may be necessary to gain fire superiority. True economy can be practiced only by closing on the enemy before first opening fire and thereafter suspending fire when there is nothing to shoot at.

SUPPORTING ARTILLERY.

420. Artillery fire is the principal aid to the infantry in gaining and keeping fire superiority, not only by its hits, but by the moral effect it produces on the enemy.

421. In attack, artillery assists the forward movement of the infantry. It keeps down the fire of the hostile artillery and seeks to neutralize the hostile infantry by inflicting losses upon it, destroying its morale, driving it to cover, and preventing it from using its weapons effectively.

In defense, it ignores the hostile artillery when the enemy's attack reaches a decisive stage and assists in checking the attack, joining its fire power to that of the defending infantry.

422. Troops should be accustomed to be fired over by friendly artillery and impressed with the fact that the artillery should continue firing upon the enemy until the last possible moment. The few casualties resulting from shrapnel bursting short are trifling compared with those that would result from the increased effectiveness of the enemy's infantry fire were the friendly artillery to cease firing.

Casualties inflicted by supporting artillery are not probable until the opposing infantry lines are less than 200 yards apart.

423. When the distance between the hostile infantry lines becomes so short as to render further use of friendly artillery inadvisable, the commander of the infantry firing line, using a preconcerted signal,^a informs the artillery commander. The latter usually increases the range in order to impede the strengthening of the enemy's foremost line.

^a With a 4-foot white and red regimental signal flag.

FIRE OF POSITION.

424. Infantry is said to execute fire of position when it is posted so as to assist an attack by firing over the heads, or off the flank, of the attacking troops and is not itself to engage in the advance; or when, in defense, it is similarly posted to augment the fire of the main firing line.

Machine guns serve a like purpose.

In a decisive action, fire of position should be employed whenever the terrain permits and reserve infantry is available.

DEPLOYMENT.

425. Troops are massed preparatory to deployment when the nature of their deployment can not be foreseen or it is desirable to shorten the column or to clear the road. Otherwise, in the deployment of large commands, whether in march column, in bivouac, or massed, and whether forming for attack or for defense, they are ordinarily first formed into a line of columns to facilitate the extension of the front prior to deploying.

The rough line or lines of columns thus formed enable troops to take advantage of the terrain in advancing and shorten the time occupied in forming the firing line.

426. In deploying the division each brigade is assigned a definite task or objective. On receipt of his orders, the brigade commander conducts his brigade in column or in line of regiments until it is advisable that it be broken into smaller columns. He then issues his order, assigning to each regiment its task, if practicable. In a similar manner the regimental commanders lead their regiments forward in column, or in line of columns, until the time arrives for issuing the regimental order. It is seldom advisable to break up the battalion before issuing orders for its deployment.

427. Each subordinate commander, after receiving his order for the action, should precede his command as far as possible, in order to reconnoiter the ground personally, and should prepare to issue his orders promptly.

428. Each commander of a column directs the necessary reconnaissance to front and flank; by this means and by a judicious choice of ground he guards against surprise.

429. The premature formation of the firing line causes unnecessary fatigue and loss of time, and may result in a faulty direction being taken. Troops once deployed make even minor changes of direction with difficulty, and this difficulty increases with the length of the firing line.

430. In the larger units, when the original deployment is found to be in the wrong direction, it will usually be necessary to deploy the reserve on the correct front and withdraw and assemble the first line.

431. To gain decisive results, it will generally be necessary to use all the troops at some stage of the combat. But in the beginning, while the situation is uncertain, care should be taken not to engage too large a proportion of the command. On the other hand, there is no greater error than to employ too few and to sacrifice them by driblets.

432. When it is intended to fight to a decision, fire superiority is essential. To gain this, two things are necessary: A heavy fire and a fire well directed and controlled. Both of these are best obtained when the firing line is as dense as practicable, while leaving the men room for the free use of their rifles.

If the men are too widely separated, direction and control are very difficult, often impossible, and the intensity of fire is slight in proportion to the front occupied.

433. In an attack or stubborn defense the firing line should have a density of one man per yard of front occupied.

Where the tactical situation demands the holding of a line too long to be occupied throughout at this density, it is generally better to deploy companies or platoons at one man per yard, leaving gaps in the line between them, than to distribute the men uniformly at increased intervals.

434. A relatively thin firing line may be employed when merely covering the movements of other forces; when on the defensive against poor troops; when the final action to be taken has not yet been determined; and, in general, when fire superiority is not necessary.

435. The length of the firing line that the whole force may employ depends upon the density of the line and the strength in rear required by the situation.

Supports and reserves constitute the strength in rear.

In a decisive attack they should be at least strong enough to replace a heavy loss in the original firing line and to increase the charging line to a density of at least one and one-half men per yard and still have troops in rear for protection and for the other purposes mentioned above.

436. In the original deployment the strength of the reserve held out by each commander comprises from one-sixth to two-thirds of his unit, depending upon the nature of the service expected of the reserve.

A small force in a covering or delaying action requires very little strength in rear, while a large force fighting a decisive battle requires much. Therefore, depending upon circumstances, the original deployment, including the strength in rear, may vary from 1 to 10 men per yard. Against an enemy poorly disciplined and trained, or lacking in morale, a thinner deployment is permissible.

437. The density of the whole deployment increases with the size of the command, because the larger the command the greater the necessity for reserves. Thus, a battalion acting alone may attack with two men per yard of front, but a regiment, with three battalions, may only double the front of the one battalion.

438. By the assignment of divisions or larger units to parts of a line of battle several miles long, a series of semi-independent battle, or local combat, districts are created.

The general deployment for a long line of battle comprising several battle districts is not directly considered in these regulations. The deployments treated of herein are those of the infantry within such districts.

The density of deployment in these districts may vary greatly, depending upon the activity expected in each. Within these battle districts, as well as in smaller forces acting alone, parts of the line temporarily of less importance may be held weakly, in order to economize troops and to have more at the decisive point.

439. The front that a unit may occupy when deployed depends also upon whether its flanks are secured. If both flanks are secured by other troops, the unit may increase its front materially by reducing its reserve or supports. If only one flank is so secured, the front may still be somewhat increased, but the exposed flank must be guarded by posting the supports or reserve toward that flank.

Natural obstacles that secure the flanks have practically the same effect upon deployment.

440. Except when assigned as supports or reserve, regiments in the brigade, battalions in the regiment, and companies in the battalion are, when practicable, deployed side by side.

441. In the deployment, battalions establish the firing line, each furnishing its own support.

In each unit larger than the battalion a reserve is held out, its strength depending upon circumstances. In general, the reserve is employed by the

commander to meet or improve conditions brought about by the action of the firing line. It must not be too weak or too split up. It must be posted where the commander believes it will be needed for decisive action, or where he desires to bring about such action. When necessary, parts of it reinforce or prolong the firing line.

ATTACK.

442. An attack is bound to succeed if fire superiority is gained and properly used.

To gain this superiority generally requires that the attack employ more rifles than the defense; this in turn means a longer line, as both sides will probably hold a strong firing line.

443. With large forces, a direct frontal attack gives the attacker little opportunity to bring more rifles to bear. However, if the enemy is unduly extended, a frontal attack may give very decisive results.

444. Owing to the difficulty of control and the danger of the parts being defeated in detail, wide turning movements are seldom allowable except in large forces.

445. If the attack can be so directed that, while the front is covered, another fraction of the command strikes a flank more or less obliquely (an enveloping attack) the advantages gained are a longer line and more rifles in action; also a converging fire opposed to the enemy's diverging fire.

446. An envelopment of both flanks should never be attempted without a very decided superiority in numbers.

447. The enveloping attack will nearly always result locally in a frontal attack, for it will be met by the enemy's reserve. The advantage of envelopment lies in the longer concentric line, with its preponderance of rifles and its converging fire.

448. Cooperation between the frontal and enveloping attacks is essential to success. Both should be pushed vigorously and simultaneously, and ordinarily both should move simultaneously to the charge; but at the final stage of the attack conditions may sometimes warrant one in charging while the other supports it with fire.

The envelopment of a flank is brought about with difficulty when made by troops already deployed in another direction or by their reserves. The two attacks should be deployed at a suitable distance apart, with the lines of attack converging in rear of the hostile position. The troops that are to make the enveloping attack should deploy in the proper direction at the start and should be given orders which enable them to gain their point of deployment in the most direct and practical manner.

The enveloping attack is generally made the stronger, especially in small forces.

DEPLOYMENT FOR ATTACK.

449. Where open terrain exposes troops to hostile artillery fire it may be necessary to make the deployment 2 miles or more from the hostile position.

The foreground should be temporarily occupied by covering troops. If the enemy occupies the foreground with detachments, the covering troops must drive them back.

450. To enable large forces to gain ground toward the enemy, it may sometimes be cheaper and quicker in the end to move well forward and to deploy at night. In such case the area in which the deployment is to be made should, if practicable, be occupied by covering troops before dark.

The deployment will be made with great difficulty unless the ground has

been studied by daylight. The deployment gains little unless it establishes the firing line well within effective range of the enemy's main position. (See Night Operations.)

451. Each unit assigned a task deploys when on its direction line, or opposite its objective, and when it has no longer sufficient cover for advancing in close order. In the firing line, intervals of 25 to 50 yards should be maintained as long as possible between battalions. In the larger units it may be necessary to indicate on the map the direction or objective, but to battalion commanders it should be pointed out on the ground.

452. The reserve is kept near enough to the firing line to be on hand at the decisive stage. It is posted with reference to the attack, or to that part of the attacking line, from which the greater results are expected; it is also charged with flank protection, but should be kept intact.

Supports are considered in paragraphs 225 to 228, inclusive, and 298 to 302, inclusive.

ADVANCING THE ATTACK.

453. The firing line must ordinarily advance a long distance before it is justified in opening fire. It can not combat the enemy's artillery, and it is at a disadvantage if it combats the defender's long-range rifle fire. Hence it ignores both and, by taking full advantage of cover and of the discipline of the troops, advances to a first firing position at the shortest range possible.

Formations for crossing this zone with the minimum loss are considered in paragraphs 212 to 220, inclusive. These and other methods of crossing such zones should be studied and practiced.

454. The best protection against loss while advancing is to escape the enemy's view.

455. Each battalion finds its own firing position, conforming to the general advance as long as practicable and taking advantage of the more advanced position of an adjacent battalion in order to gain ground.

The position from which the attack opens fire is further considered in paragraphs 306 to 308, inclusive.

456. It will frequently become necessary for infantry moving to the attack to pass through deployed artillery. This should be done so as to interfere as little as possible with the latter's fire, and never so as to cause that fire to cease entirely. As far as practicable, advantage should be taken of intervals in the line, if any. An undersanding between artillery and infantry commanders should be had, so as to effect the movement to the best advantage.

457. In advancing the attack, advanced elements of the firing line or detachments in front of it should not open fire except in defense or to clear the foreground of the enemy. Fire on the hostile main position should not be opened until all or nearly all of the firing line can join in the fire.

THE FIRE ATTACK.

458. At the first firing position the attack seeks to gain fire superiority. This may necessitate a steady, accurate fire for a long time. The object is to subdue the enemy's fire and keep it subdued so that the attacking troops may advance from this point to a favorable place near the enemy from which the charge may be made. Hence, in the advance by rushes, sufficient rifles must be kept constantly in action to keep down the enemy's fire; this determines the size of the fraction rushing.

459. To advance without fire superiority against a determined defense would result in such losses as to bring the attack to a standstill or to make the apparent success barren of results.

460. Diminution of the enemy's fire and a pronounced loss in effectiveness are the surest signs that fire superiority has been gained and that a part of the firing line can advance.

461. The men must be impressed with the fact that, having made a considerable advance under fire and having been checked, it is suicidal to turn back in daylight.

If they can advance no further, they must intrench and hold on until the fall of darkness or a favorable turn in the situation develops.

Intrenching is resorted to only when necessary. Troops who have intrenched themselves under fire are moved forward again with difficulty.

462. Supports and reserves occupying intrenchments vacated by the firing line should improve them, but they must not be held back or diverted from their true missions on this account.

463. Paragraphs 309 to 317, inclusive, deal more in detail with the conduct of the fire attack.

THE CHARGE.

464. Fire superiority beats down the enemy's fire, destroys his resistance and morale, and enables the attacking troops to close on him, but an actual or threatened occupation of his position is needed to drive him out and defeat him.

The psychological moment for the charge can not be determined far in advance. The tactical instinct of the responsible officer must decide.

465. The defenders, if subjugated by the fire attack, will frequently leave before the charge begins. On the other hand, it may be necessary to carry the fire attack close to the position and follow it up with a short dash and a bayonet combat. Hence the distance over which the charge may be made will vary between wide limits. It may be from 25 to 400 yards.

The charge should be made at the earliest moment that promises success; otherwise the full advantage of victory will be lost.

466. The commander of the attacking line should indicate his approval, or give the order, before the charge is made. Subordinate commanders, usually battalion commanders, whose troops are ready to charge signal that fact to the commander. It may be necessary for them to wait until other battalions or other parts of the line are ready or until the necessary reserves arrive.

At the signal for the charge the firing line and near-by supports and reserves rush forward. See paragraphs 318 and 319.

The charge is made simultaneously, if possible, by all the units participating therein, but, once committed to the assault, battalions should be pushed with the utmost vigor and no restraint placed on the ardor of charging troops by an attempt to maintain alignment.

467. Before ordering the charge the commander should see that enough troops are on hand to make it a success. Local reserves joining the firing line in time to participate in the charge give it a strong impetus. Too dense a mass should be avoided.

468. The line should be strengthened by prolongation, if practicable, and remaining troops kept in formation for future use; but rather than that the attack should fail, the last formed body will be sent in, unless it is very apparent that it can do no good.

469. To arrive in the hostile position with a very compact firing line and a few formed supports is sufficient for a victory, but an additional force kept well in hand for pursuit is of inestimable value.

470. A premature charge by a part of the line should be avoided, but if begun, the other parts of the line should join at once if there is any prospect of success. Under exceptional conditions a part of the line may be compelled to charge

without authority from the rear. The intention to do so should be signaled to the rear.

471. Confidence in their ability to use the bayonet gives the assaulting troops the promise of success.

472. If the enemy has left the position when the charging troops reach it, the latter should open a rapid fire upon the retreating enemy, if he is in sight. It is not advisable for the mixed and disordered units to follow him, except to advance to a favorable firing position or to cover the reorganization of others.

473. The nearest formed bodies accompanying or following the charge are sent instantly in pursuit. Under cover of these troops order is restored in the charging line. If the captured position is part of a general line or is an advanced post, it should be intrenched and occupied at once.

The exhaustion of officers and men must not cause the neglect of measures to meet a counterattack.

474. If the attack receives a temporary setback and it is intended to strengthen and continue it, officers will make every effort to stop the rearward movement and will reestablish the firing line in a covered position as close as possible to the enemy.

475. If the attack must be abandoned, the rearward movement should continue with promptness until the troops reach a feature of the terrain that facilitates the task of checking and reorganizing them. The point selected should be so far to the rear as to prevent interference by the enemy before the troops are ready to resist. The withdrawal of the attacking troops should be covered by the artillery and by reserves, if any are available. (See Night Operations.)

PURSUIT.

476. To reap the full fruits of victory a vigorous pursuit must be made. The natural inclination to be satisfied with a successful charge must be overcome. The enemy must be allowed no more time to reorganize than is positively unavoidable.

477. The part of the reserve that is still formed or is best under control is sent forward in pursuit and vigorously attacks the enemy's main body or covering detachments wherever found.

The artillery delivers a heavy fire upon the retreating enemy; the disordered attacking troops secure the position, promptly re-form, and become a new reserve.

478. If the captured position is a section of the general line, the breach should be heavily occupied, made wider, and strongly secured by drawing on all reserves in the vicinity.

479. After the pursuit from the immediate battle field, pursuit by parallel roads is especially effective where large commands are concerned.

480. Artillery and cavalry are very effective in pursuit.

ATTACK OF FORTIFICATIONS.

481. Few modifications enter into the problem of attacking fortifications. Such as are to be considered relate chiefly to the greater time and labor of advancing, the more frequent use of darkness and the use of hand grenades to augment the fire.

482. If the enemy is strongly fortified and time permits, it may be advisable to wait and approach the charging point under cover of darkness. The necessary reconnaissance and arrangements should be made before dark. If the charge is not to be made at once, the troops intrench the advanced position,

using sand bags if necessary. Before daylight the foreground should be cleared of obstacles.

483. If the distance is short and other conditions are favorable, the charge may be made without fire preparation. If made, it should be launched with spirit and suddenness at the break of day. (See Night Operations.)

484. In siege operations troops are usually advanced to the charging point by sapping. This method, however, presupposes that an early victory is not necessary or that it is clearly inadvisable to attempt more direct methods.

HOLDING ATTACK.

485. The holding attack must be vigorous enough to hold the enemy in position and must present a front strong enough to conceal the secondary nature of the attack.

The holding attack need have comparatively little strength in rear, but conceals the fact by a firing line not distinguishable from that of a decisive attack.

486. Supports and reserves are kept at short distances. Their strength is less if the object is merely to hold the enemy fast than if the object is, in addition, to compel him to use up reserves.

487. Holding attacks which may later develop into decisive attacks should be correspondingly strong in rear.

488. All feint attacks should employ dense firing lines. Their weakness is in rear and is concealed.

DEFENSE.

POSITIONS AND INTRENCHMENTS.

489. The first requirement of a good position is a clear field of fire and view to the front and exposed flanks to a distance of 600 to 800 yards or more. The length of front should be suitable to the size of the command and the flanks should be secure. The position should have lateral communication and cover for supports and reserves. It should be one which the enemy can not avoid, but must attack or give up his mission.

A position having all these advantages will rarely, if ever, be found. The one should be taken which conforms closest to the description.

490. The natural cover of the position should be fully utilized. In addition, it should be strengthened by fieldworks and obstacles.

The best protection is afforded by deep, narrow, inconspicuous trenches. If little time is available, as much as practicable must be done. That the fieldworks may not be needed should not cause their construction to be omitted, and the fact that they have been constructed should not influence the action of a commander, if conditions are found to be other than expected.

491. When time and troops are available the preparations include the necessary communicating and cover trenches, head cover, bombproofs, etc. The fire trenches should be well supplied with ammunition.

The supports are placed close at hand in cover trenches when natural cover is not available.

492. Dummy trenches frequently cause the hostile artillery to waste time and ammunition and to divert its fire.

493. The location, extent, profile, garrison, etc., of fieldworks are matters to be decided by the infantry commanders. Officers must be able to choose ground and properly intrench it. (See Intrenchments.)

494. In combat exercises, when it is impracticable to construct the trenches appropriate to the exercise, their trace may be outlined by bayonets, sticks, or other markers, and the responsible officers required to indicate the profile selected, method and time of construction, garrisons, etc.

DEPLOYMENT FOR DEFENSE.

495. The density of the whole deployment depends upon the expected severity of the action, the character of the enemy, the condition of the flanks, the field of fire, the terrain, and the available artificial or natural protection for the troops.

496. If exposed, the firing line should be as dense in defense as in attack. If the firing line is well intrenched and has a good field of fire, it may be made thinner.

Weaker supports are permissible. For the same number of troops the front occupied on the defensive may therefore be longer than on the offensive, the battalions placing more companies in the firing line.

497. If it is intended only to delay the enemy, a fairly strong deployment is sufficient, but if decisive results are desired, a change to the offensive must be contemplated and the corresponding strength in rear provided. This strength is in the reserve, which should be as large as the demands of the firing line and supports permit. Even in a passive defense the reserve should be as strong as in the attack, unless the flanks are protected by other means.

498. Supports are posted as close to the firing line as practicable and reinforce the latter according to the principles explained in the attack. When natural cover is not sufficient for the purpose, communicating and cover trenches are constructed. If time does not permit their construction, it is better to begin the action with a very dense firing line and no immediate supports than to have supports greatly exposed in rear.

499. The reserve should be posted so as to be entirely free to act as a whole, according to the developments. The distance from firing line to reserve is generally greater than in the attack. By reason of such a location the reserve is best able to meet a hostile enveloping attack; it has a better position from which to make a counter attack; it is in a better position to cover a withdrawal and permit an orderly retreat.

The distance from firing line to reserve increases with the size of the reserve.

500. When the situation is no longer in doubt, the reserve should be held in rear of the flank which is most in danger or offers the best opportunity for counterattack. Usually the same flank best suits both purposes.

501. In exceptional cases, on broad fronts, it may be necessary to detach a part of the reserve to protect the opposite flank. This detachment should be the smallest consistent with its purely protective mission.

502. The commander assigns to subordinates the front to be occupied by them. These, in turn, subdivide the front among their next lower units in the firing line.

503. An extended position is so divided into sections that each has, if practicable, a field of fire naturally made distinct by the terrain.

Unfavorable and unimportant ground will ordinarily cause gaps to exist in the line.

504. The size of the unit occupying each section depends upon the latter's natural strength, front, and importance. If practicable, battalions should be kept intact and assigned as units to sections or parts of sections.

505. Where important dead space lies in front of one section, an adjoining section should be instructed to cover it with fire when necessary, or machine guns should be concealed for the like purpose.

506. Advanced posts, or any other form of unnecessary dispersion, should be avoided.

507. Unless the difficulty of moving the troops into the position be great, most of the troops of the firing line are held in rear of it until the infantry

attack begins. The position itself is occupied by a small garrison only, with the necessary outguards or patrols in front.

508. Fire alone can not be depended upon to stop the attack. The troops must be determined to resort to the bayonet, if necessary.

509. If a night attack or close approach by the enemy is expected, troops in a prepared position should strengthen the outguards and firing line and construct as numerous and effective obstacles as possible. Supports and local reserves should move close to the firing line and should, with the firing line, keep bayonets fixed. If practicable, the front should be illuminated, preferably from the flanks of the section.

510. Only short range fire is of any value in resisting night attacks. The bayonet is the chief reliance. (See Night Operations.)

COUNTERATTACK.

511. The passive defense should be assumed only when circumstances force it. Only the offensive wins.

512. An active defense seeks a favorable decision. A favorable decision can not be expected without counterattack.

513. A passive defense in a position whose flanks are not protected by natural obstacles is generally out of the question.

514. Where the defense is assumed with a view to making a counterattack, the troops for the counterattack should be held in reserve until the time arrives for such attack. The defensive line should be held by as few troops as possible in order that the force for the offensive may be as large as possible.

The force for the counterattack should be held echeloned in rear of the flank which offers it the greatest advantage for the proposed attack.

515. The counterattack should be made vigorously and at the proper time. It will usually be made:

By launching the reserve against the enemy's flank when his attack is in full progress. This is the most effective form of counterattack.

Straight to the front by the firing line and supports after repulsing the enemy's attack and demoralizing him with pursuing fire.

Or, by the troops in rear of the firing line when the enemy has reached the defensive position and is in disorder.

516. Minor counterattacks are sometimes necessary in order to drive the enemy from important positions gained by him.

DELAYING ACTION.

517. When a position is taken merely to delay the enemy and to withdraw before becoming closely engaged, the important considerations are:

The enemy should be forced to deploy early. The field of fire should therefore be good at distances from 500 to 1,200 yards or more; a good field of fire at close range is not necessary.

The ground in rear of the position should favor the withdrawal of the firing line by screening the troops from the enemy's view and fire as soon as the position is vacated.

518. A thin firing line using much ammunition will generally answer the purpose. Supports are needed chiefly to protect the flanks.

The reserve should be posted well in rear to assist in the withdrawal of the firing line.

519. Artillery is especially valuable to a delaying force.

MEETING ENGAGEMENTS.

520. Meeting engagements are characterized by the necessity for hasty reconnaissance, or the almost total absence of reconnaissance; by the necessity for rapid deployment, frequently under fire; and usually by the absence of trenches or other artificial cover. These conditions give further advantages to the offensive.

521. The whole situation will usually indicate beforehand the proper general action to be taken on meeting the enemy.

522. Little fresh information can be expected. The boldness, initiative, and determination of the commander must be relied upon.

523. A meeting engagement affords an ideal opportunity to the commander who has intuition and quick decision and who is willing to take long chances. His opponent is likely to be overcautious.

524. The amount of information that the commander is warranted in awaiting before taking final action depends entirely upon his mission. One situation may demand a blind attack; another may demand rapid, partial deployment for attack but careful and time-consuming reconnaissance before the attack is launched.

525. A great advantage accrues to the side which can deploy the faster. The advantage of a close-order formation, favoring rapid deployment, becomes more pronounced with the size of the force.

526. The first troops to deploy will be able to attack with longer firing lines and weaker supports than are required in the ordinary case. But if the enemy succeeds in deploying a strong defensive line, the attack must be strengthened accordingly before it is wasted.

527. If the situation warrants the advance, the leading troops seek to deploy faster than the enemy, to reach his flanks, check his deployment, and get information. In any event, they seek to cover the deployment of their own troops in rear—especially the artillery—and to seize important ground.

528. The commander of a long column which meets the enemy should be with the advance guard to receive information promptly and to reconnoiter. If he decides to fight, the advance guard must hold the enemy while the commander formulates a plan of action, issues the necessary orders, and deploys the main body. Meantime, the column should be closing up, either in mass or to form line of columns, so that the deployment, when determined upon, may be made more promptly.

529. The action of the advance guard, prior to the receipt of orders, depends upon the situation. Whether to attack determinedly or only as a feint, or to assume the defensive, depends upon the strength of the advance guard, the terrain, the character of the hostile force encountered, and the mission and intentions of the commander of the whole.

530. If the enemy is beforehand or more aggressive, or if the advance guard is too weak, it may be necessary to put elements of the main body into action as fast as they arrive, in order to check him. This method should be avoided; it prevents the formation and execution of a definite plan and compels piecemeal action. The best results are obtained when the main body is used as a whole.

WITHDRAWAL FROM ACTION.

531. The withdrawal of a defeated force can generally be effected only at a heavy cost. When it is no longer possible to give the action a favorable turn and the necessity for withdrawal arises, every effort must be made to place distance and a rear guard between the enemy and the defeated troops.

532. Artillery gives especially valuable assistance in the withdrawal. The

long-range fire of machine guns should also be employed. Cavalry assists the withdrawal by charging the pursuing troops or by taking flank positions and using fire action.

533. If an intact reserve remains it should be placed in a covering position, preferably on a flank, to check the pursuit and thus enable the defeated troops to withdraw beyond reach of hostile fire.

The covering position of the reserve should be at some distance from the main action, but close enough to bring the withdrawing troops quickly under the protection of its fire. It should have a good field of fire at effective and long ranges and should facilitate its own safe and timely withdrawal.

534. If the general line is divided, by terrain or by organization, into two or more parts, the firing line of the part in the least danger from pursuit should be withdrawn first. A continuous firing line, whose parts are dependent upon one another for fire support, should be withdrawn as a whole, retiring by echelon at the beginning of the withdrawal. Every effort must be made to restore the organization, regain control, and form column of march as soon as the troops are beyond the reach of hostile fire.

As fast as possible without delaying the march, companies, and the larger units should be re-formed, so that the command will again be well in hand.

535. The commander of the whole, having given orders for withdrawal, should go to the rear, select a rendezvous point, and devote himself to the reorganization of his command.

The rendezvous point is selected with regard to the natural channels of movement approximately straight to the rear. It should be distant from the battle field and should facilitate the gathering and protection of the command.

SUMMARY.

536. 1. Avoid combats that offer no chance of victory or other valuable results.

2. Make every effort for the success of the general plan and avoid spectacular plays that have no bearing on the general result.

3. Have a definite plan and carry it out vigorously. Do not vacillate.

4. Do not attempt complicated maneuvers.

5. Keep the command in hand; avoid undue extension and dispersion.

6. Study the ground and direct the advance in such a way as to take advantage of all available cover and thereby diminish losses.

7. Never deploy until the purpose and the proper direction are known.

8. Deploy enough men for the immediate task in hand; hold out the rest and avoid undue haste in committing them to the action.

9. Flanks must be protected either by reserves, fortifications, or the terrain.

10. In a decisive action, gain and keep fire superiority.

11. Keep up reconnaissance.

12. Use the reserve, but not until needed or a very favorable opportunity for its use presents itself. Keep some reserve as long as practicable.

13. Do not hesitate to sacrifice the command if the result is worth the cost.

14. Spare the command all unnecessary hardship and exertion.

MISCELLANEOUS.

MACHINE GUNS.

537. Machine guns must be considered as weapons of emergency. Their effectiveness combined with their mobility renders them of great value at critical, though infrequent, periods of an engagement.

538. When operating against infantry only, they can be used to a great extent throughout the combat as circumstances may indicate, but they are quickly rendered powerless by efficient field artillery and will promptly draw artillery fire whenever they open. Hence their use in engagements between large commands must be for short periods and at times when their great effectiveness will be most valuable.

539. Machine guns should be attached to the advance guard. In meeting engagements they will be of great value in assisting their own advance, or in checking the advance of the enemy, and will have considerable time to operate before hostile artillery fire can silence them.

Care must be taken not to leave them too long in action.

540. They are valuable to a rear guard which seeks to check a vigorous pursuit or to gain time.

541. In attack, if fire of position is practicable, they are of great value. In this case fire should not be opened by the machine guns until the attack is well advanced. At a critical period in the attack, such fire, if suddenly and unexpectedly opened, will greatly assist the advancing line. The fire must be as heavy as possible and must be continued until masked by friendly troops or until the hostile artillery finds the machine guns.

542. In the defense, machine guns should be used in the same general manner as described above for the attack. Concealment and patient waiting for critical moments and exceptional opportunities are the special characteristics of the machine-gun service in decisive actions.

543. As part of the reserve, machine guns have special importance. If they are with the troops told off to protect the flanks, and if they are well placed, they will often produce decisive results against a hostile turning movement. They are especially qualified to cover a withdrawal or make a captured position secure.

544. Machine guns should not be assigned to the firing line of an attack. They should be so placed that fire directed upon them is not likely to fall upon the firing line.

545. A skirmish line can not advance by walking or running when hostile machine guns have the correct range and are ready to fire. Machine-gun fire is not specially effective against troops lying on the ground or crawling.

546. When opposed by machine guns and without artillery to destroy them, infantry itself must silence them before it can advance.

An infantry command that must depend upon itself for protection against machine guns should concentrate a large number of rifles on each gun in turn and until it has silenced it.

AMMUNITION SUPPLY.

547. The method of supply of ammunition to the combat trains is explained in Field Service Regulations.

548. The combat train is the immediate reserve supply of the battalion, and the major is responsible for its proper use. He will take measures to insure the maintenance of the prescribed allowance at all times.

In the absence of instructions, he will cause the train to march immediately in rear of his battalion, and, upon separating from it to enter an engagement, will cause the ammunition therein to be issued. When emptied, he will direct that the wagons proceed to the proper rendezvous to be refilled. Ordinarily a rendezvous is appointed for each brigade and the necessary number of wagons sent forward to it from the ammunition column.

549. When refilled, the combat wagons will rejoin their battalions, or, if the

latter be engaged, will join or establish communication with the regimental reserve.

550. Company commanders are responsible that the belts of the men in their companies are kept filled at all times, except when the ammunition is being expended in action. In the firing line the ammunition of the dead and wounded should be secured whenever practicable.

551. Ammunition in the bandoleers will ordinarily be expended first. Thirty rounds in the right pocket section of the belt will be held as a reserve, to be expended only when ordered by an officer.

552. When necessary to resupply the firing line, ammunition will be sent forward with reinforcements, generally from the regimental reserve.

Men will never be sent back from the firing line for ammunition. Men sent forward with ammunition remain with the firing line.

553. As soon as possible after an engagement the belts of the men and the combat wagons are resupplied to their normal capacities. Ammunition which can not be reloaded on combat wagons will be piled up in a convenient place and left under guard.

MOUNTED SCOUTS.

554. The mounted scouts should be thoroughly trained in patrolling and reconnaissance. They are used for communication with neighboring troops, for patrolling off the route of march, for march outposts, outpost patrols, combat patrols, reconnaissance ahead of columns, etc. Their further use is, in general, confined to escort and messenger duty. They should be freely used for all these purposes, but for these purposes only.

555. When infantry is acting alone, or when the cavalry of a mixed command has been sent to a distance, the mounted scouts are of special importance to covering detachments and should be used to make the reconnaissance which would otherwise fall to cavalry.

556. In reconnaissance, scouts should be used in preference to other troops as much as possible. When not needed for mounted duty, they should be employed for necessary dismounted patrolling.

557. Battalion staff officers should be specially trained in patrolling and reconnaissance work in order that they may be available when a mounted officer's patrol is required.

NIGHT OPERATIONS.

558. By employing night operations troops make use of the cover of darkness to minimize losses from hostile fire or to escape observation. Night operations may also be necessary for the purpose of gaining time. Control is difficult and confusion is frequently unavoidable.

It may be necessary to take advantage of darkness in order to assault from a point gained during the day, or to approach a point from which a daylight assault is to be made, or to effect both the approach and the assault.

559. Offensive and defensive night operations should be practiced frequently in order that troops may learn to cover ground in the dark and arrive at a destination quietly and in good order, and in order to train officers in the necessary preparation and reconnaissance.

Only simple and well-appointed formations should be employed.

Troops should be thoroughly trained in the necessary details—e. g., night patrolling, night marching, and communication at night.

560. The ground to be traversed should be studied by daylight and, if practicable, at night. It should be cleared of hostile detachments before dark, and, if practicable, should be occupied by covering troops.

Orders must be formulated with great care and clearness. Each unit must be given a definite objective and direction, and care must be exercised to avoid collision between units.

Whenever contact with the enemy is anticipated, a distinctive badge should be worn by all.

561. Preparations must be made with secrecy. When the movement is started, and not until then, the officers and men should be acquainted with the general design, the composition of the whole force, and should be given such additional information as will insure coöperation and eliminate mistakes.

During the movement every precaution must be taken to keep secret the fact that troops are abroad.

Unfriendly guides must frequently be impressed. These should be secured against escape, outcry, or deception.

Fire action should be avoided in offensive operations. In general, pieces should not be loaded. Men must be trained to rely upon the bayonet and to use it aggressively.

562. Long night marches should be made only over well-defined routes. March discipline must be rigidly enforced. The troops should be marched in as compact a formation as practicable, with the usual covering detachments. Advance and rear guard distances should be greatly reduced. They are shortest when the mission is an offensive one. The connecting files are numerous.

563. A night advance made with a view to making an attack by day usually terminates with the hasty construction of intrenchments in the dark. Such an advance should be timed so as to allow an hour or more of darkness for intrenching.

An advance that is to terminate in an assault at the break of day should be timed so that the troops will not arrive long before the assault is to be made; otherwise the advantage of partial surprise will be lost and the enemy will be allowed to reinforce the threatened point.

564. The night attack is ordinarily confined to small forces, or to minor engagements in a general battle, or to seizure of positions occupied by covering or advanced detachments. Decisive results are not often obtained.

Poorly disciplined and untrained troops are unfit for night attacks or for night operations demanding the exercise of skill and care.

Troops attacking at night can advance close to the enemy in compact formations and without suffering loss from hostile artillery or infantry fire. The defender is ignorant of the strength or direction of the attack.

A force which makes a vigorous bayonet charge in the dark will often throw a much larger force into disorder.

565. Reconnaissance should be made to ascertain the position and strength of the enemy and to study the terrain to be traversed. Officers who are to participate in the attack should conduct this reconnaissance. Reconnaissance at night is especially valuable. Features that are distinguishable at night should be carefully noted, and their distances from the enemy, from the starting point of the troops, and from other important points should be made known.

Preparations should have in view as complete a surprise as possible. An attack once begun must be carried to its conclusion, even if the surprise is not as complete as was planned or anticipated.

566. The time of night at which the attack should be made depends upon the object sought. If a decisive attack is intended, it will generally yield the best results if made just before daylight. If the object is merely to gain an intrenched position for further operations, an earlier hour is necessary in order that the position gained may be intrenched under cover of darkness.

567. The formation for attack must be simple. It should be carefully effected

and the troops verified at a safe distance from the enemy. The attacking troops should be formed in compact lines and with strong supports at short distances. The reserve should be far enough in rear to avoid being drawn into the action until the commander so desires. Bayonets are fixed, pieces are not loaded.

Darkness causes fire to be wild and ineffective. The attacking troops should march steadily on the enemy without firing, but should be prepared and determined to fight vigorously with the bayonet.

In advancing to the attack the aim should be to get as close as possible to the enemy before being discovered, then to trust to the bayonet.

If the assault is successful, preparations must be made at once to repel a counterattack.

568. On the defense, preparations to resist night attacks should be made by daylight whenever such attacks are to be feared.

Obstacles placed in front of a defensive position are especially valuable to the defense at night. Many forms of obstacles which would give an attacker little concern in the daytime become serious hindrances at night.

After dark the foreground should be illuminated whenever practicable and strong patrols should be pushed to the front.

When it is learned that the enemy is approaching, the trenches are filled and the supports moved close to the firing line.

Supports fix bayonets, but do not load. Whenever practicable and necessary they should be used for counterattacks, preferably against a hostile flank.

The defender should open fire as soon as results may be expected. This fire may avert or postpone the bayonet combat, and it warns all supporting troops. It is not likely that fire alone can stop the attack. The defender must be resolved to fight with the bayonet.

Ordinarily fire will not be effective at ranges exceeding 50 yards.

A white rag around the muzzle of the rifle will assist in sighting the piece when the front sight is not visible.

See paragraphs 450, 482, 483, 509, 510.

INFANTRY AGAINST CAVALRY.

569. A cavalry charge can accomplish little against infantry, even in inferior numbers, unless the latter are surprised, become panic-stricken, run away, or can not use their rifles.

570. A charge from the front is easily checked by a well-directed and sustained fire.

If the charge is directed against the flank of the firing line, the supports, reserves, or machine guns should stop it. If this disposition is impracticable, part of the line must meet the charge by a timely change of front. If the flank company, or companies, in the firing line execute platoons right, the successive firing lines can ordinarily break a charge against the flank. If the cavalry line passes through the firing line, the latter will be little damaged if the men retain their presence of mind. They should be on the watch for succeeding cavalry lines and leave those that have passed through to friendly troops in rear.

571. Men standing are in the best position to meet a charge, but other considerations may compel them to meet it lying prone.

572. In a *mêlée*, the infantryman with his bayonet has at least an even chance with the cavalryman, but the main dependence of infantry is rifle fire. Any formation is suitable that permits the free use of the necessary number of rifles.

Ordinarily there will be no time to change or set sights. Fire at will at battle sight should be used, whatever the range may be. It will usually be unwise to open fire at long ranges.

573. An infantry column that encounters cavalry should deploy at once. If attacked from the head or rear of the column, and if time is pressing, it may form a succession of skirmish lines. Infantry, by deploying 50 or 100 yards in rear of an obstacle, may check cavalry and hold it under fire beyond effective pistol range.

In any situation, to try to escape the issue by running is the worst and most dangerous course the infantry can adopt.

574. In attacking dismounted cavalry, infantry should close rapidly and endeavor to prevent remounting. Infantry which adopts this course will not be seriously checked by delaying cavalry.

Every effort should be made to locate and open fire on the led horses.

INFANTRY AGAINST ARTILLERY.

575. A frontal attack against artillery has little chance of succeeding unless it can be started from cover at comparatively short range. Beyond short range, the frontal fire of infantry has little effect against the artillery personnel because of their protective shields.

Machine guns, because their cone of fire is more compact, will have greater effect, but on the other hand they will have fewer opportunities and they are limited to fire attack only.

As a rule, one's own artillery is the best weapon against hostile artillery.

576. Artillery attacked in flank by infantry can be severely damaged. Oblique or flank fire will begin to have decisive effect when delivered at effective range from a point to one side of the artillery's line of fire and distant from it by about half the range. Artillery is better protected on the side of the caisson.

577. Guns out of ammunition, but otherwise secure against infantry attack, may be immobilized by fire which will prevent their withdrawal, or by locating and driving off their limbers. Or they may be kept out of action by fire which will prevent the receipt of ammunition.

578. Artillery when limbered is helpless against infantry fire. If caught at effective range while coming into action or while limbering, artillery can be severely punished by infantry fire.

In attacking artillery that is trying to escape, the wheel horses are the best targets.

ARTILLERY SUPPORTS.

579. The purpose of the artillery support is to guard the artillery against surprise or attack.

Artillery on the march or in action is ordinarily so placed as to be amply protected by the infantry. Infantry always protects artillery in its neighborhood.

580. The detail of a support is not necessary except when the artillery is separated from the main body or occupies a position in which its flanks are not protected.

The detail of a special support will be avoided whenever possible.

581. The formation of an artillery support depends upon circumstances. On the march it may often be necessary to provide advance, flank, and rear protection. The country must be thoroughly reconnoitered by patrols within long rifle range.

582. In action, the formation and location of the support must be such as to gain and give timely information of the enemy's approach and to offer actual resistance to the enemy beyond effective rifle range of the artillery's flanks. It should not be close enough to the artillery to suffer from fire directed at the

artillery. In most cases a position somewhat to the flank and rear best fulfills these conditions.

583. The support commander is charged only with the protection of the artillery. The tactical employment of each arm rests with its commander. The two should coöperate.

INTRENCHMENTS.

See Field Fortifications, p. 1171.

MINOR WARFARE.

596. Minor warfare embraces both regular and irregular operations.

Regular operations consist of minor actions involving small bodies of trained and organized troops on both sides.

The tactics employed are in general those prescribed for the smaller units.

597. Irregular operations consist of actions against unorganized or partially organized forces, acting in independent or semi-independent bodies. Such bodies have little or only crude training and are under nominal and loose leadership and control. They assemble, roam about, and disperse at will. They endeavor to win by stealth or by force of superior numbers, employing ambuscades, sudden dashes or rushes, and hand-to-hand fighting.

Troops operating against such an enemy usually do so in small units, such as platoons, detachments, or companies, and the tactics employed must be adapted to meet the requirements of the situation. Frequently the enemy's own methods may be employed to advantage.

In general, such operations should not be undertaken hastily; every preparation should be made to strike suddenly and to inflict the maximum punishment.

598. In general, the service of information will be insufficient; adequate reconnaissance will rarely be practicable. March and bivouac formations must be such as to admit of rapid deployment and fire action in any direction.

599. In the open country, where surprise is not probable, troops may be marched in column of squads preceded, within sight, by a squad as an advance party.

600. In close country, where surprise is possible, the troops must be held in a close formation. The use of flank patrols becomes difficult. Occasionally, an advance party—never less than a squad—may be sent out. In general, however, such a party accomplishes little, since an enemy intent on surprise will permit it to pass unmolested and will fall upon the main body.

Under such conditions, especially when the road or trail is narrow, the column of twos or files is a convenient formation, the officers placing themselves in the column so as to divide it into nearly equal parts. If rushed from a flank, such a column will be in readiness to face and fire toward either or both flanks, the ranks being back to back; if rushed from the front, the head of the column may be deployed, the rest of the column closing up to support it and to protect its flanks and rear. In any event, the men should be taught to take some form of a closed back-to-back formation.

601. The column may often be broken into two or more approximately equal detachments separated on the march by distances of 50 to 100 yards. As a rule the detachments should not consist of less than 25 men each. With this arrangement of the column, it will rarely be possible for an enemy to close simultaneously with all of the detachments, one or more being left unengaged and under control to support those engaged or to inflict severe punishment upon the enemy when he is repulsed.

602. The site for camp or bivouac should be selected with special reference to economical and effective protection against surprise. Double sentinels are posted on the avenues of approach, and the troops sleep in readiness for instant action. When practicable, troops should be instructed in advance as to what they are to do in case of attack at night.

603. Night operations are frequently advisable. With the small forces employed, control is not difficult. Irregular troops rarely provide proper camp protection, and they may frequently be surprised and severely punished by a properly conducted night march and attack.

PATROLS.

604. The following paragraphs on patrols are placed here for convenience. They relate in particular to the conduct of the patrol and its leader, and apply to patrols employed in covering detachments as well as in combat reconnaissance.

605. A patrol is a detachment sent out from a command to gain information of the country or of the enemy, or to prevent the enemy from gaining information. In special cases patrols may be given missions other than these.

606. The commander must have clearly in mind the purpose for which the patrol is to be used in order that he may determine its proper strength, select its leader, and give the latter proper instructions.

In general, a patrol should be sent out for one definite purpose only.

607. The strength of a patrol varies from two or three men to a company. It should be strong enough to accomplish its purpose, and no stronger.

If the purpose is to gain information only, a small patrol is better than a large one. The former conceals itself more readily and moves less conspicuously. For observing from some point in plain view of the command or for visiting or reconnoitering between outguards two men are sufficient.

If messages are to be sent back, the patrol must be strong enough to furnish the probable number of messengers without reducing the patrol to less than two men. If hostile patrols are likely to be met and must be driven off, the patrol must be strong.

In friendly territory, a weaker patrol may be used than would be used for the corresponding purpose in hostile territory.

608. The character of the leader selected for the patrol depends upon the importance of the work in hand.

For patrolling between the groups or along the lines of an outpost, or for the simpler patrols sent out from a covering detachment, the average soldier will be a competent leader.

609. For a patrol sent out to gain information, or for a distant patrol sent out from a covering detachment, the leader must be specially selected. He must be able to cover large areas with few men; he must be able to estimate the strength of hostile forces, to report intelligently as to their dispositions, to read indications, and to judge as to the importance of the information gained. He must possess endurance, courage, and good judgment.

His instructions should be full and clear. He must be made to understand exactly what is required of him, where to go and when to return. He should be given such information of the enemy and country as may be of value to him. He should be informed as to the general location of his own forces, particularly of those with whom he may come in contact. If possible, he should be given a map of the country he is to traverse, and in many cases his route may be specified.

Besides his arms and ammunition, the patrol leader should have a compass, a

watch, a pencil, a note book, and, when practicable, field message blanks and a map of the country.

The patrol leader assembles the men detailed for the patrol. He inspects their arms and ammunition and satisfies himself that they are in suitable condition for the duty. He sees that none has any papers, maps, etc., that would be of value to the enemy if captured. He sees that their accouterments do not glisten or rattle when they move. He then repeats his instructions to the patrol and assures himself that every man understands them. He explains the signals to be used and satisfies himself that they are understood. He designates a man to take his place should he be disabled.

610. The formation and movements of the patrol must be regulated so as to render probable the escape of at least one man should the patrol encounter a superior force. The formation will depend upon the nature of the ground traversed and the cover afforded. The leader must adopt the formation and measures best suited to the accomplishment of his object.

In general, it should have the formation of a main body with advance, rear, and flank guards, though each be represented only by a single man.

611. The distances separating the members of the patrol vary according to the ground. If too close together, they see no more than one man; if too widely separated they are likely to be lost to the control of the leader.

With a patrol of four or five men the distances may vary from 25 to 50 yards; with a larger patrol they may be as great as 100 yards.

At times a column of files, separated by the distances prescribed, is a satisfactory formation.

612. The country must be carefully observed as the patrol advances. In passing over a hill, the country beyond should first be observed by one man; houses, inclosures, etc., should be approached in a similar manner or avoided entirely; woods should generally be reconnoitered in a thin skirmish line.

613. The strength and composition of hostile troops must be observed. If they can not be counted, their strength may be estimated by the length of time a column consumes in passing a given point, or by the area covered if in camp.

Patrol leaders should know, if practicable, the uniforms, guidons, etc., of the enemy, as it will assist in determining the class of troops seen when no other means for doing so are available.

Insignia from the enemy's uniforms, picked up by patrols, often convey valuable information by indicating what troops are in the vicinity.

614. Patrols avoid fighting, except in self-defense or in order to prevent the enemy's patrols from gaining valuable information, or when necessary in order to accomplish their mission. In such cases, a patrol should fight resolutely even though inferior in numbers.

615. Information gained by patrols is generally of no value unless received in time to be of use to the commander. Patrol leaders must therefore send back information of importance as soon as it is gained unless the patrol itself is to return at once.

616. If written, messages should state the place, date, hour, and minute of their dispatch. The information contained in them should be clearly and concisely expressed. They should be signed by the patrol leader.

The authorized message book should be used and the form therein adhered to.

617. If the message be an oral one, the patrol leader should require the messenger to repeat it before starting back. In general, an oral message should cover but one point. Except when there is little chance of error in transmission, messages should be written.

618. When in friendly territory and not very far from friendly troops, one messenger is sufficient unless the message is very important. In hostile terri-

tory, either two men should go together or the message should be sent in duplicate by different routes.

619. Whether the information gained is of sufficient importance to be reported at once or may await the return of the patrol is a question which must be decided in each case. In case of reasonable doubt, it is generally better to send the report promptly. If the patrol leader has received proper instructions before starting out and has the requisite ability to lead a patrol, he can generally decide such questions satisfactorily as they arise.

620. Infantry patrols are generally used for work within 2 miles of supporting troops, but cases arise where they must go to greater distances.

621. Patrols composed of mounted scouts are conducted like cavalry patrols and should be trained in accordance with the Cavalry Drill Regulations.

For distant patrolling, a mounted patrol under an officer should be used.

622. For controlling the movements of the patrol, the leader should, when necessary, make use of the arm signals prescribed in these regulations.

On account of the short distances separating them, ordinary communication between members of the patrol is best effected quietly by word of mouth.

When a member of a patrol party is sent to a distant point, communication may be effected by means of simple, prearranged signals.

When practicable, the patrol leader may communicate with the main body by means of visual signaling.

PART III.

MARCHES AND CAMPS.

MARCHES.

TRAINING AND DISCIPLINE.

623. Marching constitutes the principal occupation of troops in campaign and is one of the heaviest causes of loss. This loss may be materially reduced by proper training and by the proper conduct of the march.

624. The training of infantry should consist of systematic physical exercises to develop the general physique and of actual marching to accustom men to the fatigue of bearing arms and equipment.

Before mobilization troops should be kept in good physical condition and so practiced as to teach them thoroughly the principles of marching. At the first opportunity after mobilization the men should be hardened to cover long distances without loss.

625. With new or untrained troops, the process of hardening the men to this work must be gradual. Immediately after being mustered into service the physical exercise and marching should be begun. Ten-minute periods of vigorous setting up exercises should be given three times a day to loosen and develop the muscles. One march should be made each day with full equipment, beginning with a distance of 2 or 3 miles and increasing the distance daily as the troops become hardened, until a full day's march under full equipment may be made without exhaustion.

626. A long march should not be made with untrained troops. If a long distance must be covered in a few days, the first march should be short, the length being increased each succeeding day.

627. Special attention should be paid to the fitting of shoes and the care of feet. Shoes should not be too wide or too short. Sores and blisters on the feet should be promptly dressed during halts. At the end of the march feet should be bathed and dressed; the socks and, if practicable, the shoes should be changed.

628. The drinking of water on the march should be avoided. The thirst should be thoroughly quenched before starting on the march and after arrival in camp. On the march the use of water should, in general, be confined to gargling the mouth and throat or to an occasional small drink at most.

629. Except for urgent reasons, marches should not begin before an hour after daylight, but if the distances to be covered necessitates either breaking camp before daylight or making camp after dark, it is better to do the former.

Night marching should be avoided when possible.

630. A halt of 15 minutes should be made after the first half or three-quarters of an hour of marching; thereafter a halt of 10 minutes is made in each hour. The number and length of halts may be varied, according to the weather, the condition of the roads, and the equipment carried by the men. When the day's march is long a halt of an hour should be made at noon and the men allowed to eat.

631. The rate of march is regulated by the commander of the leading company of each regiment, or, if the battalions be separated by greater than normal distances, by the commander of the leading company of each battalion. He

should maintain a uniform rate, uninfluenced by the movements of troops, or mounted men in front of him.

The position of companies in the battalion and of battalions in the regiment is ordinarily changed daily so that each in turn leads.

632. The marching efficiency of an organization is judged by the amount of straggling and elongation and the condition of the men at the end of the march.

An officer of each company marches in its rear to prevent undue elongation and straggling.

When necessary for a man to fall out on account of sickness, he should be given a permit to do so. This is presented to the surgeon, who will admit him to the ambulance, have him wait for the trains, or follow and rejoin his company at the first halt.

633. Special attention should be paid to the rate of march. It is greater for trained than for untrained troops; for small commands than for large ones; for lightly burdened than for heavily burdened troops. It is greater during cool than during hot weather. With trained troops, in commands of a regiment or less, marching over average roads, the rate should be from $2\frac{3}{4}$ to 3 miles per hour. With larger commands carrying full equipment, the rate will be from 2 to $2\frac{1}{2}$ miles per hour.

634. The marching capacity of trained infantry in small commands is from 20 to 25 miles per day. This distance will decrease as the size of the command increases. For a complete division the distance can seldom exceed $12\frac{1}{2}$ miles per day unless the division camps in column.

635. In large commands the marching capacity of troops is greatly reduced by faulty march orders and poor march discipline.

The march order should contain such instructions as will enable the troops to take their proper places in column promptly. Delay or confusion in doing so should be investigated. On the other hand, organization commanders should be required to time their movements so that the troops will not be formed sooner than necessary.

The halts and starts of the units of a column should be regulated by the watch and be simultaneous.

Closing up during a halt, or changing gait to gain or lose distance should be prohibited.

PROTECTION OF THE MARCH.

GENERAL CONSIDERATIONS.

636. A column on the march in the vicinity of the enemy is covered by detachments called "advance guards," "rear guards," or "flank guards." The object of these covering detachments is to facilitate the advance of the main body and to protect it from surprise or observation.

They facilitate the advance of the main body by promptly driving off small bodies of the enemy who seek to harass or delay it; by removing obstacles from the line of advance, by repairing roads, bridges, etc., thus enabling the main body to advance uninterruptedly in convenient marching formations.

They protect the main body by preventing the enemy from firing into it when in close formation; by holding the enemy and enabling the main body to deploy before coming under effective fire; by preventing its size and condition from being observed by the enemy; and, in retreat, by gaining time for it to make its escape or to reorganize its forces.

637. Tactical units should not be broken in making details for covering detachments.

638. The march order of the whole command should explain the situation,

and, among other things, detail the commander and troops for each covering detachment. It should specify the route to be taken and the distance to be maintained between the main body and its covering detachments. It should order such reconnaissance as the commander specially desires to have made.

The order of the commander of a covering detachment should clearly explain the situation to subordinates, assign the troops to the subdivisions, prescribe their distances, and order such special reconnaissance as may be deemed necessary in the beginning.

An advance or flank guard commander marches well to the front and, from time to time, orders such additional reconnaissance or makes such changes in his disposition as the circumstances of the case demand.

ADVANCE GUARDS.

639. An advance guard is a detachment of the main body which precedes and covers it on the march.

640. The advance guard commander is responsible for its formation and conduct. He should bear in mind that its purpose is to facilitate and protect the march of the main body. Its own security must be effected by proper dispositions and reconnaissance, not by timid or cautious advance. It must advance at normal gait and search aggressively for information of the enemy. Its action when the enemy attempts to block it with a large force depends upon the situation and plans of the commander of the troops.

641. The strength of the advance guard varies from one-twentieth to one-third of the main body, depending upon the size of the main body and the service expected of the advance guard.

642. The formation of the advance guard must be such that the enemy will be met first by a patrol, then in turn by one or more larger detachments, each capable of holding the enemy until the next in rear has time to deploy before coming under effective fire.

643. Generally an advance guard consisting of a battalion or more is divided primarily into the reserve and the support. When the advance guard consists of less than a battalion, the reserve is generally omitted.

644. In an advance guard consisting of two battalions or less, the reserve and support, if both are used, are approximately equal; in larger advance guards, the reserve is approximately two-thirds of the whole detachment.

In an advance guard consisting of one battalion, the machine guns, if any, form part of the reserve. In an advance guard consisting of two or more battalions, the machine guns form part of the support.

645. The support sends forward an advance party. The advance party, in turn, sends a patrol, called a point, still farther to the front. Patrols are sent out to the flanks when necessary. When the distance between parts of the advance guard or the nature of the country is such as to make direct communication difficult, connecting files march between the subdivisions to keep up communication. Each element of the column sends the necessary connecting files to its front.

646. A battalion acting as an advance guard should be formed about as follows: The reserve, two companies; the support, two companies; the advance party, three to eight squads (about a half company), depending upon the strength of the companies and the reconnaissance to be made; the point, a noncommissioned officer and three or four men. Or the reserve may be omitted. In such case the advance party will consist of one company preceded by a strong point. The remaining companies form the support.

647. The distances separating the parts of an advance guard vary according to the mission of the whole force, the size of the advance guard, the proximity

and character of the enemy, the nature of the country, etc. They increase as the strength of the main body increases; they are less when operating in rolling, broken country than in open country; when in pursuit of a defeated enemy than against an aggressive foe; when operating against cavalry than when against infantry.

If there be a mounted point, it should precede the dismounted point by 250 to 600 yards. The advance party may be stronger when there is a mounted point in front. The infantry maintains its gait without reference to the mounted point, the latter regulating its march on the former.

648. To afford protection to an infantry column, the country must be observed on each side of the road as far as the terrain affords positions for effective rifle fire upon the column. If the country that it is necessary to observe be open to view from the road, reconnaissance is not necessary.

649. The advance guard is responsible for the necessary reconnaissance of the country on both sides of the line of march.

Special reconnaissance may be directed by the commander of the troops, or cavalry may be reconnoitering at considerable distances to the front and flanks, but this does not relieve the advance guard from the duty of local reconnaissance.

650. This reconnaissance is effected by patrols sent out by the leading subdivisions of the advance guard. In a large advance guard the support commander orders the necessary reconnaissance.

Patrols should be sent to the flanks when necessary to reconnoiter a specified locality and should rejoin the column and their proper subdivision as soon as practicable. When the advance party is strong enough, the patrols should be sent out from it. When depleted by the patrols sent out, the advance party should be reënforced during a halt by men sent forward from the support. If it be impracticable to send patrols from the advance party, they will be sent from the support.

Where the country is generally open to view, but localities in it might conceal an enemy of some size, reconnaissance is necessary. Where the road is exposed to fire and the view is restricted a patrol should be sent to examine the country in the direction from which danger threatens. The object may be accomplished by sending patrols to observe from prominent points. When the ground permits and the necessity exists, patrols may be sent to march abreast of the column at distances which permit them to see important features not visible from the road.

Mounted scouts or cavalry, when available, should be used for flank patrols.

651. Cases may arise where the best means of covering the head and flanks of the column will be by a line of skirmishers extending for several hundred yards to both sides of the road, and deployed at intervals of from 10 to 50 yards. A column may thus protect itself when passing through country covered with high corn or similar vegetation. In such case, the vegetation forms a natural protection from rifle fire beyond very short ranges.

652. Fixed rules for the strength, formation, or conduct of advance guards can not be given. Each case must be treated to meet conditions as they exist. That solution is generally the best which, with the fewest men and unbroken units, amply protects the column and facilitates the advance.

REAR GUARDS.

653. A rear-guard is a detachment detailed to protect the main body from attack in rear. In a retreat, it checks pursuit and enables the main body to increase the distance between it and the enemy and to re-form if disorganized.

The general formation is that of an advance guard reversed.

654. Its commander should take advantage of every favorable opportunity to delay the pursuers by obstructing the road or by taking up specially favorable positions from which to force the enemy to deploy. In this latter case care must be taken not to become so closely engaged as to render withdrawal unnecessarily difficult. The position taken should be selected with reference to ease of withdrawal and ability to bring the enemy under fire at long range.

655. In large commands artillery and cavalry form a very important part of the rear guard.

FLANK GUARDS.

656. A flank guard is a detachment detailed to cover the flank of a column marching past, or across the front of, an enemy. It may be placed in position to protect the passage, or it may be so marched as to cover the passage.

657. The object of the flank guard is to hold the enemy in check long enough to enable the main body to pass, or, like the advance guard, to enable the main body to deploy.

Like all other detachments, it should be no larger than is necessary, and should not be detailed except when its protection is required.

658. When a flank guard consists of a regiment or less, its distance from the main body should not exceed a mile and a half. Practicable communication must exist between it and the main body.

659. The flank guard is marched as a separate command; that is, with advance or rear guards or both, as circumstances demand, and with patrolling on the exposed flank.

660. At times it may be necessary for an advance-guard commander to send out large reconnoitering parties which temporarily assume the character and duties of a flank guard. Such parties should be given specific orders as to when and where they are to rejoin the column.

CAMPS.

SANITATION.

661. If the area of the available ground is sufficient and suitable, the camp of the battalion or regiment should conform to the plates published in the Field Service Regulations. Under similar favorable conditions, the brigade may camp in column or in line of columns. In the latter formation the interval between regiments should be about 50 yards. When the camp site has a restricted area, intervals and distances are reduced.

Under service conditions, camp sites that will permit the encampment of regiments and brigades as above indicated will not often be available and regularity must be sacrificed.

662. In large commands the halt-order should assign camp sites to the next smaller commands, and the commanders of the latter should locate their respective commands to the best advantage on the area assigned them.

THE SELECTION OF CAMP SITES.

663. In campaign, tactical necessity may leave little choice in the selection of camp sites, but under any conditions the requirements of sanitation should be given every consideration consistent with the tactical situation.

664. Great care should be exercised in selecting sites. In general, the following principles govern:

The site should be convenient to an abundant supply of pure water.

Good roads should lead to the camp. Interior communication throughout the camp should be easy. A camp near a main road is undesirable on account of dust and noise.

Wood, grass, forage, and supplies should be at hand or easily obtainable.

The ground should accommodate the command without crowding and without compelling the troops of one unit to pass through the camp of another.

The site should be sufficiently high and rolling to drain off storm water readily, and, if the season be hot, to catch the breeze. In cold weather it should preferably have a southern exposure, with woods to the north to break the cold winds. In warm weather an eastern exposure, with the site moderately shaded by trees, is desirable.

The site should be dry. For this reason porous soil, covered with stout turf and underlaid by a sandy or gravelly subsoil, is best. A site on clay soil, or where the ground water approaches the surface, is damp, cold, and unhealthful.

Alluvial soils, marshy ground, and ground near the base of hills, or near thick woods or dense vegetation, are undesirable as camp sites on account of dampness. Ravines and depressions are likely to be unduly warm and to have insufficient or undesirable air currents.

Proximity to marshes or stagnant water is undesirable on account of the dampness, mosquitoes, and the diseases which the latter transmit. The high banks of lakes or large streams often make desirable camp sites.

Dry beds of streams should be avoided; they are subject to sudden freshet.

665. The occupation of old camp sites is dangerous, since these are often permeated by elements of disease which persist for considerable periods. Camp sites must be changed promptly when there is evidence of soil pollution or when epidemic disease threatens, but the need for frequent changes on this account may be a reflection on the sanitary administration of the camp.

A change of camp site is often desirable in order to secure a change of surroundings and to abandon areas which have become dusty and cut up.

WATER SUPPLY.

666. Immediately on making camp a guard should be placed over the water supply. If the water be obtained from a stream, places should be designated for drawing water (1) for drinking and cooking, (2) for watering animals, (3) for bathing and washing clothing. The first named should be drawn farthest up the stream; the others, in the order named, downstream.

If the stream be small, the water supply may be increased by building a dam. Small springs may be dug out and each lined with a gabion, or a barrel or box with both ends removed, or with stones, the space between the lining and the earth being filled with puddled clay. A rim of clay should be built to keep out surface drainage. The same method may be used near swamps, streams, or lakes to increase or clarify the water supply.

667. Water that is not known to be pure should be boiled 20 minutes; it should then be cooled and aerated by being poured repeatedly from one clean container to another, or it may be purified by approved apparatus supplied for the purpose.

668. Arrangements should be made for men to draw water from the authorized receptacles by means of a spigot or other similar arrangement. The dipping of water from the receptacles, or the use of a common drinking cup, should be prohibited.

KITCHENS.

669. Camp kettles can be hung on a support consisting of a green pole lying in the crotches of two upright posts of the same character.

A narrow trench for the fire, about 1 foot deep, dug under the pole, not only protects the fire from the wind but saves fuel. A still greater economy of fuel

can be effected by digging a similar trench in the direction of the wind and slightly narrower than the diameter of the kettles. The kettles are then placed on the trench and the space between the kettles filled in with stones, clay, etc., leaving the flue running beneath the kettles. The draft can be improved by building a chimney of stones, clay, etc., at the leeward end of the flue.

Four such trenches radiating from a common central chimney will give one flue for use whatever may be the direction of the wind.

A slight slope of the flue, from the chimney down, provides for drainage and improves the draft.

670. The lack of portable ovens can be met by ovens constructed of stone and covered with earth to better retain the heat. If no stone is available, an empty barrel, with one head out, is laid on its side, covered with wet clay to a depth of 6 or more inches and then with a layer of dry earth equally thick. A flue is constructed with the clay above the closed end of the barrel, which is then burned out with a hot fire. This leaves a baked clay covering for the oven.

A recess can be similarly constructed with boards or even brushwood, supported on a horizontal pole resting on upright posts, covered and burnt out as in the case of the barrel.

When clay banks are available, an oven may be excavated therein and used at once.

To bake in such ovens, first heat them and then close flues and ends.

671. Food must be protected from flies, dust, and sun. Facilities must be provided for cleaning and scalding the mess equipment of the men. Kitchens and the ground around them must be kept scrupulously clean.

672. Solid refuse should be promptly burned, either in the kitchen fire or in an improvised crematory.

673. In temporary camps, if the soil is porous, liquid refuse from the kitchens may be strained through gunnysacking into seepage pits dug near the kitchen. Flies must not have access to these pits. Boards or poles, covered with brush or grass and a layer of earth, may be used for this purpose. The strainers should also be protected from flies. Pits of this kind, dug in clayey soil, will not operate successfully. All pits should be filled with earth before marching.

DISPOSAL OF EXCRETA.

674. Immediately on arriving in camp sinks should be dug. This is a matter of fundamental sanitary importance, since the most serious epidemics of camp diseases are spread from human excreta.

One sink is usually provided for each company and one for the officers of each battalion. Those for the men are invariably located on the side of camp opposite the kitchens. All sinks should be so placed that they can not pollute the water supply or camp site as a result of drainage or overflow. To insure this, their location and their distance from camp may be varied.

When camp is made for a single night, shallow trenches, 12 inches deep and 15 to 18 inches wide, which the men may straddle, will suffice.

In more permanent camps, the trenches should be about 2 feet wide, 6 feet deep, and 15 feet long. They should be provided with seats and back rests made of poles, and should be screened by brush or old tent flys.

675. In cold weather the contents of sinks should be covered once daily with quicklime, ashes, or dry earth. When filled to within 2 feet of the top, sinks should be discontinued and filled in.

Open pits are dangerous during the fly season. However, the danger may be

greatly reduced by covering the excreta with earth or by a thorough daily burning of the entire area of the trench. Combustible sweepings or straw, saturated with oil, may be used for this purpose.

In fly season, trenches may be closed with seats covered down to the ground with muslin and supplied with self-closing lids. Urinal troughs, made of muslin and coated with oil or paint, should discharge into the trenches.

676. In permanent camps special sanitary facilities for the disposal of excreta will ordinarily be provided.

If necessary, urinal tubs may be placed in the company streets at night and removed at reveille. Their location should be plainly marked and thoroughly and frequently disinfected.

677. When troops bivouac for the night the necessity for extensive sanitary precautions is not great; however, shallow sink trenches should be dug to prevent general pollution of the vicinity. If the cooking be collective, shallow kitchen sinks should be dug. If the cooking be individual, the men should be required to build their fires on the leeward flank of the camp or bivouac.

Before marching, all trenches should be filled in.

PROTECTION OF CAMP OR BIVOUAC.

GENERAL CONSIDERATIONS.

678. The outpost is a covering detachment detailed to secure the camp or bivouac against surprise and to prevent an attack upon it before the troops can prepare to resist.

679. The size and disposition of the outpost will depend upon many circumstances, such as the size of the whole command, the proximity of the enemy and the situation with respect to him, the nature of the terrain, etc.

A suitable strength may vary from a very small fraction to one-third of the whole force. For a single company in bivouac a few sentinels and patrols will suffice; for a large command a more elaborate outpost system must be provided. It should be no stronger than is consistent with reasonable security.

The most economical protection is furnished by keeping in close contact with the enemy by means of outpost patrols, in conjunction with resisting detachments on the avenues of approach.

The outpost should be composed of complete organizations.

680. In a brigade or smaller force on the march toward the enemy, the outpost is generally formed from the advance guard, and is relieved the following day when the new advance guard crosses the line of outguards. In a retreat, the detail for outpost duty is generally made from the main body. The new outpost becomes the rear guard the following day.

681. When, as in large forces, an advance and rear guard performs such duty for several days, the outpost, during this period, is furnished by the advance or rear guards.

When the command is small and stationary for several days, the outpost is relieved daily. In large commands, the outpost will, as a rule, be relieved at intervals of several days.

682. The positions held by the subdivisions of the outpost should generally be prepared for defense, but conditions may render this unnecessary.

Troops on outpost keep concealed as much as is consistent with the proper performance of their duties; especially do they avoid appearing on the sky line.

Outpost troops do not render honors.

DISTRIBUTION OF OUTPOST TROOPS.

683. The outpost will generally be divided into three parts. These, in order from the main body, are the reserve, the line of supports, and the line of outguards.

The distances separating these parts, and their distance from the main body, will depend upon the object sought, the nature of the terrain, and the size of the command. There can be no uniformity in the distance between supports and reserve, nor between outguards and supports, even in the same outpost. The avenues of approach and the important features of the terrain will largely control their exact positions.

The outpost of a small force should ordinarily hold the enemy beyond effective rifle range of the main body until the latter can deploy. For the same purpose the outpost of a large force should hold the enemy beyond artillery range.

684. The reserve constitutes the main body of the outpost and is held at some central point from which it can readily support the troops in front or hold a rallying position on which they may retire. The reserve may be omitted when the outpost consists of less than two companies.

The reserve may comprise one-fourth to two-thirds of the strength of the outpost.

685. The supports constitute a line of supporting and resisting detachments, varying in size from a half company to a battalion. They furnish the line of outguards.

The supports are numbered consecutively from right to left. They are placed at the more important points on the outpost line, usually in the line on which resistance is to be made in case of attack.

686. As a general rule, roads exercise the greatest influence on the location of supports, and a support will generally be placed on or near a road. The section which it is to cover should be clearly defined by means of tangible lines on the ground and should be such that the support is centrally located therein.

687. The outguards constitute the line of small detachments farthest to the front and nearest to the enemy. For convenience they are classified as pickets, sentry squads, and cossack posts. They are numbered consecutively from right to left in each support.

688. A picket is a group consisting of two or more squads, ordinarily not exceeding half a company, posted in the line of outguards to cover a given sector. It furnishes patrols and one or more sentinels, double sentinels, sentry squads, or cossack posts for observation.

Pickets are placed at the more important points in the line of outguards, such as road forks. The strength of each depends upon the number of small groups required to observe properly its sector.

689. A sentry squad is a squad posted in observation at an indicated point. It posts a double sentinel in observation, the remaining men resting near by and furnishing the reliefs of sentinels. In some cases it may be required to furnish a patrol.

690. A cossack post consists of four men. It is an observation group similar to a sentry squad, but employs a single sentinel.

691. At night, it will sometimes be advisable to place some of the outguards or their sentinels in a position different from that which they occupy in the daytime. In such case the ground should be carefully studied before dark and the change made at dusk. However, a change in the position of the outguard will be exceptional.

692. Sentinels are generally used singly in daytime, but at night double sentinels will be required in most cases. Sentinels furnished by cossack posts or sentry squads are kept near their group. Those furnished by pickets may be as far as 100 yards away.

Every sentinel should be able to communicate readily with the body to which he belongs.

693. Sentinel posts are numbered consecutively from right to left in each outguard. Sentry squads and cossack posts furnished by pickets are counted as sentinel posts.

694. Instead of using outguards along the entire front of observation, part of this front may be covered by patrols only. These should be used to cover such sections of the front as can be crossed by the enemy only with difficulty and over which he is not likely to attempt a crossing after dark.

In daylight much of the local patrolling may be dispensed with if the country can be seen from the posts of the sentinels. However, patrols should frequently be pushed well to the front unless the ground in that direction is exceptionally open.

695. Patrols or sentinels must be the first troops which the enemy meets, and each body in rear must have time to prepare for the blow. These bodies cause as much delay as possible without sacrificing themselves, and gradually retire to the line where the outpost is to make its resistance.

696. Patrols must be used to keep up connection between the parts of the outpost except when, during daylight, certain fractions or groups are mutually visible. After dark this connection must be maintained throughout the outpost except where the larger subdivisions are provided with wire communication.

697. In addition to ordinary outguards, the outpost commander may detail from the reserve one or more detached posts to cover roads or areas not in the general line assigned to the supports.

In like manner the commander of the whole force may order detached posts to be sent from the main body to cover important roads or localities not included in the outpost line.

The number and strength of detached posts are reduced to the absolute needs of the situation.

ESTABLISHING THE OUTPOST.

698. The outpost is posted as quickly as possible so that the troops can the sooner obtain rest. Until the leading outpost troops are able to assume their duties, temporary protection, known as the march outpost, is furnished by the nearest available troops.

699. The halt order of the commander, besides giving the necessary information and assigning camp sites to the parts of the command, details the troops to constitute the outpost, assigns a commander therefor, designates the general line to be occupied, and, when practicable, points out the position to be held in case of attack.

700. The outpost commander, upon receipt of this order, should issue the outpost order with the least practicable delay. In large commands it may often be necessary to give the order from the map, but usually the outpost commander will have to make some preliminary reconnaissance, unless he has an accurate and detailed map.

The order gives such available information of the situation as is necessary to the complete and proper guidance of subordinates; designates the troops to constitute the supports; assigns their location and the sector each is to cover; provides for the necessary detached posts; indicates any special reconnaissance

that is to be made; orders the location and disposition of the reserve; disposes of the train if same is ordered to join the outpost; and informs subordinates where information will be sent.

701. Generally it is preferable for the outpost commander to give verbal orders to his support commanders from some locality which overlooks the terrain. The time and locality should be so selected that the support commanders may join their commands and conduct them to their positions without causing unnecessary delay to their troops. The reserve commander should, if possible, receive his orders at the same time as the support commanders. Subordinates to whom he gives orders separately should be informed of the location of other parts of the outpost.

In large outposts, written orders are frequently most convenient.

After issuing the initial orders, the outpost commander inspects the outpost, orders the necessary changes or additions, and sends his superior a report of his dispositions.

702. The reserve is marched to its post by its commander, who then sends out such detachments as have been ordered and places the rest in camp or bivouac, over which at least one sentinel should be posted. Connection must be maintained with the main body, the supports and nearby detached posts.

703. The supports march to their posts, using the necessary covering detachments when in advance of the march outpost. A support commander's order should fully explain the situation to subordinates, or to the entire command, if it be small. It should detail the troops for the different outguards and, when necessary, define the sector each is to cover. It should provide the necessary sentinels at the post of the support, the patrols to be sent therefrom, and should arrange for the necessary intrenching. Connection should be maintained with adjoining supports and with the outguards furnished by the support.

704. In posting his command the support commander must seek to cover his sector in such manner that the enemy can not reach, in dangerous numbers and unobserved, the position of the support or pass by it within the sector intrusted to the support. On the other hand, he must economize men on observation and patrol duty, for these duties are unusually fatiguing. He must practice the greatest economy of men consistent with the requirements of practical security.

705. As soon as the posting of the support is completed, its commander carefully inspects the dispositions and corrects defects, if any, and reports the dispositions of his support, including the patrolling ordered, to the outpost commander. This report is preferably made by means of a sketch.

706. Each outguard is marched by its commander to its assigned station, and, especially in the case of a picket, is covered by the necessary patrolling to prevent surprise.

Having reached the position, the commander explains the situation to his men and establishes reliefs for each sentinel, and, if possible, for each patrol to be furnished. Besides these sentinels and patrols, a picket must have a sentinel at its post.

The commander then posts the sentinels and points out to them the principal features, such as towns, roads, and streams, and gives their names. He gives the direction and location of the enemy, if known, and of adjoining parts of the outpost.

He gives to patrols the same information and the necessary orders as to their routes and the frequency with which the same shall be covered. Each patrol should go over its route once before dark.

707. Every picket should maintain connection by patrols with outguards on its right and left. Each commander will take precaution to conceal his outguard and will generally strengthen his position by intrenching.

PART IV.

CEREMONIES AND INSPECTIONS.

CEREMONIES.

GENERAL RULES FOR CEREMONIES.

708. The order in which the troops of the various arms are arranged for ceremonies is prescribed by Army Regulations.

When forming for ceremonies the companies of the battalion and the battalions of the regiment are posted from right to left in line and from head to rear in column, in the order of rank of their respective commanders present in the formation, the senior on the right or at the head.

The commander faces the command; subordinate commanders face to the front.

709. At the command present arms, given by the colonel, the lieutenant colonel, and the colonel's staff salute; the major's staff salute at the major's command. Each staff returns to the carry or order when the command order arms is given by its chief.

710. At the assembly for a ceremony companies are formed on their own parades and informally inspected.

At adjutant's call, except for ceremonies involving a single battalion, each battalion is formed on its own parade, reports are received, and the battalion presented to the major. At the second sounding of adjutant's call the regiment is formed.

REVIEWS.

GENERAL RULES.

711. The adjutant posts men or otherwise marks the points where the column changes direction in such manner that its flank in passing will be about 12 paces from the reviewing officer.

The post of the reviewing officer, usually opposite the center of the line, is indicated by a marker.

Officers of the same or higher grade, and distinguished personages invited to accompany the reviewing officer, place themselves on his left; their staffs and orderlies place themselves respectively on the left of the staff and orderlies of the reviewing officer; all others who accompany the reviewing officer place themselves on the left of his staff, their orderlies in rear. A staff officer is designated to escort distinguished personages and to indicate to them their proper positions.

712. While riding around the troops, the reviewing officer may direct his staff, flag and orderlies to remain at the post of the reviewing officer, or that only his personal staff and flag shall accompany him; in either case the commanding officer alone accompanies the reviewing officer. If the reviewing officer is accompanied by his entire staff, the staff officers of the commander place themselves on the right of the staff of the reviewing officer.

The reviewing officer and others at the reviewing stand salute the color as it passes; when passing around the troops, the reviewing officer and those accompanying him salute the color when passing in front of it.

The reviewing officer returns the salute of the commanding officer of the troops only. Those who accompany the reviewing officer do not salute.

713. In passing in review, each staff salutes with its commander.

714. After saluting the reviewing officer, the commanding officer of the troops turns out of the column, takes post on the right of the reviewing officer, and returns saber; the members of his staff accompanying him take post on the right of the reviewing officer's staff and return saber. When the rear element of his command has passed, without changing his position, the commanding officer of the troops salutes the reviewing officer; he and the members of his staff accompanying him then draw saber and rejoin his command. The commanding officer of the troops and the members of his staff are the only ones who turn out of the column.

715. If the person reviewing the command is not mounted, the commanding officer and his staff on turning out of the column after passing the reviewing officer dismount preparatory to taking post. In such case, the salute of the commanding officer, prior to rejoining his command, is made with the hand before remounting.

716. When the rank of the reviewing officer entitles him to the honor, each regimental color salutes at the command present arms, given or repeated by the major of the battalion with which it is posted; and again in passing in review.

717. The band of an organization plays while the reviewing officer is passing in front of and in rear of the organization.

Each band, immediately after passing the reviewing officer, turns out of the column, takes post in front of and facing him, continues to play until its regiment has passed, then ceases playing and follows in rear of its regiment; the band of the following regiment commences to play as soon as the preceding band has ceased.

While marching in review but one band in each brigade plays at a time, and but one band at a time when within 100 paces of the reviewing officer.

718. If the rank of the reviewing officer entitles him to the honor, the band plays the prescribed national air or the field music sounds to the color, march, flourishes, or ruffles when arms are presented. When passing in review at the moment the regimental color salutes, the musicians halted in front of the reviewing officer, sound to the color, march, flourishes, or ruffles.

719. The formation for review may be modified to suit the ground, and the present arms and the ride around the line by the reviewing officer may be dispensed with.

720. If the post of the reviewing officer is on the left of the column, the troops march in review with the guide left; the commanding officer and his staff turn out of the column to the left, taking post as prescribed above, but to the left of the reviewing officer; in saluting, the captains give the command: 1. Eyes, 2. LEFT.

721. Except in the review of a single battalion, the troops pass in review in quick time only.

722. In reviews of brigades or larger commands, each battalion, after the rear has passed the reviewing officer 50 paces, takes the double time for 100 yards in order not to interfere with the march of the column in rear; if necessary, it then turns out of the column and returns to camp by the most practicable route; the leading battalion of each regiment is followed by the other units of the regiment.

723. In a brigade or larger review a regimental commander may cause his regiment to stand at ease, rest, or stack arms and fall out and resume attention, so as not to interfere with the ceremony.

724. When an organization is to be reviewed before an inspector junior in rank to the commanding officer, the commanding officer receives the review and is accompanied by the inspector, who takes post on his left.

BATTALION REVIEW.

725. The battalion having been formed in line, the major faces to the front; the reviewing officer moves a few paces toward the major and halts; the major turns about and commands: 1. **Present**, 2. **ARMS**, and again turns about and salutes.

The reviewing officer returns the salute; the major turns about, brings the battalion to order arms, and again turns to the front.

The reviewing officer approaches to about 6 paces from the major, the latter salutes, takes post on his right, and accompanies him around the battalion. The band plays. The reviewing officer proceeds to the right of the band, passes in front of the captains to the left of the line and returns to the right, passing in rear of the file closers and the band.

On arriving again at the right of the line, the major salutes, halts, and when the reviewing officer and staff have passed moves directly to his post in front of the battalion, faces it, and commands: 1. **Pass in review**, 2. **Squads right**, 3. **MARCH**.

At the first command the band changes direction if necessary, and halts.

At the third command, given when the band has changed direction, the battalion moves off, the band playing; without command from the major the column changes direction at the points indicated, and column of companies at full distance is formed successively to the left at the second change of direction; the major takes his post 30 paces in front of the band immediately after the second change; the band having passed the reviewing officer, turns to the left out of the column, takes post in front of and facing the reviewing officer, and remains there until the review terminates.

The major and staff salute, turn the head as in eyes right, and look toward the reviewing officer when the major is 6 paces from him; they return to the carry and turn the head and eyes to the front when the major has passed 6 paces beyond him.

Without facing about, each captain or special unit commander, except the drum major, commands: 1. **Eyes**, in time to add 2. **RIGHT**, when at 6 paces from the reviewing officer, and commands **FRONT** when at 6 paces beyond him. At the command eyes the company officers armed with the saber execute the first motion of present saber; at the command right all turn head and eyes to the right, the company officers complete present saber and the noncommissioned officers armed with the saber execute the first motion of present saber; at the command front all turn head and eyes to the front, and officers and noncommissioned officers armed with the saber resume the carry saber; without arms in hand the first motion of the hand salute is made at the command right and the second motion not made until the command front.

Noncommissioned staff officers, noncommissioned officers in command of subdivisions, and the drum major salute, turn the head and eyes, return to the front, resume the carry or drop the hand, at the points prescribed for the major. Officers and dismounted noncommissioned officers in command of subdivisions with arms in hand render the rifle or saber salute. Guides charged with the step, trace, and direction do not execute eyes right.

If the reviewing officer is entitled to a salute from the color the regimental color salutes when at 6 paces from him, and is raised when at 6 paces beyond him.

The major, having saluted, takes post on the right of the reviewing officer, returns saber and remains there until the rear of the battalion has passed, then salutes, draws saber, and rejoins his battalion. The band ceases to play when the column has completed its second change of direction after passing the reviewing officer.

726. When the battalion arises at its original position in column, the major commands: 1. **Double time**, 2. **MARCH**.

The band plays in double time.

The battalion passes in review as before, except that in double time the command eyes right is omitted and there is no saluting except by the major when he leaves the reviewing officer.

The review terminates when the rear company has passed the reviewing officer; the band then ceases to play, and, unless otherwise directed by the major, returns to the position it occupied before marching in review, or is dismissed; the major rejoins the battalion and brings it to quick time. The battalion then executes such movements as the reviewing officer may have directed, or is marched to its parade ground and dismissed.

Marching past in double time may, in the discretion of the reviewing officer, be omitted; the review terminates when the major rejoins his battalion.

727. At battalion review the major and his staff may be dismounted in the discretion of the commanding officer.

REGIMENTAL REVIEW.

728. The regiment is formed in line or in line of masses.

In line the review proceeds as in the battalion, substituting "colonel" for "major" and "regiment" for "battalion."

To march the regiment in review, the colonel commands: **PASS IN REVIEW**. The band changes direction, if necessary, and halts. Each major then commands: 1. **Squads right**, 2. **MARCH**.

The band marches at the command of the major of the leading battalion.

At the second change of direction each major takes post 20 paces in front of his leading company.

The rear of the column having passed the reviewing officer, the battalions, unless otherwise directed, are marched to their parades and dismissed.

In line of masses, when the reviewing officer has passed around the regiment, the colonel commands: **PASS IN REVIEW**. The band changes direction, if necessary, and halts. The major of the right battalion then commands: 1. **Column of squads, first company, squads right**, 2. **MARCH**. At the command march the band and the leading company of the right battalion move off. Each company and battalion in rear moves off in time to follow at its proper distance.

729. The review of a small body of troops composed of different arms is conducted on the principles laid down for the regiment. The troops of each arm are formed and marched according to the drill regulations for that arm.

REVIEW OF LARGE COMMANDS.

730. A command consisting of one regiment, or less, and detachments of other arms is formed for review as ordered by the commanding officer. The principles of regimental review will be observed whenever practicable.

731. In the review of a brigade or larger command the present arms and the right around the line by the reviewing officer are omitted. The troops form and march in the order prescribed by the commanding officer.

PARADES.

GENERAL RULES.

732. If dismounted, the officer receiving the parade, and his staff, stand at parade rest, with arms folded, while the band is sounding off; they resume attention with the adjutant. If mounted, they remain at attention.

733. At the command report, given by a battalion adjutant, the captains in succession from the right salute and report: A (or other) company, present or accounted for; or, A (or other) company, (so many) officers or enlisted men absent, and resume the order saber; at the same command given by the regimental adjutant, the majors similarly report their battalions.

BATTALION PARADE.

734. At adjutant's call the battalion is formed in line but not presented. Lieutenants take their posts in front of the center of their respective platoons at the captain's command for dressing his company on the line. The major takes post at a convenient distance in front of the center and facing the battalion.

The adjutant, from his post in front of the center of the battalion, after commanding: 1. **Guides**, 2. **POSTS**, adds: 1. **Parade**, 2. **REST**; the battalion executes parade rest. The adjutant directs the band: **SOUND OFF**.

The band, playing in quick time, passes in front of the line of officers to the left of the line and back to its post on the right, when it ceases playing. At evening parade, when the band ceases playing, retreat is sounded by the field music and, following the last note and while the flag is being lowered, the band plays the Star Spangled Banner.

Just before the last note of retreat, the adjutant comes to attention and, as the last note ends, commands: 1. **Battalion**, 2. **ATTENTION**. When the band ceases playing he commands: 1. **Present**, 2. **ARMS**. He then turns about and reports: Sir, the parade is formed. The major directs the adjutant: Take your post, Sir. The adjutant moves at a trot (if dismounted, in quick time), passes by the major's right, and takes his post.

The major draws saber and commands: 1. **Order**, 2. **ARMS**, and adds such exercises in the manual of arms as he may desire. Officers, noncommissioned officers commanding companies or armed with the saber, and the color guard, having once executed order arms, remain in that position during the exercises in the manual.

The major then directs the adjutant: Receive the reports, Sir. The adjutant, passing by the major's right, advances at a trot (if dismounted, in quick time) toward the center of the line, halts midway between it and the major, and commands: **REPORT**.

The reports received, the adjutant turns about, and reports: Sir, all are present or accounted for; or Sir, (so many) officers or enlisted men are absent, including in the list of absentees those from the band and field music reported to him by the drum major prior to the parade.

The major directs: Publish the orders, Sir.

The adjutant turns about and commands: **Attention to orders**; he then reads the orders, and commands: 1. **Officers**, 2. **CENTER**, 3. **MARCH**.

At the command center, the company officers carry saber and face to the center. At the command march, they close to the center and face to the front; the adjutant turns about and takes his post.

The officers having closed and faced to the front, the senior commands: 1. **Forward**, 2. **MARCH**. The officers advance, the band playing; the left officer of the center or right center company is the guide, and marches on the major;

the officers are halted at 6 paces from the major by the senior who commands: 1. **Officers**, 2. **HALT**. They halt and salute, returning to the carry saber with the major. The major then gives such instructions as he deems necessary, and commands: 1. **Officers**, 2. **POSTS**, 3. **MARCH**.

At the command posts, company officers face about.

At the command march, they step off with guide as before, and the senior commands: 1. **Officers**, 2. **HALT**, so as to halt 3 paces from the line; he then adds: 1. **POSTS**, 2. **MARCH**.

At the command posts, officers face outward and, at the command march, step off in succession at 4 paces distance, resume their posts and order saber; the lieutenants march directly to their posts in rear of their companies.

The music ceases when all officers have resumed their posts.

The major then commands: 1. **Pass in review**, 2. **Squads right**, 3. **MARCH**, and returns saber.

The battalion marches according to the principles of review; when the last company has passed, the ceremony is concluded.

The band continues to play while the companies are in march upon the parade ground. Companies are formed in column of squads, without halting, and are marched to their respective parades by their captains.

When the company officers have saluted the major, he may direct them to form line with the staff, in which case they individually move to the front, passing to the right and left of the major and staff, halt on the line established by the staff, face about, and stand at attention. The music ceases when the officers join the staff. The major causes the companies to pass in review under the command of their first sergeants by the same commands as before. The company officers return saber with the major and remain at attention.

REGIMENTAL PARADE.

735. The regiment is formed in line or in line of masses; the formation having proceeded up to, but not including the present, the parade proceeds as described for the battalion, with the following exceptions:

"Colonel" is substituted for "major," "regiment" for "battalion," in the description, and "battalions" for "battalion" in the commands.

Lieutenants remain in the line of file closers.

After publishing the orders, the adjutant commands: 1. **Officers**, center, 2. **MARCH**.

The company commanders remain at their posts with their companies.

The field and staff officers form one line, closing on the center. The senior commands: 1. **Forward**, 2. **MARCH**.

The second major is the guide and marches on the colonel.

After being dismissed by the colonel, each major moves individually to the front, turns outward, and followed by his staff resumes his post by the most direct line. The colonel directs the lieutenant colonel to march the regiment in review; the latter moves to a point midway between the colonel and the regiment and marches the regiment in review as prescribed. If the lieutenant colonel is not present the colonel gives the necessary commands for marching the regiment in review.

ESCORTS.

ESCORT OF THE COLOR.

736. The regiment being in line, the colonel details a company, other than the color company, to receive and escort the national color to its place in line. During the ceremony the regimental color remains with the color guard at its post with the regiment.

The band moves straight to its front until clear of the line of field officers, changes direction to the right, and is halted; the designated company forms column of platoons in rear of the band, the color bearer or bearers between the platoons.

The escort then marches without music to the colonel's office or quarters and is formed in line facing the entrance, the band on the right, the color bearer in the line of file closers.

The color bearer, preceded by the first lieutenant and followed by a sergeant of the escort, then goes to obtain the color.

When the color bearer comes out, followed by the lieutenant and sergeant, he halts before the entrance, facing the escort; the lieutenant places himself on the right, the sergeant on the left of the color bearer; the escort presents arms, and the field music sounds to the color; the first lieutenant and sergeant salute.

Arms are brought to the order; the lieutenant and sergeant return to their posts; the company is formed in column of platoons, the band taking post in front of the column; the color bearer places himself between the platoons; the escort marches in quick time, with guide left, back to the regiment, the band playing; the march is so conducted that when the escort arrives at 50 paces in front of the right of the regiment, the direction of the march shall be parallel to its front; when the color arrives opposite its place in line, the escort is formed in line to the left; the color bearer, passing between the platoons, advances and halts 12 paces in front of the colonel.

The color bearer having halted, the colonel, who has taken post 30 paces in front of the center of his regiment, faces about, commands: 1. **Present**, 2. **ARMS**, resumes his front, and salutes; the field music sounds to the color; and the regimental color bearer executes the color salute at the command present arms.

The colonel then faces about, brings the regiment to the order, at which the color bearer takes his post with the color company.

The escort presents arms and comes to the order with the regiment, at the command of the colonel, after which the captain forms it again in column of platoons, and, preceded by the band, marches it to its place in line, passing around the left flank of the regiment.

The band plays until the escort passes the left of the line, when it ceases playing and returns to its post on the right, passing in rear of the regiment.

The regiment may be brought to a rest when the escort passes the left of the line.

737. Escort of the color is executed by a battalion according to the same principles.

ESCORTS OF HONOR.

738. Escorts of honor are detailed for the purpose of receiving and escorting personages of high rank, civil or military. The troops for this purpose are selected for their soldierly appearance and superior discipline.

The escort forms in line, opposite the place where the personage presents himself, the band on the flank of the escort toward which it will march. On the appearance of the personage, he is received with the honors due to his rank. The escort is formed into column of companies, platoons or squads, and takes up the march, the personage and his staff or retinue taking positions in rear of the column; when he leaves the escort, line is formed and the same honors are paid as before.

When the position of the escort is at a considerable distance from the point where the personage is to be received, as for instance, where a courtyard or

wharf intervenes, a double line of sentinels is posted from that point to the escort, facing inward; the sentinels successively salute as he passes and are then relieved and join the escort.

An officer is appointed to attend him and bear such communication as he may have to make to the commander of the escort.

FUNERAL ESCORT.

739. The composition and strength of the escort are prescribed in Army Regulations.

The escort is formed opposite the quarters of the deceased; the band on that flank of the escort toward which it is to march.

Upon the appearance of the coffin, the commander commands: 1. **Present**, 2. **ARMS**, and the band plays an appropriate air; arms are then brought to the order.

The escort is next formed into column of companies, platoons, or squads. If the escort be small, it may be marched in line. The procession is formed in the following order: 1. Music, 2. Escort, 3. Clergy, 4. Coffin and pallbearers, 5. Mourners, 6. Members of the former command of the deceased, 7. Other officers and enlisted men, 8. Distinguished persons, 9. Delegations, 10. Societies, 11. Civilians. Officers and enlisted men (Nos. 6 and 7), with side arms, are in the order of rank, seniors in front.

The procession being formed, the commander of the escort puts it in march.

The escort marches slowly to solemn music; the column having arrived opposite the grave, line is formed facing it.

The coffin is then carried along the front of the escort to the grave; arms are presented, the music plays an appropriate air; the coffin having been placed over the grave, the music ceases and arms are brought to the order.

The commander next commands: 1. **Parade**, 2. **REST**. The escort executes parade rest, officers and men inclining the head.

When the funeral services are completed and the coffin lowered into the grave the commander causes the escort to resume attention and fire three rounds of blank cartridges, the muzzles of the pieces being elevated. When the escort is greater than a battalion, one battalion is designated to fire the volleys.

A musician then sounds taps.

The escort is then formed into column, marched in quick time to the point where it was assembled, and dismissed.

The band does not play until it has left the inclosure.

When the distance to the place of interment is considerable, the escort, after having left the camp or garrison, may march at ease in quick time until it approaches the burial ground, when it is brought to attention. The music does not play while marching at ease.

In marching at attention, the field music may alternate with the band in playing.

740. When arms are presented at the funeral of a person entitled to any of the following honors, the band plays the prescribed national air, or the field music sounds to the color, march, flourishes, or ruffles, according to the rank of the deceased, after which the band plays an appropriate air. The commander of the escort, in forming column, gives the appropriate commands for the different arms.

741. At the funeral of a mounted officer or enlisted man, his horse, in mourning caparison, follows the hearse.

742. Should the entrance of the cemetery prevent the hearse accompanying the escort till the latter halts at the grave, the column is halted at the entrance long enough to take the coffin from the hearse, when the column is again put in march. The cavalry and artillery, when unable to enter the inclosure, turn out of the column, face the column, and salute the remains as they pass.

743. When necessary to escort the remains from the quarters of the deceased to the church before the funeral service, arms are presented upon receiving the remains at the quarters and also as they are borne into the church.

744. The commander of the escort, previous to the funeral, gives the clergyman and pallbearers all needful directions.

INSPECTIONS.

COMPANY INSPECTION.

745. Being in line at a halt: 1. **Open ranks**, 2. **MARCH**.

At the command march the front rank executes right dress; the rear rank and the file closers march backward 4 steps, halt, and execute right dress; the lieutenants pass around their respective flanks and take post, facing to the front, 3 paces in front of the center of their respective platoons. The captain aligns the front rank, rear rank, and file closers, takes post 3 paces in front of the right guide, facing to the left, and commands: 1. **FRONT**, 2. **PREPARE FOR INSPECTION**.

At the second command the lieutenants carry saber; the captain returns saber and inspects them, after which they face about, order saber, and stand at ease; upon the completion of the inspection they carry saber, face about, and order saber. The captain may direct the lieutenants to accompany or assist him, in which case they return saber and, at the close of the inspection, resume their posts in front of the company, draw and carry saber.

Having inspected the lieutenants, the captain proceeds to the right of the company. Each man, as the captain approaches him, executes inspection arms.

The captain takes the piece, grasping it with his right hand just above the rear sight, the man dropping his hands. The captain inspects the piece, and, with the hand and piece in the same position as in receiving it, hands it back to the man, who takes it with the left hand at the balance and executes order arms.

As the captain returns the piece the next man executes inspection arms, and so on through the company.

Should the piece be inspected without handling, each man executes order arms as soon as the captain passes to the next man.

The inspection is from right to left in front, and from left to right in rear, of each rank and of the line of file closers.

When approached by the captain the first sergeant executes inspection saber. Enlisted men armed with the pistol execute inspection pistol by drawing the pistol from the holster and holding it diagonally across the body, barrel up, and 6 inches in front of the neck, muzzle pointing up and to the left. The pistol is returned to the holster as soon as the captain passes.

Upon completion of the inspection the captain takes post facing to the left in front of the right guide and on line with the lieutenants and commands: 1. **Close ranks**, 2. **MARCH**.

At the command march the lieutenants resume their posts in line; the rear rank closes to 40 inches, each man covering his file leader; the file closers close to 2 paces from the rear rank.

746. If the company is dismissed, rifles are put away. In quarters, head-

dress and accouterments are removed and the men stand near their respective bunks; in camp they stand covered, but without accouterments, in front of their tents.

If the personal field equipment has not been inspected in ranks and its inspection in quarters or camp is ordered, each man will arrange the prescribed articles on his bunk, if in quarters or permanent camp, or in front of his half of the tent, if in shelter tent camp, in the same relative order as directed in paragraph 747.

The captain, accompanied by the lieutenants, then inspects the quarters or camp. The first sergeant precedes the captain and calls the men to attention on entering each squad room or on approaching the tents; the men stand at attention but do not salute.

747. (Edition approved August 19, 1911, and edition corrected to November, 1913.) If the inspection is to include an examination of the equipment while in ranks, the captain, after closing ranks, causes the company to stack arms, to march backward until 4 paces in rear of the stacks and to take intervals. He then commands: 1. **UNSLING EQUIPMENT**, 2. **OPEN PACKS**.

At the first command, each man unslings his equipment and places it on the ground at his feet, haversack to the front end of the pack 1 foot in front of toes.

At the second command, pack carriers are unstrapped, packs removed and unrolled, the longer edge of the pack along the lower edge of the cartridge belt. Each man exposes shelter tent pins, removes meat can, knife, fork, and spoon from the meat-can pouch, and places them on the right of the haversack, knife, fork, and spoon in the open meat can; removes the canteen and cup from the cover and places them on the left side of the haversack; unstraps and spreads out haversack so as to expose its contents; folds up the carrier to uncover the cartridge pockets; opens same; unrolls toilet articles and places them on the outer flap of the haversack; places underwear carried in pack on the left half of the open pack, with round fold parallel with front edge of pack; opens first-aid pouch and exposes contents to view. Special articles carried by individual men, such as flag kit, field glasses, compass, steel tape, notebook, etc., will be arranged on the right half of the open pack. Each man then resumes the attention. Plate VI shows the relative position of all articles except underwear and special articles.

The captain then passes along the ranks and file closers as before, inspects the equipment, returns to the right, and commands: **CLOSE PACKS**.

Each man rolls up his toilet articles and underwear, straps up his haversack and its contents, replaces the meat can, knife, fork, and spoon, and the canteen and cup; closes cartridge pockets and first-aid pouch; restores special articles to their proper receptacles; rolls up and replaces pack in carrier; and, leaving the equipment in its position on the ground, resumes the attention.

All equipments being packed, the captain commands: **SLING EQUIPMENT**.

The equipments are slung and belts fastened.

The captain then causes the company to assemble and take arms. The inspection is completed as already explained.

When the rations are not carried in the haversack the inspection proceeds as described, except that the toilet articles and bacon and condiment cans are displayed on the unrolled packs.

The captain then passes along the ranks and file closers as before, inspects the equipments, returns to the right, and commands: **CLOSE PACKS**.

Each man rolls up his toilet articles, straps up his haversack and its contents, replaces the meat can, knife, fork, and spoon, and the canteen and cup;



PLATE VI.

closes cartridge pockets and first-aid pouch; rolls up and replaces pack in carrier, and, leaving the equipment in its position on the ground, resumes the position of attention.

All equipments being packed, the captain commands: **SLING EQUIPMENT**. The equipments are slung and belts fastened.

The captain then causes the company to assemble and take arms. The inspection is completed as already explained.

748. Should the inspector be other than the captain, the latter, after commanding front, adds **REST**, and faces to the front. When the inspector approaches, the captain faces to the left, brings the company to attention, faces to the front, and salutes. The salute acknowledged, the captain carries saber, faces to the left, commands: **PREPARE FOR INSPECTION**, and again faces to the front.

The inspection proceeds as before; the captain returns saber and accompanies the inspector as soon as the latter passes him.

BATTALION INSPECTION.

749. If there be both inspection and review, the inspection may either precede or follow the review.

The battalion being in column of companies at full distance, all officers dismounted, the major commands: 1. **Prepare for inspection**, 2. **MARCH**.

At the first command each captain commands: **Open ranks**.

At the command march the ranks are opened in each company, as in the inspection of the company.

The field musicians join their companies.

The drum major conducts the band to a position 30 paces in rear of the column, if not already there, and opens ranks.

The major takes post facing to the front and 20 paces in front of the center of the leading company. The staff takes post as if mounted. The color takes post 5 paces in rear of the staff.

Field and staff officers senior in rank to the inspector do not take post in front of the column but accompany him.

The inspector inspects the major, and, accompanied by the latter, inspects the staff officers.

The major then commands: **REST**, returns saber, and, with his staff, accompanies the inspector.

If the major is the inspector he commands: **REST**, returns saber, and inspects his staff, which then accompanies him.

The inspector, commencing at the head of the column, then makes a minute inspection of the color guard, the noncommissioned staff, and the arms, accouterments, dress, and ammunition of each soldier of the several companies in succession, and inspects the band.

The adjutant gives the necessary commands for the inspection of the color guard, noncommissioned staff, and band.

The color guard and noncommissioned staff may be dismissed as soon as inspected.

750. As the inspector approaches each company its captain commands: 1. **Company**, 2. **ATTENTION**, 3. **PREPARE FOR INSPECTION**, and faces to the front; as soon as inspected he returns saber and accompanies the inspector. The inspection proceeds as in company inspection. At its completion the captain closes ranks and commands: **REST**. Unless otherwise directed by the inspector, the major directs that the company be marched to its parade and dismissed.

751. If the inspection will probably last a long time the rear companies may

be permitted to stack arms and fall out; before the inspector approaches they fall in and take arms.

752. The band plays during the inspection of the companies.

When the inspector approaches the band the adjutant commands: **PREPARE FOR INSPECTION.**

As the inspector approaches him each man raises his instrument in front of the body, reverses it so as to show both sides, and then returns it.

Company musicians execute inspection similarly.

753. At the inspection of quarters or camp the inspector is accompanied by the captain, followed by the other officers or by such of them as he may designate. The inspection is conducted as described in the company inspection.

REGIMENTAL INSPECTION.

754. The commands, means, and principles are the same as described for a battalion.

The colonel takes post facing to the front and 20 paces in front of the major of the leading battalion. His staff takes post as if mounted. The color takes post 5 paces in rear of the staff.

The inspector inspects the colonel and the lieutenant colonel, and, accompanied by the colonel, inspects the staff officers.

The colonel then commands: **REST**, returns saber, and, with the lieutenant colonel and staff, accompanies the inspector.

If the colonel is the inspector he commands: **REST**, returns saber, and inspects the lieutenant colonel and staff, all of whom then accompany him.

The inspector, commencing at the head of the column, makes a minute inspection of the color guard, noncommissioned staff, each battalion in succession, and the band.

On the approach of the inspector each major brings his battalion to attention. Battalion inspection follows.

MUSTER.

REGIMENTAL, BATTALION, OR COMPANY MUSTER.

755. Muster is preceded by an inspection, and, when practicable, by a review.

The adjutant is provided with the muster roll of the field, staff, and band, the surgeon with the hospital roll; each captain with the roll of his company. A list of absentees, alphabetically arranged, showing cause and place of absence, accompanies each roll.

756. Being in column of companies at open ranks, each captain, as the mustering officer approaches, brings his company to right shoulder arms, and commands: **ATTENTION TO MUSTER.**

The mustering officer or captain then calls the names on the roll; each man, as his name is called, answers Here and brings his piece to order arms.

After muster, the mustering officer, accompanied by the company commanders and such other officers as he may designate, verifies the presence of the men reported in hospital, on guard, etc.

757. A company may be mustered in the same manner on its own parade ground, the muster to follow the company inspection.

HONORS AND SALUTES.

758. Further rules governing honors, courtesies, etc., are prescribed in Army Regulations.

759. (1) Salutes shall be exchanged between officers and enlisted men not in a military formation, nor at drill, work, games, or mess, on every occasion of

their meeting, passing near or being addressed, the officer junior in rank or the enlisted man saluting first.

(2) When an officer enters a room where there are several enlisted men, the word "attention" is given by some one who perceives him, when all rise, uncover, and remain standing at attention until the officer leaves the room or directs otherwise. Enlisted men at meals stop eating and remain seated at attention.

(3) An enlisted man, if seated, rises on the approach of an officer, faces toward him, stands at attention, and salutes. Standing he faces an officer for the same purpose. If the parties remain in the same place or on the same ground, such compliments need not be repeated. Soldiers actually at work do not cease work to salute an officer unless addressed by him.

(4) Before addressing an officer, an enlisted man makes the prescribed salute with the weapon with which he is armed, or, if unarmed, with the right hand. He also makes the same salute after receiving a reply.

(5) In uniform, covered or uncovered, but not in formation, officers and enlisted men salute military persons as follows: With arms in hand, the salute prescribed for that arm (sentinels on interior guard duty excepted); without arms, the right-hand salute.

(6) In civilian dress, covered or uncovered, officers and enlisted men salute military persons with the right-hand salute.

(7) Officers and enlisted men will render the prescribed salutes in a military manner, the officer junior in rank, or the enlisted man, saluting first. When several officers in company are saluted, all entitled to the salute shall return it.

(8) Except in the field under campaign or simulated campaign conditions, a mounted officer (or soldier) dismounts before addressing a superior officer not mounted.

(9) A man in formation shall not salute when directly addressed, but shall come to attention if at rest or at ease.

(10) Saluting distance is that within which recognition is easy. In general, it does not exceed 30 paces.

(11) When an officer entitled to the salute passes in rear of a body of troops, it is brought to attention while he is opposite the post of the commander.

(12) In public conveyances, such as railway trains and street cars, and in public places, such as theaters, honors and personal salutes may be omitted when palpably inappropriate or apt to disturb or annoy civilians present.

(13) Soldiers at all times and in all situations pay the same compliments to officers of the Army, Navy, Marine Corps, and Volunteers, and to officers of the National Guard as to officers of their own regiment, corps, or arm of service.

(14) Sentinels on post during interior guard duty conform to the foregoing principles, but salute by presenting arms when armed with the rifle. They will not salute if it interferes with the proper performance of their duties. Troops under arms will salute as prescribed in drill regulations.

760. (1) Commanders of detachments or other commands will salute officers of grades higher than the person commanding the unit, by first bringing the unit to attention and then saluting as required by subparagraph (5), paragraph 759. If the person saluted is of a junior or equal grade, the unit need not be at attention in the exchange of salutes.

(2) If two detachments or other commands meet, their commanders will exchange salutes, both commands being at attention.

761. Salutes and honors, as a rule, are not paid by troops actually engaged in drill, on the march, or in the field under campaign or simulated campaign

conditions. Troops on the service of security pay no compliments whatever.

762. If the command is in line at a halt (not in the field) and armed with the rifle, or with sabers drawn, it shall be brought to present arms or present sabers before its commander salutes in the following cases: When the National Anthem is played, or when to the color or to the standard is sounded during ceremonies, or when a person is saluted who is its immediate or higher commander or a general officer, or when the national or regimental color is saluted.

763. At parades and other ceremonies, under arms, the command shall render the prescribed salute and shall remain in the position of salute while the National Anthem is being played; also at retreat and during ceremonies when to the color is played, if no band is present. If not under arms, the organizations shall be brought to attention at the first note of the National Anthem, to the color or to the standard, and the salute rendered by the officer or noncommissioned officer in command as prescribed in regulations, as amended herein.

764. Whenever the National Anthem is played at any place when persons belonging to the military service are present, all officers and enlisted men not in formation shall stand at attention facing toward the music (except at retreat, when they shall face toward the flag). If in uniform, covered or uncovered, or in civilian clothes, uncovered, they shall salute at the first note of the anthem, retaining the position of salute until the last note of the anthem. If not in uniform and covered, they shall uncover at the first note of the anthem, holding the headdress opposite the left shoulder and so remain until its close, except that in inclement weather the headdress may be slightly raised.

The same rules apply when to the color or to the standard is sounded as when the National Anthem is played.

When played by an Army band, the National Anthem shall be played through without repetition of any part not required to be repeated to make it complete.

The same marks of respect prescribed for observance during the playing of the National Anthem of the United States shall be shown toward the national anthem of any other country when played upon official occasions.

765. Officers and enlisted men passing the uncased color will render honors as follows: If in uniform, they will salute as required by subparagraph (5), paragraph 759; if in civilian dress and covered, they will uncover, holding the headdress opposite the left shoulder with the right hand; if uncovered they will salute with the right-hand salute.

PART V.

MANUALS.

THE COLOR.

766. The word "color" implies the national color; it includes the regimental color when both are present.

The rules prescribing the colors to be carried by regiments and battalions on all occasions are contained in Army Regulations.

767. In garrison the colors, when not in use, are kept in the office or quarters of the colonel, and are escorted thereto and therefrom by the color guard. In camp the colors, when not in use, are in front of the colonel's tent. From reveille to retreat, when the weather permits, they are displayed uncased; from retreat to reveille and during inclement weather they are cased.

Colors are said to be cased when furled and protected by the oil-cloth covering.

768. The regimental color salutes in the ceremony of escort of the color, and when saluting an officer entitled to the honor, but in no other case.

If marching, the salute is executed when at 6 paces from the officer entitled to the salute; the carry is resumed when 6 paces beyond him.

The national color renders no salute.

THE COLOR GUARD.

769. The color guard consists of two color sergeants, who are the color bearers, and two experienced privates selected by the colonel. The senior color sergeant carries the national color; the junior color sergeant carries the regimental color. The regimental color, when carried, is always on the left of the national color, in whatever direction they may face.

770. The color guard is formed and marched in one rank, the color bearers in the center. It is marched in the same manner and by the same commands as a squad, substituting, when necessary, guard for squad.

771. The color company is the center or right center company of the center or right center battalion. The color guard remains with that company unless otherwise directed.

772. In line the color guard is in the interval between the inner guides of the right and left center companies.

In line of columns or in close line, the color guard is midway between the right and left center companies and on line with the captains.

In column of companies or platoons the color guard is midway between the color company and the company in rear of the color company and equidistant from the flanks of the column.

In close column the color guard is on the flank of the color company.

In column of squads the color guard is in the column between the color company and the company originally on its left.

When the regiment is formed in line of masses for ceremonies, the color guard forms on the left of the leading company of the center (right center) battalion. It rejoins the color company when the regiment changes from line of masses.

773. The color guard, when with a battalion that takes the battle formation,

joins the regimental reserve, whose commander directs the color guard to join a certain company of the reserve.

774. The color guard executes neither loadings nor firings; in rendering honors, it executes all movements in the manual; in drill, all movements unless specially excused.

TO RECEIVE THE COLOR.

775. The color guard, by command of the senior color sergeant, presents arms on receiving and parting with the color. After parting with the color, the color guard is brought to order arms by command of the senior member who is placed as the right man of the guard.

776. At drills and ceremonies, excepting escort of the color, the color, if present, is received by the color company after its formation.

The formation of the color company completed, the captain faces to the front; the color guard, conducted by the senior sergeant, approaches from the front and halts at a distance of 10 paces from the captain, who then faces about, brings the company to the present, faces to the front, salutes, again faces about and brings the company to the order. The color guard comes to the present and order at the command of the captain, and is then marched by the color sergeant directly to its post on the left of the color company.

777. When the battalion is dismissed the color guard escorts the color to the office or quarters of the colonel.

MANUAL OF THE COLOR.

778. At the carry the heel of the pike rests in the socket of the sling; the right hand grasps the pike at the height of the shoulder.

At the order the heel of the pike rests on the ground near the right toe, the right hand holding the pike in a vertical position.

At parade rest the heel of the pike is on the ground, as at the order; the pike is held with both hands in front of the center of the body, left hand uppermost.

The order is resumed at the command attention.

The left hand assists the right when necessary.

The carry is the habitual position when the troops are at a shoulder, port, or trail.

The order and parade rest are executed with the troops.

The color salute: Being at a carry, slip the right hand up the pike to the height of the eye, then lower the pike by straightening the arm to the front.

THE BAND.

779. The band is formed in two or more ranks, with sufficient intervals between the men and distances between the ranks to permit of a free use of the instruments.

The field music, when united, forms with and in rear of the band; when the band is not present the posts, movements, and duties of the field music are the same as prescribed for the band; when a musician is in charge his position is on the right of the front rank. When the battalion or regiment turns about by squads, the band executes the countermarch; when the battalion or regiment executes right, left, or about face, the band faces in the same manner.

In marching, each rank dresses to the right.

In executing open ranks each rank of the band takes the distance of 3 paces from the rank next in front; the drum major verifies the alignment.

The field music sounds the march, flourishes, or ruffles, and to the color at the signal of the drum major.

780. The drum major is 3 paces in front of the center of the front rank, and gives the signals or commands for the movements of the band as for a squad, substituting in the commands band for squad.

SIGNALS OF THE DRUM MAJOR.

781. Preparatory to a signal the staff is held with the right hand near the head of the staff, hand below the chin, back to the front, ferrule pointed upward and to the right.

Prepare to play: Face toward the band and extend the right arm to its full length in the direction of the staff. Play: Bring the arm back to its original position in front of the body.

Prepare to cease playing: Extend the right arm to its full length in the direction of the staff. Cease playing: Bring the arm back to its original position in front of the body.

To march: Turn the wrist and bring the staff to the front, the ferrule pointing upward and to the front; extend the arm to its full length in the direction of the staff.

To halt: Lower the staff into the raised left hand and raise the staff horizontally above the head with both hands, the arms extended; lower the staff with both hands to a horizontal position at the height of the hips.

To countermarch: Face toward the band and give the signal to march. The countermarch is executed by each front-rank man to the right of the drum major turning to the right about, each to the left, turning to the left about, each followed by the men covering him. The drum major passes through the center.

To oblique: Bring the staff to a horizontal position, the head of the staff opposite the neck, the ferrule pointing in the direction the oblique is to be made; extend the arm to its full length in the direction of the staff.

To march by the right flank: Extend the arm to the right, the staff vertical, ferrule upward, back of the hand to the rear.

To march by the left flank: Extend the arm to the left, the staff vertical, ferrule upward, back of the hand to the front.

To diminish front: Let the ferrule fall into the left hand at the height of the eyes, right hand at the height of the hip.

To increase front: Let the ferrule fall into the left hand at the height of the hip, right hand at the height of the neck.

The march, flourishes, or ruffles: Bring the staff to a vertical position, hand opposite the neck, back of the hand to the front, ferrule pointing down.

To the color: Bring the staff to a horizontal position at the height of the neck, back of the hand to the rear, ferrule pointing to the left.

When the band is playing, in marching, the drum major beats the time with his staff and supports the left hand at the hip, fingers in front, thumb to the rear.

The drum major, with staff in hand, salutes by bringing his staff to a vertical position, head of the staff up and opposite the left shoulder.

The drum major, marching in review with staff in hand, salutes by bringing his staff to a vertical position, head of the staff up and opposite the left shoulder.

At a halt, and the band not playing, the drum major holds his staff with the ferrule touching the ground about 1 inch from toe of right foot, at an angle of about 60°, ball pointing upward to the right, right hand grasping staff near the ball, back of the hand to the front; left hand at the hip, fingers in front, thumb to the rear.

MANUAL OF THE SABER.**782. 1. Draw, 2. SABER.**

At the command draw unhook the saber with the thumb and first two fingers of the left hand, thumb on the end of the hook, fingers lifting the upper ring; grasp the scabbard with the left hand at the upper band, bring the hilt a little forward, seize the grip with the right hand, and draw the blade 6 inches out of the scabbard, pressing the scabbard against the thigh with the left hand.

At the command saber draw the saber quickly, raising the arm to its full extent to the right front, at an angle of about 45° with the horizontal, the saber, edge down, in a straight line with the arm; make a slight pause and bring the back of the blade against the shoulder, edge to the front, arm nearly extended, hand by the side, elbow back, third and fourth fingers back of the grip; at the same time hook up the scabbard with the thumb and first two fingers of the left hand, thumb through the upper ring, fingers supporting it; drop the left hand by the side.

This is the position of carry saber dismounted.

Officers and noncommissioned officers armed with the saber unhook the scabbard before mounting; when mounted, in the first motion of draw saber they reach with the right hand over the bridle hand and without the aid of the bridle hand draw the saber as before; the right hand at the carry rests on the right thigh.

On foot the scabbard is carried hooked up.

783. When publishing orders, calling the roll, etc., the saber is held suspended from the right wrist by the saber knot; when the saber knot is used it is placed on the wrist before drawing saber and taken off after returning saber.

784. Being at the order or carry: 1. Present, 2. SABER (or ARMS).

At the command present raise and carry the saber to the front, base of the hilt as high as the chin and 6 inches in front of the neck, edge to the left, point 6 inches farther to the front than the hilt, thumb extended on the left of the grip, all fingers grasping the grip.

At the command saber, or arms, lower the saber, point in prolongation of the right foot and near the ground, edge to the left, hand by the side, thumb on the left of grip, arm extended. If mounted, the hand is held behind the thigh, point a little to the right and front of the stirrup.

In rendering honors with troops officers execute the first motion of the salute at the command present, the second motion at the command arms; enlisted men with the saber execute the first motion at the command arms and omit the second motion.

785. Being at a carry: 1. Order, 2. SABER (or ARMS).

Drop the point of the saber directly to the front, point on or near the ground, edge down, thumb on back of grip.

Being at the present saber, should the next command be order arms, officers and noncommissioned officers armed with the saber order saber; if the command be other than order arms, they execute carry saber.

When arms are brought to the order the officers or enlisted men with the saber drawn order saber.

786. The saber is held at the carry while giving commands, marching at attention, or changing position in quick time.

When at the order sabers are brought to the carry when arms are brought to any position except the present or parade rest.

787. Being at the order: 1. Parade, 2. REST.

Take the position of parade rest except that the left hand is uppermost and rests on the right hand, point of saber on or near the ground in front of the center of the body, edge to the right.

At the command attention resume the order saber and the position of the soldier.

788. In marching in double time the saber is carried diagonally across the breast, edge to the front; the left hand steadies the scabbard.

789. Officers and noncommissioned officers armed with the saber, on all duties under arms draw and return saber without waiting for command. All commands to soldiers under arms are given with the saber drawn.

790. Being at a carry: 1. **Return**, 2. **SABER**.

At the command return carry the right hand opposite to and 6 inches from the left shoulder, saber vertical, edge to the left; at the same time unhook and lower the scabbard with the left hand and grasp it at the upper band.

At the command saber drop the point to the rear and pass the blade across and along the left arm; turn the head slightly to the left, fixing the eyes on the opening of the scabbard, raise the right hand, insert and return the blade; free the wrist from the saber knot (if inserted in it), turn the head to the front, drop the right hand by the side; hook up the scabbard with the left hand, drop the left hand by the side.

Officers and noncommissioned officers armed with the saber, when mounted, return saber without using the left hand; the scabbard is hooked up on dismounting.

791. At inspection enlisted men with the saber drawn execute the first motion of present saber and turn the wrist to show both sides of the blade, resuming the carry when the inspector has passed.

MANUAL OF TENT PITCHING.

SHELTER TENTS.

792. Being in line or in column of platoons, the captain commands: **FORM FOR SHELTER TENTS**.

The officers, first sergeant, and guides fall out; the cooks form a file on the flank of the company nearest the kitchen, the first sergeant and right guide fall in, forming the right file of the company; blank files are filled by the file closers or by men taken from the front rank; the remaining guide, or guides, and file closers form on a convenient flank. Before forming column of platoons, preparatory to pitching tents, the company may be redivided into two or more platoons, regardless of the size of each.

793. The captain then causes the company to take intervals as described in the School of the Squad, and commands: **PITCH TENTS**.

At the command pitch tents, each man steps off obliquely to the right with the right foot and lays his rifle on the ground, the butt of the rifle near the toe of the right foot, muzzle to the front, barrel to the left, and steps back into his place; each front-rank man then draws his bayonet and sticks it in the ground by the outside of the right heel.

Equipments are unslung, packs opened, shelter half and pins removed; each man then spreads his shelter half, small triangle to the rear, flat upon the ground the tent is to occupy, the rear-rank man's half on the right. The halves are then buttoned together; the guy loops at both ends of the lower half are passed through the buttonholes provided in the lower and upper halves; the whipped end of the guy rope is then passed through both guy loops and secured, this at both ends of the tent. Each front-rank man inserts the muzzle of his rifle under the front end of the ridge and holds the rifle upright, sling to the front, heel of butt on the ground beside the bayonet. His rear-rank man pins down the front corners of the tent on the line of bayonets, stretching the

tent taut; he then inserts a pin in the eye of the front guy rope and drives the pin at such a distance in front of the rifle as to hold the rope taut; both men go to the rear of the tent, each pins down a corner, stretching the sides and rear of the tent before securing; the rear-rank man then inserts an intrenching tool, or a bayonet in its scabbard, under the rear end of the ridge inside the tent, the front-rank man pegging down the end of the rear guy ropes; the rest of the pins are then driven by both men, the rear-rank man working on the right.

The front flaps of the tent are not fastened down, but thrown back on the tent.

As soon as the tent is pitched each man arranges his equipment and the contents of his pack in the tent and stands at attention in front of his own half on line with the front guy-rope pin.

To have a uniform slope when the tents are pitched, the guy ropes should all be of the same length.

In shelter-tent camps, in localities where suitable material is procurable, tent poles may be improvised and used in lieu of the rifle and bayonet or intrenching tool as supports for the shelter tent.

794. When the pack is not carried the company is formed for shelter tents, intervals are taken, arms are laid aside or on the ground, the men are dismissed and proceed to the wagon, secure their packs, return to their places, and pitch tents as heretofore described.

795. Double shelter tents may be pitched by first pitching one tent as heretofore described, then pitching a second tent against the opening of the first, using one rifle to support both tents, and passing the front guy ropes over and down the sides of the opposite tents. The front corner of one tent is not pegged down, but is thrown back to permit an opening into the tent.

SINGLE SLEEPING BAG.

796. Spread the poncho on the ground, buttoned end at the feet, buttoned side to the left; fold the blanket across its short dimension and lay it on the poncho, folded side along the right side of the poncho; tie the blanket together along the left side by means of the tapes provided; fold the left half of the poncho over the blanket and button it together along the side and bottom.

DOUBLE SLEEPING BAG.

797. Spread one poncho on the ground, buttoned end at the feet, buttoned side to the left; spread the blankets on top of the poncho; tie the edges of the blankets together with the tapes provided, spread a second poncho on top of the blankets, buttoned end at the feet, buttoned side to the right; button the two ponchos together along both sides and across the end.

TO STRIKE SHELTER TENTS.

798. The men standing in front of their tents: **STRIKE TENTS.**

Equipments and rifles are removed from the tent; the tents are lowered, packs made up, and equipments slung, and the men stand at attention in the places originally occupied after taking intervals.

TO PITCH TENTS.

799. To pitch all types of Army tents, except shelter and conical wall tents: Mark line of tents by driving a wall pin on the spot to be occupied by the right (or left) corner of each tent. For pyramidal tents the interval between adjacent pins should be about 30 feet, which will give a passage of two feet between

tents. Spread tripod on the ground where the center of tent is to be, if tripod is used. Spread the tent on the ground to be occupied, door to the front, and place the right (or left) front wall loop over the pin. The door (or doors if more than one) being fastened and held together at the bottom, the left (or right) corner wall loop is carried to the left (or right) as far as it will go and a wall pin driven through it, the pin being placed in line with the right (or left) corner pins already driven. At the same time the rear corner wall loops are pulled to the rear and outward so that the rear wall of the tent is stretched to complete the rectangle. Wall pins are then driven through these loops. Each corner pin should be directly in rear of the corresponding front corner pin, making a rectangle. Unless the canvas be wet, a small amount of slack should be allowed before the corner pins are driven. According to the size of the tent one or two men, crawling under the tent if necessary, fit each pole or ridge or upright into the ring or ridge pole holes, and such accessories as hood, fly and brace ropes are adjusted. If a tripod be used an additional man will go under the tent to adjust it. The tent steadied by the remaining men, one at each corner guy rope, will then be raised. If the tent is a ward or storage type, corner poles will now be placed at the four corners. The four corner guy ropes are then placed over the lower notches of the large pins driven in prolongation of the diagonals at such distance as to hold the walls and ends of the tent vertical and smooth when the guy ropes are drawn taut. A wall pin is then driven through each remaining wall loop and a large pin for each guy rope is driven in line with the corner guy pins already driven. The guy ropes of the tent are placed over the lower notches, while the guy ropes of the fly are placed over the upper notches, and are then drawn taut. Brace ropes, when used, are then secured to stakes or pins suitably placed.

800. Rescinded.

CONICAL WALL TENT.

801. Drive the door pin and center pin 8 feet 3 inches apart. Using the hood lines with center pin as center, describe two concentric circles with radii 8 feet 3 inches and 11 feet 3 inches. In the outer circle drive two door guy pins 3 feet apart. At intervals of about 3 feet drive the other guy pin.

In other respects conical tents are erected practically as in the case of pyramidal tents.

TO STRIKE COMMON, WALL, PYRAMIDAL, AND CONICAL WALL TENTS.

802. STRIKE TENTS.

The men first remove all pins except those of the four corner guy ropes, or the four quadrant guy ropes in the case of the conical wall tent. The pins are neatly piled or placed in their receptacle.

One man holds each guy, and when the ground is clear the tent is lowered, folded, or rolled and tied, the poles or tripod and pole fastened together, and the remaining pins collected.

TO FOLD TENTS.

803. For folding common, wall, hospital, and storage tents: Spread the tent flat on the ground, folded at the ridge so that bottoms of side walls are even, ends of tent forming triangles to the right and left; fold the triangular ends of the tent in toward the middle, making it rectangular in shape; fold the top over

about 9 inches; fold the tent in two by carrying the top fold over clear to the foot; fold again in two from the top to the foot; throw all guys on tent except the second from each end; fold the ends in so as to cover about two-thirds of the second cloths; fold the left end over to meet the turned-in edge of the right end, then fold the right end over the top, completing the bundle; tie with the two exposed guys.

METHOD OF FOLDING PYRAMIDAL TENT.

The tent is thrown toward the rear and the back wall and roof canvas pulled out smooth. This may be most easily accomplished by leaving the rear-corner wall pins in the ground with the wall loops attached, one man at each rear-corner guy, and one holding the square iron in a perpendicular position and pulling the canvas to its limit away from the former front of the tent. This leaves the three remaining sides of the tent on top of the rear side, with the door side in the middle.

Now carry the right-front corner over and lay it on the left-rear corner. Pull all canvas smooth, throw guys toward square iron, and pull bottom edges even. Then take the right-front corner and return to the right, covering the right-rear corner. This folds the right side of the tent on itself, with the crease in the middle and under the front side of tent.

Next carry the left-front corner to the right and back as described above; this when completed will leave the front and rear sides of the tent lying smooth and flat and the two side walls folded inward, each on itself.

Place the hood in the square iron which has been folded downward toward the bottom of tent, and continue to fold around the square iron as a core, pressing all folds down flat and smooth, and parallel with the bottom of the tent. If each fold is compactly made and the canvas kept smooth, the last fold will exactly cover the lower edge of the canvas. Lay all exposed guys along the folded canvas except the two on the center width, which should be pulled out and away from bottom edge to their extreme length for tying. Now, beginning at one end, fold toward the center on the first seam (that joining the first and second widths) and fold again toward the center so that the already folded canvas will come to within about 3 inches of the middle width. Then fold over to the opposite edge of middle width of canvas. Then begin folding from opposite end, folding the first width in half, then making a second fold to come within about 4 or 5 inches of that already folded, turn this fold entirely over that already folded. Take the exposed guys and draw them taut across each other, turn bundle over on the under guy, cross guys on top of bundle drawing tight. Turn bundle over on the crossed guys and tie lengthwise.

When properly tied and pressed together this will make a package 11 by 23 by 34 inches, requiring about 8,855 cubic inches to store or pack.

Stencil the organization designation on the lower half of the middle width of canvas in the back wall.

MANUAL OF THE BUGLE.

WARNING CALLS.

804. First call, guard mounting, full dress, overcoats, drill, stable, water, and boots and saddle precede the assembly by such interval as may be prescribed by the commanding officer.

Mess, church, and fatigue, classed as service calls, may also be used as warning calls.

First call is the first signal for formation for roll call and for all ceremonies except guard mounting.

Guard mounting is the first signal for guard mounting.

The field music assembles at first call and guard mounting.

In a mixed command, boots and saddles is the signal to mounted troops that their formation is to be mounted; for mounted guard mounting or mounted drill, it immediately follows the signal guard mounting or drill.

When full dress or overcoats are to be worn, the full dress or overcoat call immediately follows first call, guard mounting, or boots and saddles.

FORMATION CALLS.

805. Assembly: The signal for companies or details to fall in.

Adjutant's call: The signal for companies to form battalion; also for the guard details to form for guard mounting on the camp or garrison parade ground; it follows the assembly at such intervals as may be prescribed by the commanding officer.

It is also used as a signal for the battalions to form regiment, following the first adjutant's call at such interval as the commanding officer may prescribe.

To the color: Is sounded when the color salutes.

ALARM CALLS.

806. Fire call: The signal for the men to fall in, without arms, to extinguish fire.

To arms: The signal for the men to fall in, under arms, on their company parade grounds as quickly as possible.

To horse: The signal for mounted men to proceed under arms to their horses, saddle, mount and assemble at a designated place as quickly as possible. In extended order this signal is used to remount troops.

SERVICE CALLS.

807. Tattoo, taps, mess, sick, church, recall, issue, officers', captains', first sergeants', fatigue, school, and the general.

The general is the signal for striking tents and loading wagons preparatory to marching.

Reveille precedes the assembly for roll call; retreat follows the assembly, the interval between being only that required for formation and roll call, except when there is parade.

Taps is the signal for extinguishing lights; it is usually preceded by call to quarters by such interval as prescribed by Army Regulations.

Assembly, reveille, retreat, adjutant's call, to the color, the flourishes, ruffles, and the marches are sounded by all the field music united; the other calls, as a rule, are sounded by the musician of the guard or orderly musician; he may also sound the assembly when the musicians are not united.

The morning gun is fired at the first note of reveille, or, if marches be played before reveille, it is fired at the commencement of the first march.

The evening gun is fired at the last note of retreat.

BUGLE CALLS.

1. First Call.

Quick.



2. Guard Mounting.

Quick.



3. Full Dress.



4. Overcoats.



5. Drill.



6. Stable.



7. Water.

Quick.



8. Boots and Saddles.

Quick.



9. Assembly.

Moderate.



10. Adjutant's Call.

Quick.



11. To the Color.

Quick time.



To the Color.—Concluded.

End.

12. Fire.

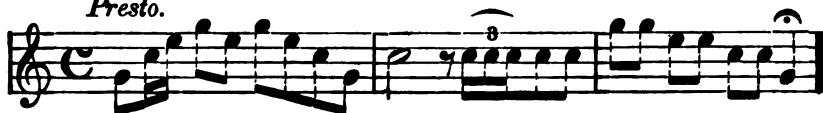
Quick.*Repeat at will.*

13. To Arms.

Quick.*Repeat at will.*

14. To Horse.

Presto.



15. Reveille.

Quick.



End.



D.C.



16. Retreat.

Moderate.



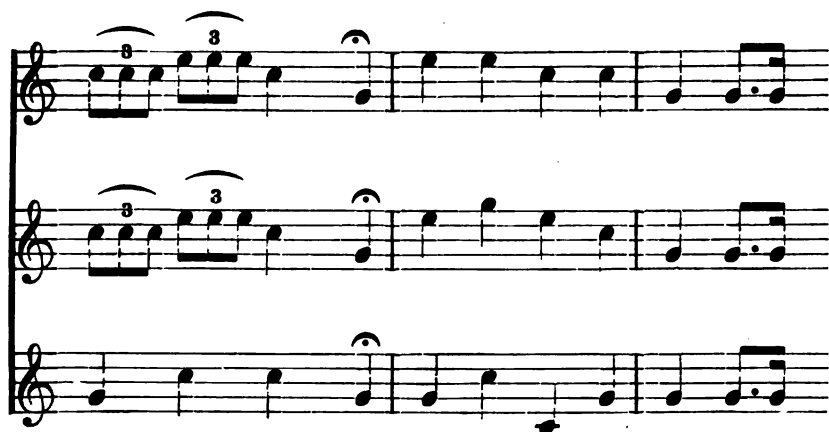
Retreat.—Concluded.

17. Tattoo.

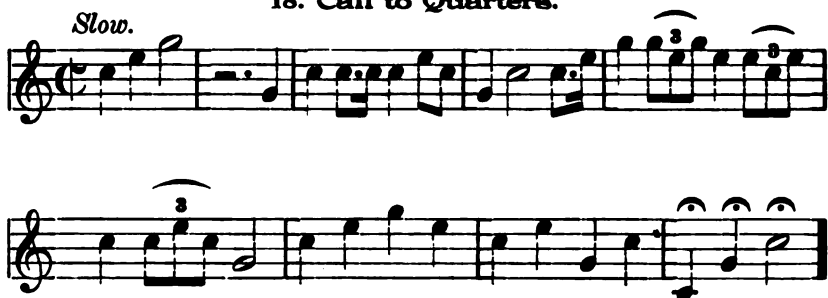
Quick.

Tattoo.—Continued.

Tattoo.—Concluded.



18. Call to Quarters.



19. Taps.



20. Mess.



21. Sick.

Quick.



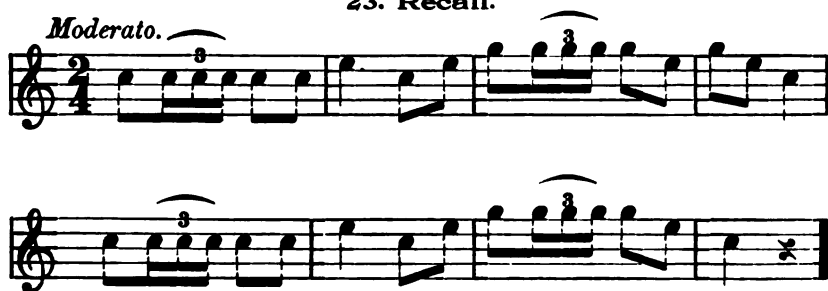
22. Church.

Slow.



23. Recall.

Moderato.



24. Issue.

Allegro.



25. Officers' Call.

Quick.

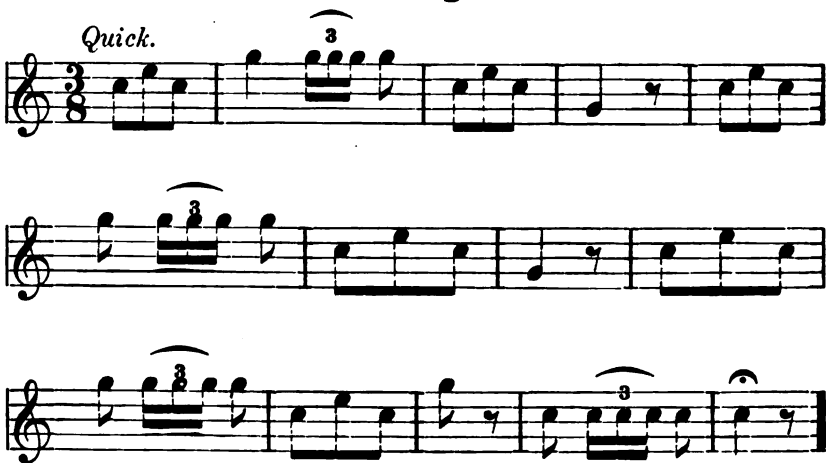
26. Captains' Call.

Quick.

27. First Sergeants' Call.

Quick.

28. Fatigue.

Quick.

29. School.

Quick.



29 1/2. The General's March.

Quick time.



30. The General.

Quick.



The General.—Concluded.**30 $\frac{1}{2}$. Flourishes for Review.***Quick.*

BUGLE SIGNALS.

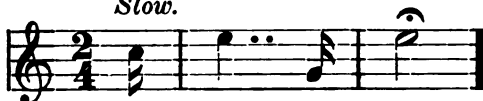
See paragraph 41.

31. Assemble. March.

Same as Assembly, No. 9.

32. Attention.

Slow.



33. Attention to Orders.

Slow.



34. Forward. March.

Slow.



35. Halt.



36. Double Time. March. .

Quick.



37. To the Rear. March.



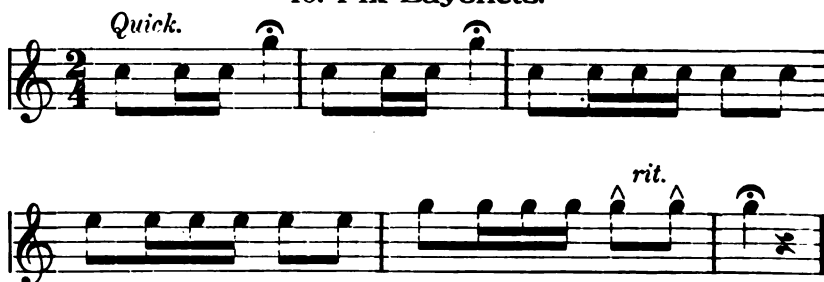
38. Commence Firing.



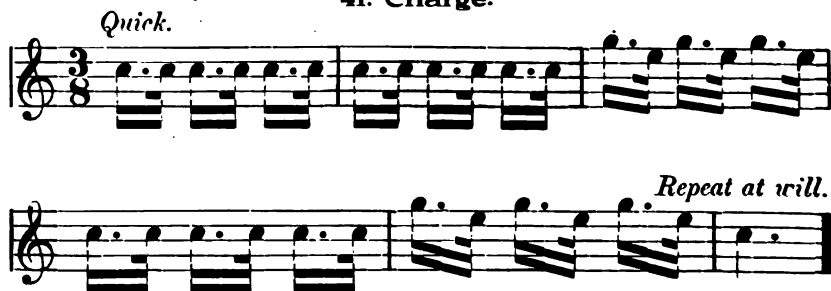
39. Cease Firing.



40. Fix Bayonets.



41. Charge.



APPENDIX A.

War Department,
Office of the Chief of Staff,
Washington, December 2, 1911.

The Infantry Drill Regulations, 1911, have been prepared for the use of troops armed with the United States magazine rifle, model 1903. For the guidance of organizations armed with the United States magazine rifle, model 1898, the following alternative paragraphs are published and will be considered as substitute paragraphs for the corresponding paragraphs in the text: 75 (in part), 96, 98, 99, 134, 139, 141, 142, 148, and 150.

By order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

75. * * *

Third. The cut-off is kept turned down, except when using the magazine.

* * * * *

96. Being at order arms: 1. Unfix, **BAYONET**.

If the bayonet scabbard is carried on the belt: Take the position of parade rest, grasp the handle of the bayonet firmly with the right hand, press the spring with the forefinger of the left hand, raise the bayonet until the handle is about 6 inches above the muzzle of the piece, drop the point to the left, back of hand toward the body, and, glancing at the scabbard, return the bayonet, the blade passing between the left arm and body; regrasp the piece with the right hand and resume the order.

If the bayonet scabbard is carried on the haversack: Take the bayonet from the rifle with the left hand and return it to the scabbard in the most convenient manner.

If marching or lying down, the bayonet is fixed and unfix in the most expeditious and convenient manner and the piece returned to the original position.

Fix and unfix bayonet are executed with promptness and regularity, but not in cadence.

98. Being at order arms: 1. **Inspection**, 2. **ARMS**.

At the second command, take the position of port arms. (TWO) With the right hand open the magazine gate, turn the bolt handle up, draw the bolt back and glance at the magazine and chamber. Having found them empty, or having emptied them, raise the head and eyes to the front.

99. Being at inspection arms: 1. **Order (Right shoulder, port)**, 2. **ARMS**.

At the preparatory command, push the bolt forward, turn the handle down, close the magazine gate, pull the trigger, and resume port arms. At the command arms, complete the movement ordered.

134. Pieces being loaded and in the position of load, to execute other movements with the pieces loaded: 1. **Lock**, 2. **PIECES**.

At the command pieces turn the safety lock fully to the right.

The safety lock is said to be at the "ready" when turned to the left, and at the "safe" when turned to the right.

The cut-off is said to be "on" when turned up and "off" when turned down.

139. Being in line or skirmish line at halt: 1. **With dummy (blank or ball) cartridges**, 2. **LOAD**.

At the command load each front-rank man or skirmisher faces half right and

carries the right foot to the right, about one foot, to such position as will insure the greatest firmness and steadiness of the body; raises or lowers the piece and drops it into the left hand at the balance, left thumb extended along the stock, muzzle at the height of the breast. With the right hand he turns and draws the bolt back, takes a cartridge between the thumb and first two fingers and places it in the receiver; places palm of the hand against the back of the bolt handle; thrusts the bolt home with a quick motion, turning down the handle, and carries the hand up to the small of the stock. Each rear-rank man moves to the right front, takes a similar position opposite the interval to the right of his front-rank man, muzzle of the piece extending beyond the front rank, and loads.

A skirmish line may load while moving, the pieces being held as nearly as practicable in the position of load.

If kneeling or sitting the position of the piece is similar; if kneeling the left forearm rests on the left thigh; if sitting the elbows are supported by the knees. If lying down the left hand steadies and supports the piece at the balance, the toe of the butt resting on the ground, the muzzle off the ground.

For reference, these positions (standing, kneeling, and lying down) are designated as that of load.

141. FILL MAGAZINE.

Take the position of load, if not already there, open the gate of the magazine with the right thumb, take five cartridges from the box or belt, and place them, with the bullets to the front, in the magazine, turning the barrel slightly to the left to facilitate the insertion of the cartridges; close the gate and carry the right hand to the small of the stock.

To load from the magazine the command *From magazine* will be given preceding that of *LOAD*; the cut-off will be turned up on coming to the position of load.

To resume loading from the belt the command *From belt* will be given preceding the command *LOAD*; the cut-off will be turned down on coming to the position of load.

The commands from magazine and from belt, indicating the change in the manner of loading, will not be repeated in subsequent commands.

The words from belt apply to cartridge box as well as belt.

In loading from the magazine care should be taken to push the bolt fully forward and turn the handle down before drawing the bolt back, as otherwise the extractor will not catch the cartridge in the chamber, and jamming will occur with the cartridge following.

To fire from the magazine, the command *magazine fire* may be given at any time. The cut-off is turned up and an increased rate of fire is executed. After the magazine is exhausted the cut-off is turned down and the firing continued, loading from the belt.

Magazine fire is employed only when, in the opinion of the platoon leader or company commander, the maximum rate of fire becomes necessary.

142. UNLOAD.

All take the position of load, turn the cut-off up, if not already there, turn the safety lock to the left, and alternately open and close the chamber until all the cartridges are ejected. After the last cartridge is ejected the chamber is closed and the trigger pulled. The cartridges are then picked up, cleaned, and returned to the box or belt, and the piece brought to the order.

148. CLIP FIRE.

Turn the cut-off up; fire at will (reloading from the magazine) until the cartridges in the piece are exhausted; turn the cut-off down; fill magazine; reload and take the position of suspend firing.

150. CEASE FIRING.

Firing stops; pieces not already there are brought to the position of load, the cut-off turned down if firing from magazine, the cartridge is drawn or the empty shell is ejected, the trigger is pulled, sights are laid down, and the piece is brought to the order.

Cease firing is used for long pauses to prepare for changes of position or to steady the men.

APPENDIX B.

War Department,
Office of the Chief of Staff,
Washington, December 2, 1911.

Paragraphs 747, 792, 793, 794, 795, 797, and 798, Infantry Drill Regulations, 1911, apply only to troops equipped with the Infantry Equipment, model 1910. For troops equipped under General Orders, No. 23, War Department, 1906, and orders amendatory thereof, the alternative paragraphs published herewith will govern.

By order of the Secretary of War.

LEONARD WOOD,
Major General, Chief of Staff.

747. If the inspection is to include an examination of the blanket rolls the captain, before dismissing the company and after inspecting the file closers, directs the lieutenants to remain in place, close ranks, stacks arms, dresses the company back to four paces from the stacks, takes intervals, and commands: 1. **Unslung**, 2. **PACKS**, 3. **Open**, 4. **PACKS**.

At the second command each man unslings his roll and places it on the ground at his feet, rounded end to the front, square end of shelter half to the right.

At the fourth command the rolls are untied, laid perpendicularly to the front with the triangular end of the shelter half to the front, opened, and unrolled to the left; each man prepares the contents of his roll for inspection and resumes the attention.

The captain then returns saber, passes along the ranks and file closers as before, inspects the rolls, returns to the right, draws saber and commands: 1. **Close**, 2. **PACKS**.

At the second command each man, with his shelter half smoothly spread on the ground with buttons up and triangular end to the front, folds his blanket once across its length and places it upon the shelter half, fold toward the bottom, edge one-half inch from the square end, the same amount of canvas uncovered at the top and bottom. He then places the parts of the pole on the side of the blanket next the square end of shelter half, near and parallel to the fold, end of pole about 6 inches from the edge of the blanket; nests the pins similarly near the opposite edge of the blanket and distributes the other articles carried in the roll; folds the triangular end and then the exposed portion of the bottom of the shelter half over the blanket.

The two men in each file roll and fasten first the roll of the front and then of the rear rank man. The file closers work similarly two and two, or with the front rank man of a blank file. Each pair stands on the folded side, rolls the blanket roll closely and buckles the straps, passing the end of the strap through both keeper and buckle, back over the buckle and under the keeper. With the roll so lying on the ground that the edge of the shelter half can just be seen when looking vertically downward one end is bent upward and over to meet the other, a clove hitch is taken with the guy rope first around the

end to which it is attached and then around the other end, adjusting the length of rope between hitches to suit the wearer.

As soon as a file completes its two rolls each man places his roll in the position it was in after being unslung and stands at attention.

All the rolls being completed, the captain commands: 1. **Sling**, 2. **PACKS**.

At the second command the rolls are slung, the end containing the pole to the rear.

The company is assembled, takes arms, and the captain completes the inspection as before.

792. Being in line or in column of platoons, the captain commands: **FORM FOR SHELTER TENTS**.

The officers, first sergeant, and guides fall out; the cooks form a file on the flank of the company nearest the kitchen, the first sergeant and right guide fall in, forming the right file of the company; blank files are filled by the file closers or by men taken from the front rank; the remaining guide or guides and file closers form on a convenient flank. Before forming column of platoons, preparatory to pitching tents, the company may be redivided into two or more platoons, regardless of the size of each.

793. The captain then causes the company to take intervals as described in the School of the Squad, and commands: **PITCH TENTS**.

At the command Pitch tents, each man steps off obliquely to the right with the right foot and lays his rifle on the ground, the butt of the rifle near the toe of the right foot, muzzle to the front, barrel to the left, and steps back into his place; each front rank man then draws his bayonet and sticks it in the ground by the outside of the right heel. All unslung and open the blanket rolls and take out the shelter half, poles, and pins. Each then spreads his shelter half, triangle to the rear, flat upon the ground the tent is to occupy, rear rank man's half on the right. The halves are then buttoned together. Each front rank man joins his pole, inserts the top in the eyes of the halves, and holds the pole upright beside the bayonet placed in the ground; his rear rank man, using the pins in front, pins down the front corners of the tent on the line of bayonets, stretching the canvas taut; he then inserts a pin in the eye of the rope and drives the pin at such distance in front of the pole as to hold the rope taut. Both then go to the rear of the tent; the rear rank man adjusts the pole and the front rank man drives the pins. The rest of the pins are then driven by both men, the rear rank man working on the right.

As soon as the tent is pitched each man arranges the contents of the blanket roll in the tent and stands at attention in front of his own half on line with the front guy rope pin.

The guy ropes, to have a uniform slope when the shelter tents are pitched, should all be of the same length.

794. When the blanket roll is not carried, intervals are taken as described above; the position of the front pole is marked with a bayonet, and equipments are laid aside. The men then proceed to the wagon, secure their rolls, return to their places, and pitch tents as heretofore described.

795. To pitch double shelter tent, the captain gives the same commands as before, except Take half interval is given instead of Take interval. In taking interval each man follows the preceding man at 2 paces. The captain then commands: **PITCH DOUBLE TENTS**.

The first sergeant places himself on the right of the right guide and with him pitches a single shelter tent.

Only the odd numbers of the front rank mark the line with the bayonet.

The tent is formed by buttoning together the square ends of two single tents. Poles, except one pole, are used. Two guy ropes are used at each corner, being placed in front of the corner pins.

The tents are pitched by numbers 1 and 2, front and rear rank; and by numbers 3 and 4, front and rear rank; the men falling in on the left are numbered, counting off if necessary.

All the men spread their shelter halves on the ground the tent is to occupy. Those of the front rank are placed with the triangular ends to the front. All four halves are then buttoned together, first the ridges and then the square ends. The front corners of the tent are pinned by the front-rank men, the odd number holding the poles, the even number driving the pins. The rear-rank men similarly pin the rear corners.

While the odd numbers steady the poles, each even number of the front rank takes his pole and enters the tent, where, assisted by the even number of the rear rank, he adjusts the pole to the center eyes of the shelter halves in the following order: (1) The lower half of the front tent; (2) the lower half of the rear tent; (3) the upper half of the front tent; (4) the upper half of the rear tent. The guy ropes are then adjusted.

The tents having been pitched, the triangular ends are turned back, contents of the rolls arranged, and the men stand at attention, each opposite his own shelter half and facing out from the tent.

796. Omitted.

797. Omitted.

798. Omitted.

EXTRACTS FROM
MANUAL OF PHYSICAL TRAINING
FOR USE IN THE
UNITED STATES ARMY

War Department,
Office of the Chief of Staff,
Washington, February 20, 1914.

The following Manual of Physical Training, prepared by a board of officers consisting of Lieut. Col. Fred W. Sladen, United States Army; Capt. Herman J. Koehler, United States Army; and First Lieut. Philip Mathews, Coast Artillery Corps, is published for the information and government of the Regular Army and the Organized Militia of the United States.

In the preparation of this Manual the demands of the service and the facilities to meet these demands were constantly kept in mind.

The board also endeavored to treat the subject in a manner that would insure its successful application by all officers, thus making it possible to place this part of the soldier's training upon a permanent and uniform basis.

There is nothing in the education of the soldier of more vital importance than this, and while considerable has been accomplished by some commands in this respect in the past, it has, owing to the absence of any well-defined authorized method of procedure, lacked system and uniformity, without which the benefits to the service in general will continue to remain a negligible quantity.

The physical training of the enlisted men should, therefore, be carried out in accordance with the instructions laid down herein.

Officers to whom this work is intrusted will find the material the Manual affords and its arrangement more than ample to meet any condition. While a strict adherence to the text or the manner of its application is not necessarily to be insisted upon, departures from it that are at variance with its methods generally should not be encouraged.

By order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

EXTRACTS FROM MANUAL OF PHYSICAL TRAINING

THE OBJECT AND SCOPE OF PHYSICAL TRAINING IN THE SERVICE.

OBJECT.

The objects which a course in physical training in the service aim to attain are the development of the physical attributes of every individual to the fullest extent of his possibilities.

These, in order of their importance, may be summed up as follows:

- (a) General health and bodily vigor.
- (b) Muscular strength and endurance.
- (c) Self-reliance.
- (d) Smartness, activity, and precision.

It is upon the first of these, health and bodily vigor, that the development of all the other qualities so essential in a soldier are dependent, and for that reason the maintenance of robust health and the development of organic vigor should be considered the primary object of this training.

The tendency of the age is to treat all conditions of health from a pathological standpoint; and while much has been accomplished in the way of increasing the resistive powers of the human organism against the inroads of disease by means of inoculation and other methods of prevention, the development of the inherent power of resistance, which every individual possesses in a greater or lesser degree by means of natural physiological methods, has been much neglected.

It is not sufficient, however, for a soldier to be healthy; his profession demands that he possess more than the average amount of muscular strength and endurance in addition to good health, in order that he may be ready to exchange the comparative comforts of barrack life for the hardships of field service at any moment without diminishing his effectiveness. Hence, the preparatory training he receives must contain those elements that will enable him to do so successfully.

With robust health as a basis and with the knowledge that he is the possessor of more than average strength and endurance, he must be taught how to value the former and how to use the latter to the best advantage. By doing so he will unwittingly develop self-reliance, which, after all, is a physical quality, as it induces men to dare because of the consciousness to do.

Smartness, activity and precision are the physical expressions of mental activity. All are essential soldierly qualities, as they make for self-respect, neatness, and grace, which combined spell discipline. Precision and exactitude

should therefore always be insisted upon in the performance of all exercises prescribed.

In the endeavor to attain the objects referred to above the soldier will be the recipient of a course of training that can not fail to develop him harmoniously, and the liability of developing one portion of his body at the expense of another will be obviated.

SCOPE.

The material at the disposal of instructors embraces:

1. Setting-up exercises.
2. Marching at quick or double time and running.
3. Dumb-bell, club, and rifle exercises.
4. Climbing.
5. Jumping.
6. Apparatus work.
7. Gymnastic contests.
8. Athletics.
9. Swimming.
10. Boxing and wrestling.

Setting-up exercises are the foundation upon which the entire course of training in the service is based. Their importance can not be overestimated, as by means of them alone it is possible to effect an all-around development impossible of attainment by any other method. They should therefore form a very important part of every drill.

Marching in quick time and exercises calling into action the various parts of the body while marching tend to develop coördination, upon which to a great extent poise, posture, carriage, and rhythm are dependent. Marching in double time is a heart and lung developing exercise of moderate severity. Running, on the other hand, especially when continued for long periods, or at a high rate of speed, or when taken in conjunction with leg exercises, affects those organs in a very marked degree. Both double timing and running are invaluable in the development of endurance and organic vigor.

Dumb-bell exercises are closely allied to the setting-up exercises and differ from these only by the extra weight that is imposed by the bells, which should, however, never exceed 2 pounds.

Club exercises are of use principally as a means for the development of co-ordination and grace in the upper extremities; their weight, since muscular development is not aimed at, should not exceed 2 pounds.

Rifle exercises have for their object the development of "handiness" with the piece. Owing to the weight of the rifle they are powerful factors in the development of the muscles of the arms, upper back, shoulders, and chest, and when taken in conjunction with trunk and leg exercises they are excellent agents for the all-round development of those who possess the strength to wield the piece to advantage.

Climbing, on poles or ropes, when both arms and legs are used, brings into action nearly every muscle of the body and exerts considerable influence upon the heart. Where poles or ropes of sufficient length are used this exercise will also develop self-reliance.

Jumping, when indulged in as a gymnastic exercise, where a series of from 8 to 10 jumps of moderate length are executed successively, is essentially a leg and heart developing exercise. When form is insisted upon and the nature of the jump is varied by introducing various leg, arm, and trunk movements, it becomes a strong factor in the development of coördination.

Apparatus work should be supplementary to all other forms of training. The chief object of this work in the service should be to use it as a means for the development of the ability of the soldier to control his body while its weight is supported by or suspended from the arms and hands, in order to enable him to successfully overcome and surmount such obstacles as may present themselves during field service. The exercises composing this part of the training should, therefore, be confined to those that will develop the muscular strength of the entire body in general and that of the arms and legs in particular, and at the same time tend to make the soldier agile and active and teach him decision and self-reliance.

Gymnastic contests are the simpler forms of antagonistic gymnastics in which the participants are pitted against each other, and which never fail to induce the usual rivalry for superiority attending personal contests. Their chief value lies in the development of agility and quickness of thought and action. They are quite the most interesting of those exercises in which the effort is lost sight of in the desire to win.

Athletics, when employed for the sake of their value as a means for the development of large numbers, which should be the case in the service, have nothing in common with competitive athletics. In other words, their value lies entirely in their usefulness in the development of physical strength, endurance, skill, and not in the making or breaking of records.

Swimming is of vital importance to every one connected with the service, and it should be made obligatory upon all officers and enlisted men to make themselves proficient in it. Aside from its usefulness it is without doubt the best single means to all round physical development.

Boxing and wrestling, while not recommended as an obligatory part of the enlisted man's training, should still be encouraged at all times, not only on account of their value as a means to bodily development, but on account of the self-reliance and confidence they give to those who are proficient in them.

METHODS.

In the employment of the various forms of physical training enumerated above it is necessary that well-defined methods should be introduced in order that the object of this training may be attained in the most thorough and systematic manner. Whenever it is possible this work should be conducted out of doors. In planning these methods the following factors must be considered:

- (a) The condition and physical aptitude of the men.
- (b) The facilities.
- (c) The time.
- (d) Instruction material.

The question of the physical aptitude and general condition, etc., of the men is a very important one, and it should always determine the nature and extent of the task expected of them; never should the work be made the determining factor. In general, it is advisable to divide the men into three classes, viz., the recruit class, the intermediate class, and the advanced class. The work for each class should fit the capabilities of the members of that class and in every class it should be arranged progressively.

Facilities are necessarily to be considered in any plan of instruction, but as most posts are now equipped with better than average facilities the plan laid down in this Manual will answer all purposes.

Time is a decidedly important factor, and no plan can be made unless those in charge of this work know exactly how much time they have at their disposal.

During the suspension of drills five periods a week, each of 45 minutes' duration, should be devoted to physical training; during the drill period a 15-minute drill in setting-up exercises should be ordered on drill days. The time of day, too, is important. When possible, these drills should be held in the morning about two hours after breakfast, and at no time should they be held immediately before or after a meal.

The proper use of the instruction material is undoubtedly the most important part of an instructor's duty, for it not only means the selection of the proper material but its application. Every exercise has a function peculiarly its own; in other words, it has a certain effect upon a certain part of the body and plays a rôle in the development of the men. It is, therefore, the sum of these various exercises properly grouped that constitutes the method. So far as possible every lesson should be planned to embrace setting-up exercises that call into action all parts of the body, applied gymnastics, apparatus work, and exercises that develop coördination and skill, such as jumping and vaulting.

The best results are obtained when these exercises which affect the extensor muscles chiefly are followed by those affecting the flexors; i.e., flexion should always be followed by extension, or vice versa. It is also advisable that a movement requiring a considerable amount of muscular exertion should be followed by one in which this exertion is reduced to a minimum. As a rule, especially in the setting-up exercises, one portion of the body should not be exercised successively; thus, arm exercises should be followed by a trunk exercise, and that in turn by a leg, shoulder, or neck exercise.

The following program of a week's work illustrates the application of the instruction material as described above: each drill is of 45 minutes' duration.

FIRST DAY'S PROGRAM.

1. Marching in quick and double time (5 minutes).
2. Setting-up exercises (15 minutes).
3. Applied gymnastics, flexor work, horizontal bar (15 minutes).
4. Jumping exercises (8 minutes).
5. Trunk and arm stretching exercises in conjunction with breathing exercises (2 minutes).

SECOND DAY'S PROGRAM.

1. Exercises in marching, combined with arm and leg exercises (10 minutes).
2. Setting-up exercises, chiefly trunk exercises (5 minutes).
3. Applied gymnastics, extensor work, parallel bars (15 minutes).
4. Vaulting, low vaulting bars (15 minutes).
5. Stretching and breathing exercises (2 minutes).

THIRD DAY'S PROGRAM.

1. Marching in double and quick time (5 minutes).
2. Setting-up exercises, general work (15 minutes).
3. Applied gymnastics, flexor work, rings (15 minutes).
4. Jumping exercises (8 minutes).
5. Stretching and breathing exercises (2 minutes).

FOURTH DAY'S PROGRAM.

1. Running and walking (5 minutes).
2. Setting-up exercises, general work (10 minutes).
3. Applied gymnastics, extensor work, side horse (15 minutes).
4. Climbing (13 minutes).
5. Stretching and breathing exercises (2 minutes).

FIFTH DAY'S PROGRAM.

1. Marching quick time, running, and exercises while marching in quick time (10 minutes).

2. Setting-up exercises, trunk movements (5 minutes).

3. Applied gymnastics, flexor work, horizontal bar (15 minutes).

4. Vaulting, side horse vaults (13 minutes).

5. Stretching and breathing exercises (2 minutes).

Clubs, dumb-bells, bar bells, wands, or rifles may be substituted for the setting-up exercises occasionally, and the gymnastic contests may also be used in place of the jumping and vaulting exercises.

Large numbers may be employed in a body in the setting-up exercises and also in the exercises with the clubs, etc. In the applied or apparatus work, unless the facilities afford a sufficient number of the same kind of apparatus, it is advisable to divide the men into small squads.

Officers who have been placed in charge of this work must not for an instant lose sight of the fact that to them has been intrusted a part of the soldier's training which is of great importance, and that success or failure is dependent entirely upon themselves. Work as important as this is worthy of the best efforts, and it should never be intrusted to those who are not enthusiastic about it.

Whenever possible the officer in charge should conduct the work personally, as in no profession does the individuality and personal influence of a leader carry such weight as it does in the military.

A well-defined program should be mapped out before the drill begins, and this should be carried out faithfully. Every day's work should dovetail into the next and be progressive.

Instructors should not fail to do as much as possible themselves, as an example is always more impressive than a précept; it will also serve to keep the officer in fit condition.

Where commands are large, the athletic officer should be given officer assistants, whom he should train so that they may be able to carry out his program intelligently. If officers are not available, he should select likely enlisted men and train them to be leaders and capable of taking charge of a squad.

The work laid down in this manual should not be followed blindly; every instructor should select such portions, and if necessary vary them, as in his opinion are productive of the best results under the conditions under which he is laboring.

The work should be so conducted that the men are developed harmoniously; that is, any tendency to develop one side or one portion of the body at the expense of the other should be avoided.

Insist upon accurate and precise execution of every movement. By doing so those other essential qualities, besides strength and endurance—activity, agility, gracefulness, and accuracy—will also be developed.

Exercises which require activity and agility, rather than those that require strength only, should be selected.

It should be constantly borne in mind that these exercises are the means and not the end; and if there be a doubt in the mind of the instructor as to the effect of an exercise, it is always well to err upon the side of safety. Underdoing is rectifiable; overdoing is often not. The object of this work is not the development of expert gymnasts, but the development of physically sound men by means of a system in which the chances of bodily injury are reduced to a minimum. When individuals show a special aptitude for gym-

nastics they may be encouraged, within limits, to improve this ability, but never at the expense of their fellows.

The drill should be made attractive, and this can best be accomplished by employing the mind as well as the body. The movements should be as varied as possible, thus constantly offering the men something new to make them keep their minds on their work. A movement many times repeated presents no attraction and is executed in a purely mechanical manner which should always be discountenanced.

Short and frequent drills should be given in preference to long ones, which are liable to exhaust all concerned, and exhaustion means lack of interest and benefit. All movements should be carefully explained, and, if necessary, illustrated by the instructor.

The lesson should begin with the least violent exercises, gradually working up to those that are more so, then gradually working back to the simpler ones, so that the men at the close of the drill will be in as nearly a normal condition as possible.

When one portion of the body is being exercised, care should be taken that the other parts remain quiet so far as the conformation of the body will allow. The men must learn to exercise any one part of the body independent of the other parts.

Everything in connection with physical training should be such that the men look forward to it with pleasure, not with dread, for the mind exerts more influence over the human body than all the gymnastic paraphernalia that was ever invented.

Exercise should be carried on as much as possible in the open air; at all times in pure, dry air.

All the men except those excused by the post surgeon should be compelled to attend these drills.

Never exercise the men to the point of exhaustion. If there is evidence of panting, faintness, fatigue, or pain, the exercise should be stopped at once, for it is nature's way of saying "too much."

By constant practice the men should learn to breathe slowly through the nostrils during all exercises, especially while running.

A fundamental condition of exercise is unimpeded respiration. Proper breathing should always be insisted upon; "holding the breath" and breathing only when it can no longer be held is injurious. Every exercise should be accompanied by an unimpeded and if possible by an uninterrupted act of respiration, the inspiration and respiration of which depends to a great extent upon the nature of the exercise. Inhalation should always accompany that part of an exercise which tends to elevate and distend the thorax—as raising arms over head laterally, for instance; while that part of an exercise which exerts a pressure against the walls of the chest should be accompanied by exhalation, as for example, lowering arms laterally from shoulders or overhead.

If after exercising, the breathing becomes labored and distressed, it is an unmistakable sign that the work has been excessive. Such excessiveness is not infrequently the cause of serious injury to the heart and lungs, or to both. In cases where exercise produces palpitation, labored respiration, etc., it is advisable to recommend absolute rest, or to order such exercises that will relieve the oppressed and overtaxed organ. Leg exercises slowly executed will afford such relief; by drawing the blood from the upper to the lower extremities they equalize the circulation, thereby lessening the heart's action and quieting the respiration.

Never exercise immediately after a meal; digestion is more important at this time than extraneous exercise.

Never eat or drink immediately after exercise; allow the body to recover its normal condition first, and the most beneficial results will follow. If necessary, pure water, not too cold, may be taken in small quantities, but the exercise should be continued, especially if in a state of perspiration.

Never, if at all possible, allow the underclothing to dry on the body. Muscular action produces an unusual amount of bodily heat; this should be lost gradually, otherwise the body will be chilled; hence, after exercise, never remove clothing to cool off, but, on the contrary, wear some wrap in addition. In like manner, be well wrapped up on leaving the gymnasium.

Cold baths, especially when the body is heated, as in the case after exercising violently, should be discouraged. In individual instances such baths may appear apparently beneficial, or at least not injurious; in a majority of cases, however, they can not be used with impunity. Tepid baths are recommended. When impossible to bathe, the flannels worn while exercising should be stripped off, the body sponged with tepid water, and then rubbed thoroughly with coarse towels. After such a sponge the body should be clothed in clean, warm clothing.

Flannel is the best material to wear next to the body during physical drill, as it absorbs the perspiration, protects the body against drafts and in a mild manner excites the skin. When the conditions permit it the men may be exercised in the ordinary athletic costume, sleeveless shirt, flappers, socks, and gymnasium shoes.

COMMANDS—SETTING-UP EXERCISES.

COMMANDS.

There are two kinds of commands:

The preparatory indicates the movement to be executed.

The command of execution causes the execution.

In the command: 1. **Arms forward**, 2. **RAISE**, the words **Arms forward** constitute the preparatory command, and **Raise**, the command of execution. Preparatory commands are printed in black letter type, and those of execution in black letter capitals.

The tone of command is animated, distinct, and of a loudness proportioned to the number of men for whom it is intended.

The various movements comprising an exercise are executed by commands and, unless otherwise indicated, the continuation of an exercise is carried out by repeating the command, which usually takes the form of numerals, the numbers depending upon the number of movements that an exercise comprises. Thus, if an exercise consists of two movements, the counts will be one, two; or if it consists of eight movements, the counts will be correspondingly increased; thus every movement is designated by a separate command.

Occasionally, especially in exercises that are to be executed slowly, words rather than numerals are used, and these must be indicative of the nature of the various movements.

In the continuation of an exercise the preparatory command is explanatory, the command of execution causes the execution and the continuation is caused by a repetition of numerals denoting the number of movements required, or of words describing the movements if words are used. The numerals or words preceding the command **HALT** should always be given with a rising inflection on

the first numeral or word of command of the last repetition of the exercise in order to prepare the men for the command **HALT**.

For example:

1. Arms to thrust, 2. **RAISE**, 3. Thrust arms upward, 4. **EXERCISE, ONE, TWO, ONE, TWO, ONE, HALT**; the rising inflection preparatory to the command halt being placed on the "one" preceding the "halt."

Each command must indicate, by its tone, how that particular movement is to be executed; thus, if an exercise consists of two movements, one of which is to be energized, the command corresponding to that movement must be emphasized.

Judgment must be used in giving commands, for rarely is the cadence of two movements alike; and a command should not only indicate the cadence of an exercise, but also the nature of its execution.

Thus, many of the arm exercises are short and snappy; hence the command should be given in a smart tone of voice, and the interval between the commands should be short.

The leg exercises can not be executed as quickly as those of the arms; therefore, the commands should be slightly drawn out and follow one another in slow succession.

The trunk exercises, owing to the deliberateness of execution, should be considerably drawn out and follow one another in slow succession.

The antagonistic exercises, where one group of muscles is made to antagonize another, tensing exercises, the commands are drawn still more. In these exercises words are preferable to numerals. In fact it should be the object of the instructor to convey to the men, by the manner of his command, exactly the nature of the exercise.

All commands should be given in a clear and distinct tone of voice, articulation should be distinct, and an effort should be made to cultivate a voice which will inspire the men with enthusiasm and tend to make them execute the exercises with willingness, snap, and precision. It is not the volume, but the quality, of the voice which is necessary to successful instruction.

THE POSITION OF ATTENTION.

This is the position an unarmed dismounted soldier assumes when in ranks. During the setting-up exercises, it is assumed whenever the command **ATTENTION** is given by the instructor.

Having allowed his men to rest, the instructor commands: 1. **Squad**, 2. **ATTENTION**. Figs. A and B.

The words class, section, or company may be substituted for the word "squad."

At the command attention, the men will quickly assume and retain the following position:

Heels on same line and as near each other as the conformation of the man permits.

Feet turned out equally and forming an angle of about 45 degrees.

Knees straight without stiffness.

The body erect on the hips, the spine extended throughout its entire length.

The shoulders falling naturally, are forced back until they are square.

Chest arched and slightly raised.

The arms hang naturally; thumbs along seams of trousers; back of hands out and elbows turned back.

Head erect, chin drawn in so that the axis of the head and neck is vertical; eyes straight to the front and, when the nature of the terrain permits it, fixed on an object at their own height.

Too much attention can not be given to this position, and instructors are cautioned to insist that the men accustom themselves to it. As a rule, it is so exaggerated that it not only becomes ridiculous, but positively harmful. The men must be taught to assume a natural and graceful position, one from which all rigidity is eliminated and from which action is possible without first relaxing muscles that have been constrained in an effort to maintain the position of attention. In other words, coördination rather than strength should be depended upon.

In the position described the weight rests principally upon the balls of the feet, the heels resting lightly upon the ground.

The knees are extended easily, but never locked.

The body is now inclined forward until the front of the thighs is directly over the base of the toes; the hips are square and the waist is extended by the erection of the entire spine, but never to such a degree that mobility of the waist is lost.

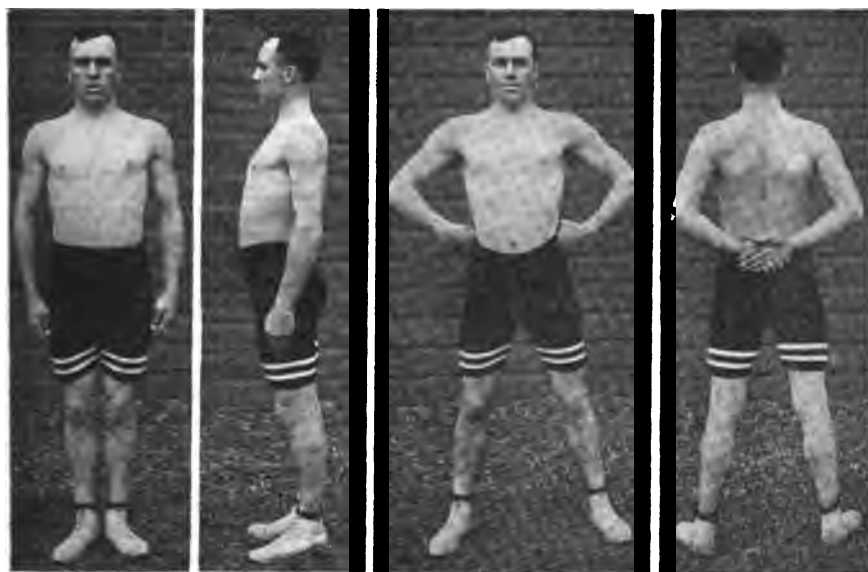


FIG. A.

FIG. B.

FIG. C.

FIG. D.

In extending the spine, the chest is naturally arched and the abdomen is drawn in, but never to the extent where it interferes with respiration.

In extending the spinal column, the shoulders must not be raised, but held loosely in normal position and forced back until the points of the shoulders are at right angles with an anterior-posterior plane running through the body.

The chin should be square; i.e., horizontal and forced back enough to bring the neck in a vertical plane; the eyes fixed to the front and the object on which they are fixed must be at their own height whenever the nature of the terrain permits it.

When properly assumed, a vertical line drawn from the top of the head should pass in front of the ear, just in front of the shoulder and of the thigh, and find its base at the balls of the feet.

All muscles should be contracted only enough to maintain this position, which at all times should be a lithesome one, that can be maintained for a long period without fatigue—one that makes for activity and that is based upon a correct anatomical and physiological basis.

Instructors will correct the position of attention of every man individually and they will ascertain, when the position has been properly assumed, whether the men are "on their toes," i.e., carrying the weight on the balls of the feet, whether they are able to respire properly. This position should be repeated until the men are able to assume it correctly without restraint or rigidity.

At the command rest or at ease the men, while carrying out the provisions of the drill regulations, should be cautioned to avoid assuming any position that has a tendency to nullify the object of the position of attention; as standing on one leg for instance; allowing the shoulders to slope forward; drooping the head; folding arms across chest, etc. The weight should always be distributed equally upon both legs; the head, trunk, and shoulders remain erect and the arms held in a position that does not restrict the chest or derange the shoulders. The positions illustrated here have been found most efficacious. Figs. C and D.

FORMATIONS.

The men form in a single or double rank, the tallest men on the right.

The instructor commands: 1. **Count off.**

At this command, all except the right file execute "eyes right" and, beginning on the right, the men in each rank count 1, 2, 3, 4; each man turns his head and eyes to the front as he counts.

The instructor then commands: 1. **Take distance**, 2. **MARCH**, 3. **SQUAD**, 4. **HALT.**

At the command march, No. 1 of the front rank moves straight to the front; Nos. 2, 3, and 4 of the front and Nos. 1, 2, 3, and 4 of the rear rank in the order named move straight to the front, each stepping off, so as to follow the preceding man at four paces; the command halt is given when all have their distances.

If it is desired that a less distance than four paces be taken, the distance desired should be indicated in the preparatory command. The men of the squad may be caused to cover No. 1 front rank by the command cover.

The instructor then commands: 1. **Right (left)**, 2. **FACE**, 3. **COVER.**

At these commands the men face in the direction indicated and cover in file.

To assemble the squad the instructor commands: 1. **Right (left)**, 2. **FACE**, 3. **Assemble**, 4. **MARCH.**

After facing and at command march, No. 1 of the front rank stands fast, the other members of both ranks resuming their original positions, or for convenience in the gymnasium they may be assembled to the rear, in which case the assemblage is made on No. 4 of the rear rank.

Unless otherwise indicated, the guide is always right.

SPECIAL TRAINING.

In addition to the regular squad or class work instructors should, when they notice a physical defect in any man, recommend some exercise which will tend to correct it.

The most common physical defects and corresponding corrective exercises are noted here.

DROOPING HEAD.

Exercise the muscles of the neck by bending, turning, and circling the head, muscles tense.

ROUND AND STOOPED SHOULDERS.

Stretch arms sideward from front horizontal, turning palms upward, muscles tense.

Swing arms forward and backward, muscles relaxed.

Circle arms forward and backward slowly, energize backward motion, muscles tense; forward motion with muscles relaxed.

Circle shoulders backward, move them forward first, then raise them; then move them backward as far as possible in the raised position, muscles tense, and then lower to normal position, muscles relaxed.

WEAK BACK.

Bend trunk forward as far as possible and erect it slowly.

Bend trunk forward, back arched and head thrown back.

Bend trunk sideward, without moving hips out of normal position, right and left.

Lie on floor, face down, and raise head and shoulders.

WEAK ABDOMEN.

Circle trunk right or left.

Bend trunk backward or obliquely backward.

Bend head and trunk backward without moving hips out of normal plane.

Lie on floor, face up, and raise head and shoulders slightly; or to sitting position or raise legs slightly; or to a vertical position.

TO INCREASE DEPTH AND WIDTH OF CHEST.

Arm stretchings, sideward and upward, muscles tense.

Same, with deep inhalations.

Arm swings and arm circles outward, away from the body.

Raise extended arms over head laterally and cross them behind the head.

Breathing exercises in connection with arm and shoulder exercises.

STARTING POSITIONS.

In nearly all the arm exercises it is necessary to hold the arms in some fixed position from which the exercise can be most advantageously executed, and to which position the arms are again returned upon completing the exercise. These positions are termed starting positions; and though it may not be absolutely necessary to assume one of them before or during the employment of any other portion of the body, it is advisable to do so, since they give to the exercise a finished, uniform, and graceful appearance.

In the following positions, at the command down, resume the attention. Practice in assuming the starting position may be had by repeating the commands of execution, such as raise, down.

Intervals having been taken and attention assumed, the instructor commands:

1. 1. **Arms forward**, 2. **RAISE**, 3. **Arms**, 4. **DOWN**. Fig. 1.

At the command raise, raise the arms to the front smartly, extended to their full length, till the hands are in front of and at the height of the shoulders, palms down, fingers extended and joined, thumbs under index fingers. At arms down, resume position of attention.

2. 1. **Arms sideward**, 2. **RAISE**, 3. **Arms**, 4. **DOWN**. Fig. 2.

At the command raise, raise the arms laterally until horizontal, palms down, fingers as in 1.

The arms are brought down smartly without allowing them to touch the body.

3. 1. **Arms upward**, 2. **RAISE**, 3. **Arms**, 4. **DOWN**. Fig. 3.

At the command raise, raise the arms from the sides, extended to their full length, with the forward movement, until they are vertically overhead, back of hands turned outward, fingers as in 1.

This position may also be assumed by raising the arms laterally until vertical. The instructor cautions which way he desires it done.

4. 1. **Arms backward**, 2. **CROSS**, 3. **Arms**, 4. **DOWN**. Fig. 4.

At the command cross, the arms are folded across the back; hands grasping forearms.

5. 1. **Arms to thrust**, 2. **RAISE**, 3. **Arms**, 4. **DOWN**. Fig. 5.

At the command raise, raise the forearms to the front until horizontal, elbow forced back, upper arms against the chest, hands tightly closed, knuckles down.

6. 1. **Hands on hips**, 2. **PLACE**, 3. **Arms**, 4. **DOWN**. Fig. 6.

At the command place, place the hands on the hips, the finger tips in line with trouser seams; fingers extended and joined, thumbs to the rear, elbows pressed back.



FIG. 1.



FIG. 2.

7. 1. **Hands on shoulders**, 2. **PLACE**, 3. **Arms**, 4. **DOWN**. Fig. 7.

At the command place, raise the forearms to the vertical positions, palms inward, without moving the upper arms; then raise the elbows upward and outward until the upper arms are horizontal; at the same time bending the wrist and allowing the finger tips to rest lightly on the shoulders.

8. 1. **Fingers in rear of head**, 2. **LACE**, 3. **Arms**, 4. **DOWN**. Fig. 8.

At the command lace, raise the arms and forearms as described in 7, and lace the fingers behind the lower portion of the head, elbows well up and pressed well back.

These positions should be practiced frequently, and instead of recovering the position of attention after each position, the instructor may change directly from one to another by giving the proper commands instead of commanding arms, down.

For instance: To change from the position described in paragraph 8 to that described in paragraph 9 (having commanded: 1. **Hands on shoulders**, 2. **PLACE**), he commands: 1. **Hands on hips**, 2. **PLACE**.

These changes should, however, be made only after the positions are thoroughly understood and correctly assumed.



FIG. 3.



FIG. 4.



FIG. 5.



FIG. 6.



FIG. 7.



FIG. 8.

SETTING-UP EXERCISES.

As has been stated previously (see par. 2), these exercises form the basis upon which the entire system of physical training in the service is founded. Therefore too much importance can not be attached to them. Through the number and variety of movements they offer it is possible to develop the body harmoniously with little if any danger of injurious results. They develop the muscles and impart vigor and tone to the vital organs and assist them in their functions; they develop endurance and are important factors in the development of smartness, grace, and precision. They should be assiduously practiced, and the fact that they require no apparatus of any description makes it possible to do this out of doors or even in the most restricted room, proper hygienic conditions being the only adjunct upon which their success is dependent. No physical training drill is complete without them. They should always precede the more strenuous forms of training, as they prepare the body for the greater exertion these forms demand.

The following series prescribed for the recruit and trained soldier's instruction is indicated here to illustrate the nature, amount, and arrangement of work that should be required of each class. At the discretion of instructors these exercises may be substituted by others of a similar character. Instructors are cautioned, however, to employ all the parts of the body in every lesson and to suit the exercise as far as practicable to the natural function of the particular part of the body which they employ.

In these lessons only the preparatory command is given here; the command of execution, which is invariably Exercise, and the commands of continuance, as well as the command to discontinue, having been explained in paragraph 6, are omitted.

Every preparatory command should convey a definite description of the exercise required; by doing so long explanations are avoided and the men will not be compelled to memorize the various movements.

RECRUIT INSTRUCTION.

FIRST SERIES.

1. Position of attention, from at ease and rest.

2. Starting positions, Par. 10, Figs. 1 to 8.

3. 1. **Raise and lower arms to side horizontal.**

Two counts; repeat 8 to 10 times, Fig. 2.

The arms rigidly extended are brought to the sides smartly without coming in contact with the thighs. Inhale on first and exhale on second count.

4. 1. **Hands on hips, 2. PLACE, 3. Quarter bend trunk forward.**

Two counts; repeat 8 to 10 times, Fig. 9.

The trunk is inclined forward at the waist about 45 degrees and then extended again; the hips are as perpendicular as possible; execute slowly; exhale on first and inhale and raise chest on second count.

5. 1. **Arms to thrust, 2. RAISE, 3. Raise shoulders.**

Two counts; repeat 8 to 10 times, Fig. 10.

The shoulders are raised as high as possible without deranging the position of the body or head and lowered back to position; execute briskly; inhale on first and exhale on second count.

6. 1. **Hands on hip, 2. PLACE, 3. Quarter bend knees.**

Two counts; repeat 8 to 10 times, Fig. 11.

The knees are flexed until the point of the knee is directly over the toes; whole foot remains on ground; heels closed; head and body erect; execute moderately fast, emphasizing the extension; breathe naturally.



FIG. 9.



FIG. 10.



FIG. 11.



FIG. 12.



FIG. 13.



FIG. 14.

7. 1. **Arms backward**, 2. **CROSS**, 3. **Rise on toes**.

Two counts; repeat 8 to 10 times, Fig. 12.

The body is raised smartly until the toes and ankles are extended as much as possible; heels closed; head and trunk erect; in recovering position heels are lowered gently; breathe naturally.

8. 1. **Breathing exercise**, 2. **INHALE**, 3. **EXHALE**.

At inhale the arms are stretched forward overhead and the lungs are inflated; at exhale the arms are lowered laterally and the lungs deflated; execute slowly; repeat four times.

SECOND SERIES.

1. Position of attention, as in first series.

2. Repeat first lesson.

3. 1. **Hands on shoulders**, 2. **PLACE**, 3. **Extend arms forward**.

Two counts; repeat 8 to 10 times.

The arms are extended forward forcibly, palms down, and brought back to position smartly, elbows being forced back; exhale on first and inhale on second count.



FIG. 15.



FIG. 16.



FIG. 17.

4. 1. **Hands on hips**, 2. **PLACE**, 3. **Bend trunk backward**.

Two counts; repeat 6 to 8 times, Fig. 13.

The trunk is bent backward as far as possible; head and shoulders fixed; knees extended; feet firmly on the ground; hips as nearly perpendicular as possible; in recovering care should be taken not to sway forward; execute slowly; inhale on first and exhale on second count.

5. 1. **Arms to thrust**, 2. **RAISE**, 3. **Move shoulders forward**.

Two counts; repeat 8 to 10 times, Fig. 14.

The shoulders are relaxed and moved forward and in as far as possible and then moved backward without jerking; head and trunk erect; execute slowly; exhale on first and inhale on second count.

6. 1. Arms backward, 2. CROSS, 3. Half bend knees.

Two counts; repeat 8 to 10 times, Fig. 15.

The knees are separated and bent halfway to the ground, point of knee being forced downward; head and trunk erect; execute smartly and emphasize the extension; breathe naturally.

7. 1. Hands on hips, 2. PLACE, 3. Half bend trunk forward.

Two counts; repeat 8 to 10 times, Fig. 16.

The trunk is inclined forward until it is at right angles to the legs, hips perpendicular; knees extended; head and shoulders fixed; execute moderately slow; exhale on first and inhale and raise chest on second count.

8. 1. Hands on shoulders, 2. PLACE, 3. Strike arms sideward.

The arms, knuckles down, hands closed, are flung outward forcibly and brought back to shoulders smartly; execute fast; breathe naturally.

9. Breathing exercise, as in first lesson.

THIRD SERIES.

1. Position of attention, as in first series.

2. Repeat second lesson.

3. 1. Raise arms overhead laterally.

Two counts; repeat 8 to 10 times, as in Fig. 3.



FIG. 18.



FIG. 19.



FIG. 20.

The arms, rigidly extended at the elbows, are raised overhead, palms inward, smartly, and brought down the same way; execute moderately fast; inhale on the first and exhale on the second count.

4. 1. Hands on hips, 2. PLACE, 3. Bend trunk sideward, right or left.

Two counts; repeat 6 to 8 times, Fig. 17.

The trunk, stretched at the waist, is inclined sideward as far as possible; head and shoulders fixed; knees extended and feet firmly on the ground; execute slowly; inhale on first and exhale on second count.

5. 1. **Arms to thrust**, 2. **RAISE**, 3. **Bend head forward and backward.**

Four counts; repeat 6 to 8 times, Fig. 18.

The chin is drawn in and the head bent forward, back muscles of neck being stretched upward; shoulders remain fixed; in recovering the muscles are relaxed; execute slowly; inhale and raise chest on first and exhale on second count. In bending the head backward the muscles of the neck are stretched upward; breathe as before.

6. 1. **Curl shoulders forward.**

Two counts; repeat 6 to 8 times, Fig. 19.

The shoulders relaxed are rolled forward as far as possible, arms being rotated forward; they are then rolled backward and the arms are rotated backward; execute slowly; exhale on first and inhale on second count.

7. 1. **Hands on hips**, 2. **PLACE**, 3. **Full bend knees.**

Two counts; repeat 6 to 8 times, Fig. 20.

The knees are separated and bent as much as possible; point of knees forced forward and downward; heels together; trunk and head erect; execute slowly; breathe naturally.

8. 1. **Hands in rear of head**, 2. **LACE**, 3. **On toes**, 4. **RISE**, 5. **ROCK.**

Two counts; repeat 6 to 8 times.

The body is raised on toes and then by short and quick extensions and flexions of the toes it is lowered and raised knees extended; heels together and free from the ground; breathe naturally.

9. Breathing exercise as in first lesson.

FOURTH SERIES.

1. Repeat third series.

2. 1. **Arms to thrust**, 2. **RAISE**, 3. **Thrust arms forward.**

Two counts; repeat 8 to 10 times, Fig. 21.

The arms, knuckles up, are thrust forward forcibly; in recovering the elbows are forced back; execute moderately fast; exhale on first and inhale on the second count.

3. 1. **Hands on shoulders**, 2. **PLACE**, 3. **Twist trunk sideward, right or left.**

Two counts; repeat 6 to 8 times, Fig. 22.

The trunk is turned to the right or left as far as possible; hips as nearly perpendicular as possible; shoulders square and head erect; knees extended and feet firm; execute slowly; inhale on first and exhale on second count.

4. 1. **Arms to thrust**, 2. **RAISE**, 3. **Turn head right, or left.**

Two counts; repeat 6 to 10 times, Fig. 23.

The head, chin square, is turned to the right, or left, as far as possible, muscles of the neck being stretched; shoulders remain square; execute slowly; breathe naturally.

5. 1. **Hands on hips**, 2. **PLACE**, 3. **Raise knee.**

Two counts; repeat 10 to 12 times, Fig. 24.

The thigh and knee are flexed until they are at right angles, thigh horizontal; toes depressed; the right knee is raised at one and the left at two; trunk and head erect; execute in cadence of quick time; breathe naturally.

6. 1. **Fingers in rear of head**, 2. **LACE**, 3. **Full bend trunk forward. FORWARD.**

Two counts; repeat 6 to 8 times, Fig. 25.

The trunk is bent forward as far as possible; knees extended; feet firm; head and shoulders fixed; execute slowly; exhale on first and inhale on second count.



FIG. 21.



FIG. 22.



FIG. 23.



FIG. 24.



FIG. 25.

7. 1. **Hands on hips**, 2. **PLACE**, 3. **On toes**, 4. **RISE**, 5. **HOP**.

Two counts; repeat 12 to 16 times.

The body is raised on toes and the hopping is performed with knees extended; execute fast; breathe naturally.

8. Breathing exercise, as in first lesson.

FIFTH SERIES.

1. Repeat fourth series.

2. 1. **Arms forward**, 2. **RAISE**, 3. **Stretch arms sideward**.

Two counts; repeat 6 to 8 times, Fig. 26.

From the front horizontal the arms are extended to their fullest extent and then stretched sideward, the arms rotating till the palms are up; the sideward movement is performed slowly; the recovery relaxed and quick; inhale on first and exhale on the second count.



FIG. 26.



FIG. 27.

3. 1. **Hands on hips**, 2. **PLACE**, 3. **Bend trunk obliquely forward, right or left**.

Two counts; repeat 4 to 8 times, Fig. 27.

The trunk is turned to the right and bent forward to the half-bend position; shoulders remain square, in the plane of the ground; head fixed; knees straight; feet firm; hips as nearly perpendicular as possible; execute slowly; exhale on the first and inhale and raise chest on second count.

4. 1. **Arms to thrust**, 2. **RAISE**, 3. **Extend leg forward**.

Two counts; repeat 8 to 10 times, Fig. 28.

The knee and ankle are extended forward with a snap, the toes just escaping the ground; all extensor muscles contracted; in recovering relax; trunk and head erect; execute briskly; breathe naturally.

5. 1. **Hands on shoulders**, 2. **PLACE**, 3. **Move elbows forward**.

Two counts; repeat 8 to 10 times. Fig. 29.

The elbows are brought together horizontally in front and then forced back as far as possible; the forward movement relaxed, the backward a stretch not

a jerk; execute moderately fast; exhale on the first and inhale on the second count.

6. 1. Hand on hips, 2. **PLACE**, 3. Bend trunk forward and backward.

Two counts; repeat 6 to 8 times.

Bend trunk forward to the half-bend position (Fig. 16), and then backward (Fig. 13); execute slowly; exhale on first and inhale on second count.

7. 1. Arms backward, 2. **CROSS**, 3. Rise on toes, right and left alternately.

Four counts; repeat 10 to 12 times, Fig. 30.



FIG. 28.



FIG. 29.



FIG. 30.

The body is extended on the toes of the right foot and then on those of the left; heels closed; trunk and head erect; execute moderately fast; breathe naturally.

8. Breathing exercise, as in first lesson.

SIXTH SERIES.

1. Repeat fifth series.

2. 1. Arms forward overhead, 2. **RAISE**, 3. Swing arms downward and upward.

Two counts; repeat 8 to 10 times, Fig. 31.

3. 1. Arms sideward overhead, 2. **RAISE**, 3. **Fingers**, 4. **LACE**, 5. Bend trunk sideward, right and left.

Two counts; repeat 6 to 8 times, Fig. 32.

The arms are fully extended and the body, stretched at waist, is bent sideward to the right and left; knees straight; feet firm; head erect; execute slowly; breathe naturally.

4. 1. Knees to squatting position, hands on hips, 2. **BEND**, 3. Rock on knees.

Two counts; repeat 6 to 8 times.

The knees are bent as in Fig. 20; extend and bend the knees in quick succession; trunk and head erect; heels closed; execute moderately fast; breathe naturally.

5. 1. **Arms to thrust**, 2. **RAISE**, 3. **Move shoulders forward, up, back, and down.**

Four counts; repeat 8 to 10 times.

The shoulders are relaxed and brought forward; in that position they are raised; then they are forced back without lowering them; and then they are dropped back to position; execute slowly; exhale on the first; inhale on the second and third and exhale on the last count.

6. 1. **Arms to thrust**, 2. **RAISE**, 3. **Thrust arms forward; swing them side-ward, forward, and back to position.**

Four counts; repeat 8 to 10 times.

The arms are thrust forward, then relaxed and swung sideward, then forward and finally brought back to position, pressing elbows well to the rear; execute moderately fast; exhale on the first and third and inhale on the second and fourth counts.

7. 1. **Hop to side straddle and swing arms over head laterally and recover position of attention.**

Two counts; repeat 8 to 10 times, Fig. 33.



FIG. 31.



FIG. 32.



FIG. 33.

The distance between the legs is about 30 inches; in alighting the toes come in contact with the ground first and knees are bent slightly; trunk and head erect; arms extended; execute moderately fast; breathe naturally.

8. **Breathing exercise**, as in first lesson.

TRAINED SOLDIERS' INSTRUCTION.

FIRST SERIES.

1. 1. **Stretch arms forward, sideward, forward and down.**

Four counts; repeat 6 to 8 times.

The arms, stretched to their utmost, are raised forward horizontally, then moved sideward, knuckles down; in returning and lowering the arms the

muscles are relaxed; trunk and head erect; execute first two motions slowly; second two moderately fast; inhale on first and second, and exhale on third and fourth counts.

2. 1. Hands on shoulders, 2. PLACE, 3. Half bend trunk forward and extend arms sideward.

Two counts; repeat 6 to 8 times, Fig. 34.



FIG. 34.



FIG. 35.

The trunk is bent as in Fig. 16, and arms are extended forcibly; in the recovery the elbows are forced back and the chest raised; execute slowly; exhale on first, inhale on second count.

3. 1. Hands on hips, 2. PLACE, 3. Full bend knees and extend arms sideward. Two counts; repeat 6 to 8 times, Fig. 35.

The knees are bent as in Fig. 20, and arms are extended sideward forcibly; execute moderately slow; breathe naturally.

4. 1. Arms sideward, 2. RAISE, 3. Roll shoulders and arms forward and back. Two counts; repeat 6 to 10 times, Fig. 36.

The arms are rotated and the shoulders rolled forward and backward as far as possible; execute slowly; exhale on first and inhale and raise chest on second count.

5. 1. Hands on shoulders, 2. PLACE, 3. Twist trunk sideward right, or left, and extend arms sideward.

Two counts; repeat 6 to 8 times, Fig. 37.

The trunk is twisted as in Fig. 22; execute moderately fast; inhale on the first and exhale on the second count.

6. 1. Raise arms and right or left leg forward, move arms sideward and leg backward; move arms and leg forward and recover.

Four counts; repeat 8 to 10 times, Fig. 38.

On the first count, the arms and legs are raised forward, arms horizontal, leg extended; toes depressed; foot at height of knee; on the second count the arms are moved smartly to side horizontal and the leg is moved backward, knee and



FIG. 36.



FIG. 37.



FIG. 38.



FIG. 39.

toes extended; at three the first position is assumed and at four the position of attention; execute moderately fast; inhale on first two and exhale on last two counts.

7. 1. Forearms vertically, 2. RAISE, 3. Extend arms upward and raise on toes; resume vertical position; and recover position of attention.

Four counts; repeat 8 to 10 times, Fig. 39.

The forearms are raised vertically at one; at two they are extended upward and the body is raised on toes; at three the first position is assumed, and at four the position of attention; execute briskly; inhale on first two and exhale on last two counts.

8. Breathing exercise.

SECOND SERIES.

1. Repeat first series.

2. 1. Arms to thrust, 2. RAISE, 3. Thrust arms upward, swing downward and backward, swing upward and recover.

Four counts; repeat 6 to 10 times, Fig. 40.



FIG. 40.



FIG. 41.

The arms are thrust upward forcibly at one; at two the arms, relaxed, are swung downward to the front and back as far as possible; at three they are swung upward, and at four the position of attention is resumed; trunk and head erect; knees extended; execute moderately fast; inhale on first three and exhale on last count.

3. 1. Hands on shoulders, 2. PLACE, 3. Bend trunk backward and extend arms sideward, knuckles up.

Two counts; repeat 6 to 8 times, Fig. 41.

The trunk is bent backward as in Fig. 13, and the arms, knuckles down, are extended to the side horizontal; head fixed; knees extended; feet firm; execute slowly; inhale on first and exhale on second count.

4. 1. Full bend knees and raise arms, knuckles down, to side horizontal, 2. BEND, 3. Rock, and circle arms backward.

Two counts; repeat 6 to 10 times, Fig. 42.

The knees, bent to the squatting position, are slightly extended and flexed as in Exercise 4, Sixth Lesson, Recruit Instruction, and the arms are circled backward in circles of about 12 inches; head and trunk erect; arms extended; execute moderately fast; breathe naturally.

5. 1. Hands on hips, 2. PLACE, 3. Circle trunk right, or left.

Six counts; repeat 4 to 6 times, Fig. 43.

The trunk is half bent forward at one; at two it is moved to the right side bend position; at three to the back bend; at four to the left bend; at five to the front bend position and raised at six; knees extended; feet firm; head fixed; execute slowly; exhale on first; inhale on second; hold breath on third and fourth; exhale on fifth and inhale on sixth count.



FIG. 42.

6. 1. Hands on hips, 2. PLACE, 3. Swing right and left leg forward, breast high, and extend right and left arm forward horizontally, alternating right and left.

Four counts; repeat 6 to 10 times, Fig. 44.

The right leg, knee extended, is swung forward high enough to come in contact with the hand; supporting leg extended; body inclined as little as possible; execute moderately fast; breathe naturally.

7. 1. Leaning rest in four counts.

Repeat 6 to 8 times, Fig. 45 a and b.

At one knees are bent to squatting position, hands on the ground between knees; at two the legs are extended backward to the leaning rest; at three the first position is resumed, and at four the position of attention; hands should be directly under shoulders; back arched; knees straight; head fixed; execute moderately fast; breathe naturally.

8. Breathing exercise.



FIG. 43.



FIG. 44.



FIG. 45a.

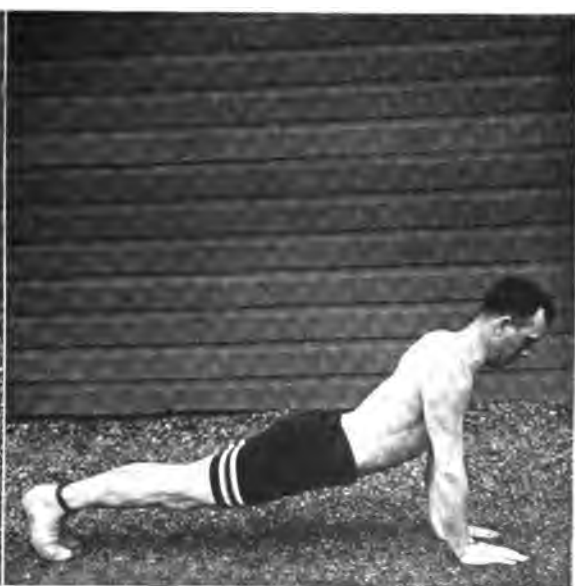


FIG. 45b.

THIRD SERIES.

1. Repeat second series.

2. 1. **Stretch arms forward, sideward, upward, sideward, forward, and down.** Six counts; repeat 6 to 10 times.

First five counts arms are extended as much as possible; in the last they are relaxed; execute slowly; inhale on first three counts and exhale on last three.

3. 1. **Half bend trunk forward and rotate arms inward; raise and bend trunk backward, raising and rotating arms backward, palms up; resume first position and recover.**

Four counts; repeat 4 to 8 times, Fig. 46.

In the first position the body and arms are relaxed; in the second the body and arms are tense (Fig. 41); the third position is the same as the first, and at four the position of attention is resumed; execute slowly; exhale on first and third and inhale on second and fourth counts.



FIG. 46.



FIG. 47.



FIG. 48.

4. 1. **Hands on hips, 2. PLACE, 3. Rise on toes, bend knees to squatting position; extend knees and recover.**

Four counts; repeat 6 to 8 times.

The body is raised on toes slowly at one; at two the knees are bent slowly to squatting position; at three they are extended slowly and at four the starting position is resumed; execute slowly; breathe naturally.

5. 1. **Hop to side straddle position, hands on hips, bend trunk forward and extend arms downward, fingers touching ground; resume straddle with hands on hips and hop to attention.**

Four counts; repeat 6 to 8 times, Fig. 47.

Execute moderately fast; breathe naturally.

6. 1. **Arms to thrust, 2. RAISE, 3. Thrust arms forward; swing right (left) arm up, left, (right) down; swing to front horizontal and recover.**

Four counts, or alternating in eight counts; repeat 8 to 10 times, Fig. 48.

The thrust and recovery are forcible, the swings brisk but relaxed; execute

moderately fast; exhale on first and third count and inhale on second and fourth.

7. 1. **Step position forward right, or left, and raise arms to front horizontal; lunge forward and swing arms to side horizontal; resume first position and recover position of attention.**

Four counts; repeat 6 to 10 times, Fig. 49 a and b.

The right foot, knee extended and toes depressed, is moved forward once its length, the toes resting on the ground lightly, the weight resting on the left leg, and the arms are raised to the front horizontal, at one; at two the right foot is advanced and planted smartly, the distance between heels being about 3-foot lengths, and the arms are swung to side horizontal; right knee is well bent, left extended; trunk and head erect; at three the first position, and at four



FIG. 49a.



FIG. 49b.

the position of attention are resumed; execute moderately fast; exhale on first and third and inhale on second and fourth counts.

8. **Breathing exercise.**

FOURTH SERIES.

1. Repeat third series.

2. 1. **Hands on shoulders, 2. PLACE, 3. Extend arms upward; swing arms downward laterally, upward laterally, and recover starting position.**

Four counts; repeat 6 to 10 times.

The first and fourth motions are energetic; the second and third relaxed; execute moderately fast; inhale on first and third counts and exhale on second and fourth.

3. 1. **To side straddle with arms overhead, 2. Hop, 3. Bend trunk forward and back and swing arms downward and upward.**

Two counts; repeat 6 to 8 times, Fig. 50.

Being in the straddle position, the body is bent forward as far as possible and the arms are swung between the legs; the arms are then swung upward and the

body bent backward; knees extended; execute moderately fast; exhale on first and inhale on second count.

4. 1. Arms to thrust, 2. **RAISE**, 3. Thrust arms sideward and lunge sideward right and left alternately.

Four counts; repeat 8 to 10 times, Fig. 51.

The starting position is resumed at two and four; the distance of the lunge is three times the length of the feet; supporting leg extended; head and trunk erect; execute moderately fast; inhale on first and third and exhale on second and fourth counts.

5. 1. Hands on shoulders, 2. **PLACE**, 3. Bend trunk sideward right and extend left arm obliquely upward and right obliquely downward; swing trunk sideward left and right and recover.

Four counts; repeat 6 to 8 times, Fig. 52.



FIG. 50.



FIG. 51.



FIG. 52.

The trunk is bent to the right, the left arm, palm down, is extended obliquely upward and the right arm obliquely downward, at one; at two the body is bent to the left; at three to the right and at four the starting position is resumed; arms extended; knees straight; head fixed; execute moderately fast; breathe naturally.

6. 1. To squatting position, hands on ground, 2. **BEND**, 3. Extend right and left legs backward, alternately.

Four counts; repeat 6 to 10 times, Fig. 53.

The squatting position is the starting position, from there the right and left legs are extended backward and brought back to the squatting position again; execute moderately fast; breathe naturally.

7. 1. Hands on shoulders, 2. **PLACE**, 3. Extend arms sideward and swing right and left legs sideward, alternately.

Four counts; repeat 8 to 10 times, Fig. 54.

The legs are extended and swung loosely to the side as high as possible, arms being extended with each leg movement; execute moderately fast; inhale on one and three and exhale on two and four.

8. Breathing exercise.



FIG. 53.



FIG. 54.

FIFTH SERIES.

This series is composed of three groups, each group containing four exercises, and together they form a combination which can be adapted to music.

Each exercise is composed of four movements and should be repeated four times, twice to the right and twice to the left; alternately, except the last, which is repeated in the same direction. The third position always corresponds to the first, and the fourth to the position of attention.

When performed to music it is advisable to employ "two-four" time, allowing two beats to every movement, or four measures to an exercise, the action occurring on the first beat and a pause in position during the second beat. If this is done and the tempo is made to suit the movements, it will be possible to execute the exercises with precision and vigor, and slurring a movement for the sake of keeping time will be eliminated. Every group should be preceded by an introduction of four measures.

FIRST GROUP.**FIRST EXERCISE.**

Counts.

- 1—2. Raise arms overhead laterally and step position forward right. Fig. 55.
- 3—4. Lunge forward right and swing the arms downward and backward laterally. Fig. 56.
- 5—6. Resume first position.
- 7—8. Resume position of attention. Repeat left, right, left.



FIG. 55.



FIG. 56.

Counts.

SECOND EXERCISE.

- 1—2. Raise right arm obliquely upward to the right, and left arm obliquely backward to the left, and step position forward to the right with the right foot. Fig. 57.
- 3—4. Lunge obliquely forward to the right and swing right arm downward to the rear, and left arm obliquely upward, Fig. 58.
- 5—6. Resume first position.
- 7—8. Resume position of attention. Repeat left, right, left.



FIG. 57.



FIG. 58.



FIG. 59.



FIG. 60.

Counts.

THIRD EXERCISE.

1—2. Flex arms over shoulders with lateral motion, knuckles to the rear, hands closed, and step position sideward right. Fig. 59.

3—4. Lunge sideward right and extend arms to side horizontal, knuckles to the rear. Fig. 60.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.



FIG. 61.



FIG. 62.

Counts.

FOURTH EXERCISE.

1—2. Raise arms to side horizontal and step position backward right. Fig. 61.

3—4. Lunge backward right and raise arms overhead, knuckles out. Fig. 62.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.

SECOND GROUP.

Counts.

FIRST EXERCISE.

1—2. Lunge forward right and raise arms to side horizontal. Fig. 63.

3—4. Bend trunk forward and move arms downward. Fig. 64.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.

Counts.

SECOND EXERCISE.

1—2. Lunge sideward right and raise right arm obliquely upward, and left arm obliquely downward. Fig. 65.

3—4. Bend trunk sideward right and swing left arm upward, knuckles out, and right arm downward in rear of body, knuckles out. Fig. 66

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.



FIG. 63.



FIG. 64.



FIG. 65.



FIG. 66.

Counts.

THIRD EXERCISE.

1—2. Lunge obliquely forward to the right, and raise arms overhead laterally. Fig. 67.

3—4. Bend trunk forward and swing arms downward and upward. Fig. 68.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.

Counts.

FOURTH EXERCISE.

1—2. Lunge backward right and raise arms to side horizontal, knuckles up. Fig. 69.

3—4. Bend trunk and head backward and raise arms overhead, palms in. Fig. 70.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.



FIG. 67.



FIG. 68.

THIRD GROUP.

Counts.

FIRST EXERCISE.

1—2. Stride forward right and flex arms over shoulders laterally, hands closed, knuckles up. Fig. 71.

3—4. Face to the left on both heels, bending knees and striking arms side-ward, knuckles down. Fig. 72.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.

Counts.

SECOND EXERCISE.

1—2. Stride sideward right and raise and circle arms outward, crossing them below. Fig. 73.

3—4. Bend right knee and trunk obliquely forward, clasp thigh with arms. Fig. 74.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.



FIG. 69.



FIG. 70.



FIG. 71.



FIG. 72.



FIG. 73.



FIG. 74.

Counts.

THIRD EXERCISE.

1—2. Stride backward right, and raise arms overhead laterally, palms in. Fig. 75.

3—4. Turn about on both heels, bend left knee and trunk backward and lower arms to side horizontal, palms up. Fig. 76.

5—6. Resume first position.

7—8. Resume position of attention. Repeat left, right, left.

Counts.

FOURTH EXERCISE.

1—2. Bend to the squatting position, hands on the ground. Same as Fig. 45a.

3—4. Extend to the leaning-rest with legs straddled. Fig. 77.

5—6. Resume first position.

7—8. Resume position of attention. Repeat four times.

[Note: Length of stride in these exercises should be 28 inches between heels.]

HOPPING EXERCISES.

Hopping is executed by raising the body on the balls of the feet and forcing the body from the ground by a series of quick extensions of the toe and ankle joints; knees remain easily extended, heels together and free from the floor.

Having assumed a position for the arms, the instructor commands: 1. **On toes**, 2. **RISE**, 3. **HOP**.

At the command hop execute one spring, alighting on the balls of the feet. Continue by repeating one, two.

1. Hop and turn to the right or left at every second, fourth, or sixth hop.

2. Hop and turn about at every second, fourth, or sixth hop.

3. Hop to side straddle in four and return to attention in four hops.

4. Hop to side straddle and continue to hop in that position.

5. Hop to side straddle in one hop and return to attention in next hop.

6. Hop to cross straddle and return to attention in next hop.

7. Hop on right leg and extend left leg forward, sideward, or backward.

8. Hop on left leg and extend right forward, sideward, or backward.

9. Hop four times on right leg, and then change and hop four times on left leg, extending the unemployed leg forward, sideward, or backward.

10. Same as in 9, hopping twice on each leg.

11. Same as in 9, hopping once on each leg.

12. Hop forward, sideward, or backward.

LEAPING.

Leaping or jumping as a setting-up exercise has for its object the raising of the body from 8 to 12 inches from the ground; there is, however, no gaining of ground as in gymnastic or athletic jumping.

At the first command, the arms are raised to the front horizontal and the body is elevated on the toes.

At the command leap, the arms are swung downward and backward and the knees are slightly bent; without pausing the arms are swung forward again and as they pass through the vertical plane the knees are extended and the body is forced from the floor.

The moment the feet leave the floor the knees are extended; feet are closed and toes depressed; the arms are in the front horizontal; the back is arched and the head is erect.

In alighting, the balls of the feet touch the floor first, knees slightly bent; the latter are quickly extended, however, and the arms brought down by the sides and the position of attention is assumed.

Continue by repeating leap.



FIG. 75.



FIG. 76.



FIG. 77.

LEAPING EXERCISES.

1. Leap and execute a quarter turn to the right or left.
2. Leap and execute a half turn to the right or left.
3. Leap and straddle legs sideward (legs are closed) before alighting.
4. Leap and cross straddle, right or left leg forward.
5. Leap and cross legs, right over left or left over right.
6. Leap and raise heels.
7. Leap and raise knees.
8. Leap and strike feet together.
9. Leap and strike feet together twice.
10. Leap and strike feet together three times.
11. Leap and cross and recross legs.
12. Leap and raise heels and touch them with hands.
13. Leap and swing arms sideward.
14. Leap and swing arms upward.
15. Leap and circle arms forward.
16. Leap and circle arms backward.
17. Leap and circle arms inward.
18. Leap and circle arms outward.
19. Leap and swing arms upward and execute a whole turn.

WALKING AND MARCHING.

The length of the full step in quick time is 30 inches, measured from heel to heel, and the cadence is at the rate of 120 steps per minute.

Proper posture and carriage have ever been considered very important in the training of soldiers. In marching, the head and trunk should remain immobile, but without stiffness; as the left foot is carried forward the right forearm is swung forward and inward obliquely across the body until the thumb, knuckles being turned out, reaches a point about the height of the belt plate. The upper arm does not move beyond the perpendicular plane while the forearm is swung forward, though the arm hangs loosely from the shoulder joint. The forearm swing ends precisely at the moment the left heel strikes the ground; the arm is then relaxed and allowed to swing down and backward by its own weight until it reaches a point where the thumb is about the breadth of a hand to the rear of the buttocks. As the right arm swings back the left arm is swung forward with the right leg. The forward motion of the arm assists the body in marching by throwing the weight forward and inward upon the opposite foot as it is planted. The head is held erect; body well stretched from the waist; chest arched, and there should be no rotary motion of the body about the spine.

As the leg is thrown forward the knee is smartly extended, the heel striking the ground first.

The instructor having explained the principles and illustrated the step and arm swing, commands: 1. **Forward**, 2. **MARCH**—and to halt the squad he commands: 1. **Squad**, 2. **HALT**.

In executing the setting-up exercises on the march the cadence should at first be given slowly and gradually increased as the men become more expert; as some exercises require a slow and others a faster pace, it is best in these cases to allow the cadence of the exercise to determine the cadence of the step.

The men should march in a single file at proved intervals. The command that causes and discontinues the execution should be given as the left foot strikes the ground.

On the march, to discontinue the exercise, command: 1. **Quick time**, 2. **MARCH**, instead of halt, as when standing.

All of the arm, wrist, finger, and shoulder exercises, and some of the trunk and neck, may be executed on the march by the same commands and in the same manner as when standing.

The following leg and foot exercises are executed at the command march; the execution always beginning with the left leg or foot.

1. 1. **On toes**, 2. **MARCH**.
2. 1. **On heels**, 2. **MARCH**.
3. 1. **On right heel and left toe**, 2. **MARCH**.
4. 1. **On left heel and right toe**, 2. **MARCH**.
5. 1. **On toes with knees extended**, 2. **MARCH**.
6. 1. **Swing extended leg forward, ankle high**, 2. **MARCH**.
7. 1. **Swing extended leg forward, knee high**, 2. **MARCH**.
8. 1. **Swing extended leg forward, waist high**, 2. **MARCH**.
9. 1. **Swing extended leg forward, shoulder high**, 2. **MARCH**.
10. 1. **Raise heels**, 2. **MARCH**.
11. 1. **Raise knees, thigh horizontal**, 2. **MARCH**.
12. 1. **Raise knees, chest high**, 2. **MARCH**.
13. 1. **Circle extended leg forward, ankle high**, 2. **MARCH**.
14. 1. **Circle extended leg forward, knee high**, 2. **MARCH**.
15. 1. **Circle extended leg forward, waist high**, 2. **MARCH**.
16. 1. **Swing extended leg backward**, 2. **MARCH**.
17. 1. **Swing extended leg sideward**, 2. **MARCH**.
18. 1. **Raise knee and extend leg forward**, 2. **MARCH**.
19. 1. **Raise heels and extend leg forward**, 2. **MARCH**.

STEPS.

In the steps, the rules given above apply, viz., the command march given as the left foot strikes the ground, determines the execution, which always begins with the left foot, and is continued until the command: 1. **Quick time**, 2. **MARCH**, is given, when the direct step is resumed.

The different steps are executed at the following commands:

1. **Cross step**, 2. **MARCH**.

As the legs move forward they are crossed. The body does not turn.

1. **Halting step**, 2. **MARCH**.

The left foot is advanced and planted; the right foot is brought directly in rear of the left, resting on the ball only; the right is then advanced and planted and the left brought up, and so on.

1. **Foot-balancing step**, 2. **MARCH**.

The left foot is advanced and planted; the right foot is brought up beside it, heels touching; the body is then raised on the toes and lowered. The right foot is then advanced and planted and the left brought up, and so on.

1. **Continuous change step**, 2. **MARCH**.

The left foot is advanced and planted; the toes of the right are then advanced near the heel of the left in the halting step; the left foot is then advanced about half a step (15 inches) and the right foot is advanced with the full step and planted; the toes of the left foot are then brought up to the heel of the right foot, which advances a half step, when the left foot is advanced a full step, and so on.

1. **Knee-rocking step**, 2. **MARCH**.

As each foot is planted it is accompanied by a slight bending and extension

in the corresponding knee, the other leg remaining fully extended, heel raised.

1. Lunging step, 2. MARCH.

The length of the step is 45 inches, the knee in advance being well bent; the other leg remaining fully extended, heel raised; trunk erect.

1. Leg-balance step, 2. MARCH.

The left foot is advanced, ankle high; it is then swung backward and forward and planted, the body during the swing balancing on the right leg. The right foot is then advanced, swung backward and forward and planted, and so on.

1. Body-balance step, 2. MARCH.

The left foot is advanced, ankle high, body being bent slightly to the rear; the left foot is then swung backward, body being bent slightly to the front; the same foot is then swung forward again and planted, the body in the meantime becoming erect. This is repeated with the right foot, and so on.

1. Heel-and-toe step, 2. MARCH.

The left foot is advanced and allowed to rest on the heel; it is then swung backward and allowed to rest on the toes; it is once more advanced and planted. This is repeated with the right foot, and so on.

1. Cross step, raising knees, 2. MARCH.

Execute the cross step and raise the knees. The cross step may also be executed in combination with the swings of the extended leg.

The change step may be combined with the following: Cross step, halting step, raising knees, foot-rocking step, on toes, raising heels, swinging and circling legs, heel and toe step. These may also be combined with the change step hop.

1. Continuous change step hop, 2. MARCH.

Execute the ordinary change step, hopping with the change.

1. Forward gallop hop, 2. MARCH.

The left foot is advanced and planted, the right is brought up in rear as in the halting step; this is done four times in succession. The same is done four times with the right foot in advance, and so on.

1. Sideward gallop hop, 2. MARCH.

The left foot is advanced, body turning on the right; four hops are then executed sideward on the left foot followed by the right; at the fourth hop the body is turned to the left about and four hops executed sideward on the right foot followed by the left, and so on.

DOUBLE TIMING.

The length of the step in double time is 36 inches; the cadence is at the rate of 180 steps per minute. To march in double time the instructor commands:

1. Double time, 2. MARCH.

If at a halt, at the first command shift the weight of the body to the right leg. At the command March raise the forearms, fingers closed, to a horizontal position along the waist line; take up an easy run with the step and cadence of double time, allowing a natural swinging motion to the arms inward and upward in the direction of the opposite shoulder.

In marching in quick time, at the command, double time, march, given as either foot strikes the ground, take one step in quick time, and then step off in double time.

When marching in double time and in running the men breathe as much as possible through the nostrils, keeping the mouth closed.

A few minutes at the beginning of the setting-up exercises should be devoted to double timing. From lasting only a few minutes at the start it may be gradually increased, so that daily drills should enable the men at the end of

five or six months to double time for 10 or 15 minutes without becoming fatigued or distressed.

After the double time the men should be marched for several minutes at quick time; after this the instructor should command: 1. **Route step**, 2. **MARCH**.

In marching at route step, the men are not required to preserve silence nor keep the step; if marching at proved intervals, the latter is preserved.

To resume the cadence step in quick time, the instructor commands: 1. **Squad**, 2. **ATTENTION**.

Great care must be exercised concerning the duration of the double time and the speed and duration of the run. The demands made upon the men should be increased gradually.

When exercise rather than distance is desired, the running should be done on the balls of the feet, heels raised from the ground.

DOUBLE-TIMING EXERCISES.

While the men are double timing the instructor may vary the position of the arms by commanding:

1. 1. **Arms forward**, 2. **RAISE**.
2. 1. **Arms sideward**, 2. **RAISE**.
3. 1. **Arms upward**, 2. **RAISE**.
4. 1. **Hands on hips**, 2. **PLACE**.
5. 1. **Hands on shoulders**, 2. **PLACE**.
6. 1. **Arms forward**, 2. **CROSS**.
7. 1. **Arms backward**, 2. **CROSS**.

At the command **Arms, Down**, the double-time position for the arms and hands is resumed.

The instructor may combine the following with the double time:

1. 1. **Cross step**, 2. **MARCH**.
2. 1. **Raise knees**, 2. **MARCH**.
3. 1. **Raise heels**, 2. **MARCH**.
4. 1. **Swing legs forward**, 2. **MARCH**.
5. 1. **Swing legs backward**, 2. **MARCH**.

To continue these exercises, but still continue the double timing, command: 1. **Double time**, 2. **MARCH**. To march in quick time, command: 1. **Quick time**, 2. **MARCH**. Marching in quick or double time, to halt, command: 1. **Squad**, 2. **HALT**.

RIFLE EXERCISES.

The object of these exercises, which may also be performed with wands or bar bells, is to develop the muscles of the arms, shoulders, and back so that the men will become accustomed to the weight of the piece and learn to wield it with that "handiness" so essential to its successful use. When these exercises are combined with movements of the various other parts of the body, they serve as a splendid, though rather strenuous, method for the all-round development of the men. As the weight of the piece is considerable instructors are cautioned to be reasonable in their demands. Far better results are obtained if these exercises are performed at commands than when they are grouped and performed for spectacular purposes.

All the exercises start from the starting position, which is the low extended arm horizontal position in front of the body, arms straight; the right hand grasping the small of the stock and the left hand the barrel; the knuckles turned to the front and the distance between the hands slightly greater than the width of the shoulders. Fig. 1.

This position is assumed at the command: 1. **Starting**, 2. **POSITION**; at the command position the piece is brought to the port and lowered to the front horizontal snappily.

To recover the position of order, command: 1. **Order**, 2. **ARMS**; the piece is first brought to the port and then ordered.

ARM EXERCISES.

From the starting position (Fig. 1); all exercises are in two counts.

1. Raise piece to front extended arm horizontal.
2. Raise piece to high overhead, extended arm horizontal.
3. Raise piece to side horizontal, right or left. Fig. 2.
4. Raise piece to front perpendicular, right or left hand up. Fig. 3.
5. Raise piece to front bent arm horizontal, waist high.
6. Raise piece to front bent arm horizontal, shoulder high. Fig. 4.
7. Raise piece to rear bent arm horizontal, on shoulders. Fig. 5.
8. Raise piece to front bent arm horizontal, shoulder high, arms crossed, left over right or vice versa.
9. Raise piece to low side perpendicular, right or left, right or left hand up. Fig. 6.
10. Raise piece to high side perpendicular, right or left. Fig. 7.

In the above exercises the movement begins at the command "exercise" and is discontinued at "halt."

From front bent arm horizontal, shoulder high:

11. Thrust piece forward, upward, downward or sideward, right or left.
12. Thrust piece upward from rear, bent arm horizontal.

From high extended arm horizontal:

13. Circle piece from right to left, or from left to right. Describe complete circle parallel with the front of the body.

ARM COMBINATIONS.

All of the following exercises consist of four movements, the third carrying the piece back to the first position, and the fourth to the starting position; in other words, the piece is carried back in reverse order at three and four.

1. Raise piece to high extended arm horizontal; flex to the bent arm horizontal in front of shoulders and return in reverse order.

2. Same as above, except that the piece is brought to the shoulders in rear of head.

3. Raise piece as in 1, lower to right horizontal, and return in reverse order.

4. Same, left.

5. Raise piece to front bent arm horizontal, shoulder high; thrust piece upward, and return in reverse order.

6. Same, thrusting piece forward or sideward right or left.

7. Raise piece to front extended arm perpendicular, right hand up; reverse bringing left hand up; reverse again and lower.

8. Raise piece to low side perpendicular, left hand up; change to high side perpendicular, right hand up; and return in reverse order.

9. Same on the left.

10. Raise piece to front extended arm horizontal; cross and bend arms to front bent arm horizontal right over left; and return in reverse order.

11. Raise piece to front bent arm horizontal, arms crossed, right over left; change by crossing left over right; reverse and down.



ARM, LEG, AND TRUNK COMBINATIONS.

From the starting position: All exercises in two counts.

1. Raise piece to front extended arm horizontal and bend knees quarter, half, or full.
2. Raise piece to high extended arm horizontal and raise on toes.
3. Raise piece as in 2 and bend trunk forward.
4. Raise piece to rear bent arm horizontal on shoulders and bend trunk forward.
5. Raise piece to front perpendicular, left hand up, and bend trunk sideward right. Fig. 8.
6. Same to the left, right hand up.
7. Raise piece to high right side perpendicular and bend trunk sideward left.
8. Same, piece on the left, bending trunk to the right.
From front bent arm horizontal, shoulder high.
9. Thrust piece forward or upward and bend knees, quarter, half, or full.
10. Raise piece forward and upward and bend trunk forward.
11. Thrust piece sideward right and bend trunk sideward left.
12. Same reversed.
13. Thrust piece forward and twist body to the left or right.
14. Thrust piece upward and bend trunk backward.
15. Thrust piece upward and hop to side straddle.
16. Thrust piece forward or upward and lunge forward right or left.
17. Thrust piece upward or forward and lunge obliquely forward right or left.
18. Thrust piece sideward left and lunge sideward right or left.
19. Thrust piece upward and lunge backward.
20. Thrust piece downward, lunge forward and bend body forward, Fig. 9.
21. Thrust piece upward; lunge backward and bend trunk backward. Fig. 10.
22. Thrust piece side right and lunge and bend trunk sideward left. Fig. 11.

RIFLE DRILL COMBINATION.

The following exercises consist of four movements, the third position always corresponding to the first position and the fourth to the starting position. They have been grouped and arranged precisely like the setting-up combination, Fifth Lesson, prescribed for trained soldiers. When performed as a musical drill, the instructions laid down in that lesson are applicable here.

All exercises begin and end with the first or starting position; Fig. 1.

FIRST GROUP.

Counts.

FIRST EXERCISE.

- 1—2. Raise piece to bent arm front horizontal, shoulder high, and stride forward right, Fig. 12;
 - 3—4. Face to the left on both heels and extend piece upward, Fig. 13;
 - 5—6. Resume first position;
 - 7—8. Resume starting position.
- Repeat left, right, left, right.

Counts.

SECOND EXERCISE.

- 1—2. Raise piece to extended high horizontal, and stride sideward right, Fig. 14;
- 3—4. Bend right knee and lower piece to left horizontal, Fig. 15;



- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

Counts.

THIRD EXERCISE.

- 1—2. Raise piece to high side perpendicular on the left, left hand up, and stride backward right, Fig. 16;
- 3—4. Face about on heels and swing piece down and up to high side perpendicular on the right, Fig. 17;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

Counts.

FOURTH EXERCISE.

- 1—2. Raise piece to extended high horizontal, and stride obliquely forward right, Fig. 18;
- 3—4. Face about on heels and lower piece to horizontal on shoulders, Fig. 19;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

SECOND GROUP.

Counts.

FIRST EXERCISE.

- 1—2. Lower piece to front extended horizontal and bend trunk forward, Fig. 20;
- 3—4. Lunge obliquely forward right and raise piece to right oblique, left hand at shoulder, Fig. 21;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

Counts.

SECOND EXERCISE.

- 1—2. Raise piece to high perpendicular on the left, left hand up, and bend trunk sideward right, Fig. 22;
- 3—4. Lunge sideward right and swing piece down and up to right high perpendicular, right hand up, Fig. 23;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

Counts.

THIRD EXERCISE.

- 1—2. Raise piece to high extended arm horizontal and bend trunk backward, Fig. 24;
- 3—4. Lunge forward right, and swing piece to side horizontal, left hand to the rear, Fig. 25;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.

Counts.

FOURTH EXERCISE.

- 1—2. Raise piece to right high perpendicular and side step position left, Fig. 26;
- 3—4. Lunge sideward left and swing piece to left high perpendicular, Fig. 27;
- 5—6. Resume first position;
- 7—8. Resume starting position.
- Repeat left, right, left.



Fig. 19

Fig. 20 Second Group 1st Exercise

Fig. 21

Fig. 22 Second Group 2nd Exercise

Fig. 23

Fig. 24 Second Group 3rd Exercise

Fig. 25

Fig. 26 Second Group 4th Exercise

Fig. 27



Fig. 28 Third Group 1st Exercise



Fig. 29



Fig. 30 Third Group 2nd Exercise



Fig. 31



Fig. 32 Third Group 3rd Exercise



Fig. 33



Fig. 34 Third Group 4th Exercise



Fig. 35

THIRD GROUP.

Counts.

FIRST EXERCISE.

1—2. Raise piece to front bent horizontal, arms crossed, left over right; lunge sideward right and bend trunk sideward right, Fig. 28;

3—4. Extend right knee and bend trunk to the left, bending left knee and recrossing arms, left over right, Fig. 29;

5—6. Resume first position;

7—8. Resume starting position.

Repeat left, right, left.

Counts.

SECOND EXERCISE.

1—2. Raise piece to bent arm horizontal; face right and lunge forward right and bend trunk forward, Fig. 30;

3—4. Raise trunk and turn to the left on both heels and extend piece overhead, Fig. 31;

5—6. Resume first position;

7—8. Resume starting position.

Repeat left, right, left.

Counts.

THIRD EXERCISE.

1—2. Raise piece to left high horizontal; lunge forward right, Fig. 32;

3—4. Bend trunk forward and lower piece to low front horizontal, Fig. 33;

5—6. Resume first position;

7—8. Resume starting position.

Repeat left, right, left.

Counts.

FOURTH EXERCISE.

1—2. Raise piece to high extended horizontal and hop to side straddle position, Fig. 34;

3—4. Bend trunk forward and swing piece to extended low horizontal, left hand between legs, right hand forward, Fig. 35;

5—6. Resume first position;

7—8. Resume starting position.

Repeat left, right, left.

MANUAL OF INTERIOR GUARD DUTY
U. S. ARMY

1914

INCLUDES CHANGES 1, FEBRUARY, 1914

War Department,
Office of the Chief of Staff,
Washington, May 21, 1914.

The following Manual of Interior Guard Duty is approved and herewith published for the information and government of the Regular Army and the Organized Militia of the United States.

By order of the Secretary of War:

W. W. WOTHERSPOON,
Major General, Chief of Staff.

MANUAL OF INTERIOR GUARD DUTY

INTRODUCTION.

1. Guards may be divided into four classes: Exterior guards, interior guards, military police, and provost guards.

2. Exterior guards are used only in time of war. They belong to the domain of tactics and are treated of in the Field Service Regulations, and in the drill regulations of the different arms of the service.

The purpose of exterior guards is to prevent surprise, to delay attack, and otherwise to provide for the security of the main body.

On the march they take the form of advance guards, rear guards, and flank guards. At a halt they consist of outposts.

3. Interior guards are used in camp or garrison to preserve order, protect property, and to enforce police regulations. In time of war such sentinels of an interior guard as may be necessary are placed close in or about a camp, and normally there is an exterior guard further out consisting of outposts. In time of peace the interior guard is the only guard in a camp or garrison.

4. Military police differ somewhat from either of these classes. (See Field Service Regulations.) They are used in time of war to guard prisoners, to arrest stragglers and deserters, and to maintain order and enforce police regulations in the rear of armies, along lines of communication, and in the vicinity of large camps.

5. Provost guards are used in the absence of military police, generally in conjunction with the civil authorities at or near large posts or encampments, to preserve order among soldiers beyond the interior guard.

INTERIOR GUARD.

CLASSIFICATION.

6. The various elements of an interior guard classified according to their particular purposes and the manner in which they perform their duties are as follows:

(a) The main guard.

(b) Special guards: Stable guards, park guards, prisoner guards, herd guards, train guards, boat guards, watchmen, etc.

DETAILS AND ROSTERS.

7. At every military post, and in every regiment or separate command in the field, an interior guard will be detailed and duly mounted.

It will consist of such number of officers and enlisted men as the commanding officer may deem necessary, and will be commanded by the senior officer or noncommissioned officer therewith, under the supervision of the officer of the day or other officer detailed by the commanding officer.

8. The system of sentinels on fixed posts is of value in discipline and training because of the direct individual responsibility which is imposed and required to be discharged in a definite and precise manner. In order, however, that guard duty may not be needlessly irksome and interfere with tactical instruction, the number of men detailed for guard will be the smallest possible.

Commanding officers are specifically charged with this matter, and, without entirely dispensing with the system of sentinels on fixed posts will, as far as practicable, in time of peace, replace such sentinels with watchmen. (See Par. 221.)

9. At posts where there are less than three companies the main guard and special guards may all be furnished by one company or by detail from each company.

Where there are three or more companies, the main guard will, if practicable, be furnished by a single company, and, as far as practicable, the same organization will supply all details for that day for special guard, overseer, and fatigue duty. In this case the officer of the day, and the officers of the guard, if there are any, will, if practicable, be from the company furnishing the guard.

10. At a post or camp where the headquarters of more than one regiment are stationed, or in the case of a small brigade in the field, if but one guard be necessary for the whole command, the details will be made from the headquarters of the command.

If formal guard mounting is to be held, the adjutant, sergeant major, and band to attend guard mounting will be designated by the commanding officer.

11. When a single organization furnishes the guard, a roster of organizations will be kept by the sergeant major under the supervision of the adjutant. (See Appendix B.)

12. When the guard is detailed from several organizations, rosters will be kept by the adjutant, of officers of the day and officers of the guard by name; by the sergeant major, under the supervision of the adjutant, of sergeants, corporals, musicians, and privates of the guard by number per organization; and by first sergeants, of sergeants, corporals, musicians, and privates by name. (See Appendix A.)

13. When organizations furnish their own stable, or stable and park guards, credit will be given each for the number of enlisted men so furnished, as though they had been detailed for main guard.

14. Special guards, other than stable or park guards, will be credited the same as for main guard, credited with fatigue duty, carried on special duty, or credited as the commanding officer may direct. (Pars. 6, 221, 247, and 300.)

15. Captains will supervise the keeping of company rosters and see that all duties performed are duly credited. (See pars. 355-364, A. R., for rules governing rosters, and Form 342, A. G. O., for instructions as to how rosters should be kept.)

16. There will be an officer of the day with each guard, unless in the opinion of the commanding officer the guard is so small that his services are not needed. In this case an officer will be detailed to supervise the command and

instruction of the guard for such period as the commanding officer may direct.

17. When more than one guard is required for a command, a field officer of the day will be detailed, who will receive his orders from the brigade or division commander as the latter may direct. When necessary, captains may be placed on the roster for field officer of the day.

18. The detail of officers of the guard will be limited to the necessities of the service and efficient instruction; inexperienced officers may be detailed as supernumerary officers of the guard for purposes of instruction.

19. Officers serving in staff departments are, in the discretion of the commanding officer, exempt from guard duty.

20. Guard details will, if practicable, be posted or published the day preceding the beginning of the tour, and officers notified personally by a written order at the same time.

21. The strength of guards and the number of consecutive days for which an organization furnishes the guard will be so regulated as to insure privates of the main guard an interval of not less than five days between tours.

When this is not otherwise practicable, extra and special duty men will be detailed for night-guard duty, still performing their daily duties. When so detailed a roster will be kept by the adjutant showing the duty performed by them.

22. The members of main guards and stable and park guards will habitually be relieved every 24 hours. The length of the tour of enlisted men detailed as special guards, other than stable or park guards, will be so regulated as to permit of these men being held accountable for a strict performance of their duty.

23. Should the officer of the day be notified that men are required to fill vacancies in the guard, he will cause them to be supplied from the organization to which the guard belongs. If none are available in that organization, the adjutant will be notified and will cause them to be supplied from the organization that is next for guard. (Par. 63.)

24. The adjutant will have posted on the bulletin board at his office all data needed by company commanders in making details from their companies.

At first sergeant's call, first sergeants will go to headquarters and take from the bulletin board all data necessary for making the details required from their companies; these details will be made from their company rosters.

25. In order to give ample notice, first sergeants will, when practicable, publish at retreat and post on the company bulletin board all details made from the company for duties to be performed.

26. Where rosters are required to be kept by this manual, all details will be made by roster.

THE COMMANDING OFFICER.

27. The commanding officer will exact a faithful, vigilant, and correct performance of guard duty in all of its details, giving his orders to the officer of the day, or causing them to be communicated to him with the least practicable delay. He will prescribe the strength of the guard, and the necessary regulations for guard, police, and fatigue duty.

28. The commanding officer receives the reports of the officers of the day immediately after guard mounting, at his office, or at some other place previously designated; carefully examines the guard report and remarks thereon (questioning the old officer of the day, if necessary, concerning his tour of duty), relieves the old officer of the day and gives the new officer of the day such instructions as may be necessary.

THE OFFICER OF THE DAY.

29. The officer of the day is responsible for the proper performance of duty by the guard with which he marches on and for the enforcement of all police regulations. He is charged with the execution of all orders of the commanding officer relating to the safety and good order of the post or camp. His actual tour begins when he receives the instructions of the commanding officer after guard mounting, and ceases when he has been relieved by the commanding officer. In case of emergency during the interval between guard mounting and reporting to the commanding officer, the senior officer of the day will give the necessary instructions for both guards.

30. In the absence of special instructions from the commanding officer, the officer of the day will inspect the guard and sentinels during the day and at night at such times as he may deem necessary. He will visit them at least once between 12 o'clock midnight and daylight.

31. He may prescribe patrols (par. 218) and visits of inspection to be made by officers and noncommissioned officers of the guard whenever he deems it necessary.

32. He will see that the commander of the guard is furnished with the parole and countersign before retreat in case they are to be used, and will inform him of the presence in post or camp of any person entitled to the compliment.

33. In case of alarm of any kind he will at once take such steps as may be necessary to insure the safety of life and public property and to preserve order in the command, disposing his guard so as best to accomplish this result.

34. In the performance of his duties as officer of the day he is subject to the orders of the commanding officer only, except that in case of an alarm of any kind, and at a time of great danger, the senior line officer present is competent to give necessary orders to the officer of the day for the employment of the guard.

35. At the inspections and musters, prescribed in Army Regulations, the officer of the day will be present at the post of the guard, but all commands to the guard will be given by the commander of the guard.

36. Both officers of the day together verify the prisoners and inspect the guardhouse and premises.

37. In the absence of special instructions, the old officer of the day will, at guard mounting, release all garrison prisoners whose sentences expire that day. If there are any prisoners with no record of charges against them, the old officer of the day will report that fact to the commanding officer who will give the necessary instructions.

38. The old officer of the day signs the report of the commander of the guard. He also enters on it such remarks as may be necessary.

39. The officers of the day then report to the commanding officer.

On presenting themselves, both salute with the right hand, remaining covered. The old officer of the day, standing on the right of the new, then says: "Sir, I report as old officer of the day," and presents the guard report. As soon as the commanding officer notifies the old officer of the day that he is relieved, the old officer of the day salutes the commanding officer and retires. The new officer of the day again salutes and says: "Sir, I report as new officer of the day," and then receives his instructions.

40. The officer of the day will always keep the guard informed as to where he may be found at all hours of the day and night.

COMMANDER OF THE GUARD.

41. The commander of the guard is responsible for the instruction and discipline of the guard. He will see that all of its members are correctly instructed in their orders and duties, and that they understand and properly perform them. He will visit each relief at least once while it is on post, and at least one of these visits will be made between 12 o'clock midnight and daylight.

42. He receives and obeys the orders of the commanding officer and the officer of the day, and reports to the latter without delay all orders to the guard not received from the officer of the day; he transmits to his successor all material instructions and information relating to his duties.

43. He is responsible under the officer of the day for the general safety of the post or camp as soon as the old guard marches away from the guardhouse. In case of emergency while both guards are at the guardhouse, the senior commander of the two guards will be responsible that the proper action is taken.

44. Officers of the guard will remain constantly with their guards, except while visiting patrols or necessarily engaged elsewhere in the performance of their duties. The commanding officer will allow a reasonable time for meals.

45. A commander of a guard leaving his post for any purpose will inform the next in command of his destination and probable time of return.

46. Except in emergencies, the commander of the guard may divide the night with the next in command, but retains his responsibility; the one on watch must be constantly on the alert.

47. When any alarm is raised in camp or garrison, the guard will be formed immediately. (Par. 234.) If the case be serious, the proper call will be sounded, and the commander of the guard will cause the commanding officer and the officer of the day to be at once notified.

48. If a sentinel calls: "The Guard," the commander of the guard will at once send a patrol to the sentinel's post. If the danger be great, in which case the sentinel will discharge his piece, the patrol will be as strong as possible.

49. When practicable, there should always be an officer or noncommissioned officer and two privates of the guard at the guardhouse, in addition to the sentinels there on post.

50. Between reveille and retreat, when the guard has been turned out for any person entitled to the compliment (see pars. 222 and 224), the commander of the guard, if an officer, will receive the report of the sergeant, returning the salute of the latter with the right hand. He will then draw his saber, and place himself two paces in front of the center of the guard. When the person for whom the guard has been turned out approaches, he faces his guard and commands: 1. **Present**, 2. **ARMS**; faces to the front and salutes. When his salute is acknowledged he resumes the carry, faces about, and commands: 1. **Order**, 2. **ARMS**; and faces to the front.

If it be an officer entitled to inspect the guard, after saluting and before bringing his guard to an order, the officer of the guard reports: "Sir, all present or accounted for"; or, "Sir, (so and so) is absent"; or, if the roll call has been omitted: "Sir, the guard is formed," except that at guard mounting the commanders of the guards present their guards and salute without making any report.

Between retreat and reveille, the commander of the guard salutes and reports, but does not bring the guard to a present.

51. To those entitled to have the guard turned out but not entitled to inspect it, no report will be made; nor will a report be made to any officer, unless he halts in front of the guard.

52. When a guard commanded by a noncommissioned officer is turned out as a compliment or for inspection, the noncommissioned officer, standing at a right shoulder on the right of the right guide, commands: 1. **Present**, 2. **ARMS**. He then executes the rifle salute. If a report be also required, he will, after saluting, and before bringing his guard to an order, report as prescribed for the officer of the guard. (Par. 50.)

53. When a guard is in line, not under inspection, and commanded by an officer, the commander of the guard salutes his regimental, battalion, and company commander, by bringing the guard to attention and saluting in person.

For all other officers, excepting those entitled to the compliment from a guard (par. 224), the commander of the guard salutes in person but does not bring the guard to attention.

When commanded by a noncommissioned officer the guard is brought to attention in either case, and the noncommissioned officer salutes.

The commander of a guard exchanges salutes with the commanders of all other bodies of troops; the guard is brought to attention during the exchange.

"Present arms" is executed by a guard only when it has turned out for inspection or as a compliment, and at the ceremonies of guard mounting and relieving the old guard.

54. In marching a guard or a detachment of a guard the principles of paragraph 53 apply. "Eyes right" is executed only in the ceremonies of guard mounting and relieving the old guard.

55. If a person entitled to the compliment, or the regimental, battalion, or company commander, passes in rear of a guard, neither the compliment nor the salute is given, but the guard is brought to attention while such person is opposite the post of the commander.

After any person has received or declined the compliment, or received the salute from the commander of the guard, official recognition of his presence thereafter while he remains in the vicinity will be taken by bringing the guard to attention.

56. The commander of the guard will inspect the guard at reveille and retreat, and at such other times as may be necessary, to assure himself that the men are in proper condition to perform their duties and that their arms and equipments are in proper condition. For inspection by other officers, he prepares the guard in each case as directed by the inspecting officer.

57. The guard will not be paraded during ceremonies unless directed by the commanding officer.

58. At all formations members of the guard or reliefs will execute inspection arms as prescribed in the drill regulations of their arm.

59. The commander of the guard will see that all sentinels are habitually relieved every two hours, unless the weather or other cause makes it necessary that it be done at shorter or longer intervals, as directed by the commanding officer.

60. He will question his noncommissioned officers and sentinels relative to the instructions they may have received from the old guard; he will see that patrols and visits of inspection are made as directed by the officer of the day.

61. He will see that the special orders for each post and member of the guard, either written or printed, are posted in the guardhouse, and, if practicable, in the sentry box or other sheltered place to which the member of the guard has constant access.

62. He will see that the proper calls are sounded at the hours appointed by the commanding officer.

63. Should a member of the guard be taken sick, or be arrested, or desert,

or leave his guard, he will at once notify the officer of the day. (Par. 23.)

64. He will, when the countersign is used (pars. 210 to 216), communicate it to the noncommissioned officers of the guard and see that it is duly communicated to the sentinels before the hour for challenging; the countersign will not be given to sentinels posted at the guardhouse.

65. He will have the details for hoisting the flag at reveille, and lowering it at retreat, and for firing the reveille and retreat gun, made in time for the proper performance of these duties. (See pars. 338, 344, 345, and 346.) He will see that the flags are kept in the best condition possible, and that they are never handled except in the proper performance of duty.

66. He may permit members of the guard while at the guardhouse to remove their headdress, overcoats, and gloves; if they leave the guardhouse for any purpose whatever he will require that they be properly equipped and armed according to the character of the service in which engaged, or as directed by the commanding officer.

67. He will enter in the guard report a report of his tour of duty, and, on completion of his tour, will present it to the officer of the day. He will transmit with his report all passes turned in at the post of the guard.

68. Whenever a prisoner is sent to the guardhouse or guard tent for confinement, he will cause him to be searched, and will, without unnecessary delay, report the case to the officer of the day.

69. Under war conditions, if any one is to be passed out of camp at night, he will be sent to the commander of the guard, who will have him passed beyond the sentinels.

70. The commander of the guard will detain at the guardhouse all suspicious characters or parties attempting to pass a sentinel's post without authority, reporting his action to the officer of the day, to whom persons so arrested will be sent, if necessary.

71. He will inspect the guard rooms and cells, and the irons of such prisoners as may be ironed, at least once during his tour, and at such other times as he may deem necessary.

72. He will cause the corporals of the old and new reliefs to verify together, immediately before each relief goes on post, the number of prisoners who should then properly be at the guardhouse.

73. He will see that the sentences of prisoners under his charge are executed strictly in accordance with the action of the reviewing authority.

74. When no special prisoner guard has been detailed (par. 300), he will, as far as practicable, assign as guards over working parties of prisoners sentinels from posts guarded at night only.

75. The commander of the guard will inspect all meals sent to the guardhouse and see that the quantity and quality of food are in accordance with regulations.

76. At guard mounting he will report to the old officer of the day all cases of prisoners whose terms of sentence expire on that day, and also all cases of prisoners concerning whom no statement of charges has been received. (See par. 241.)

77. The commander of the guard is responsible for the security of the prisoners under the charge of his guard; he becomes responsible for them after their number has been verified and they have been turned over to the custody of his guard by the old guard or by the prisoner guard or overseers.

78. The prisoners will be verified and turned over to the new guard without parading them, unless the commanding officer or the officer of the day shall direct otherwise.

79. To receive the prisoners at the guard house when they have been paraded and after they have been verified by the officers of the day, the commander

of the new guard directs his sergeant to form his guard with an interval, and commands: 1. Prisoners, 2. Right, 3. FACE, 4. Forward, 5. MARCH. The prisoners having arrived opposite the interval in the new guard, he commands: 1. Prisoners, 2. HALT, 3. Left, 4. FACE, 5. Right (or left), 6. DRESS, 7. FRONT.

The prisoners dress on the line of the new guard.

SERGEANT OF THE GUARD.

80. The senior noncommissioned officer of the guard always acts as sergeant of the guard, and if there be no officer of the guard, will perform the duties prescribed for the commander of the guard.

81. The sergeant of the guard has general supervision over the other noncommissioned officers and the musicians and privates of the guard, and must be thoroughly familiar with all of their orders and duties.

82. He is directly responsible for the property under charge of the guard, and will see that it is properly cared for. He will make lists of articles taken out by working parties, and see that all such articles are duly returned. If they are not, he will immediately report the fact to the commander of the guard.

83. Immediately after guard mounting he will prepare duplicate lists of the names of all noncommissioned officers, musicians, and privates of the guard, showing the relief and post or duties of each. One list will be handed as soon as possible to the commander of the guard; the other will be retained by the sergeant.

84. He will see that all reliefs are turned out at the proper time, and that the corporals thoroughly understand, and are prompt and efficient in, the discharge of their duties.

85. During the temporary absence from the guardhouse of the sergeant of the guard, the next in rank of the noncommissioned officers will perform his duties.

86. Should the corporal whose relief is on post be called away from the guardhouse, the sergeant of the guard will designate a noncommissioned officer to take the corporal's place until his return.

87. The sergeant of the guard is responsible at all times for the proper police of the guardhouse or guard tent, including the ground about them and the prison cells.

88. At "first sergeant's call" he will proceed to the adjutant's office and obtain the guard report book.

89. When the national or regimental colors are taken from the stacks of the color line, the color bearer and guard, or the sergeant of the guard, unarmed, and two armed privates as a guard, will escort the colors to the colonel's quarters, as prescribed for the color guard in the drill regulations of the arm of the service to which the guard belongs.

90. He will report to the commander of the guard any suspicious or unusual occurrence that comes under his notice, will warn him of the approach of any armed body, and will send to him all persons arrested by the guard.

91. When the guard is turned out, its formation will be as follows: The senior noncommissioned officer, if commander of the guard, is on the right of the right guide; if not commander of the guard, he is in the line of file closers, in rear of the right four of the guard; the next in rank is right guide; the next left guide; the others in the line of file closers, usually, each in rear of his relief; the field music, with its left three paces to the right of the right guide. The reliefs form in the same order as when the guard was first divided, except that if the guard consists of dismounted cavalry and infantry, the cavalry forms on the left.

92. The sergeant forms the guard, calls the roll, and, if not in command of the guard, reports to the commander of the guard as prescribed in drill regulations for a first sergeant forming a troop or company; the guard is not divided into platoons or sections, and, except when the whole guard is formed prior to marching off, fours are not counted.

93. The sergeant reports as follows: "Sir, all present or accounted for, or Sir, (so-and-so) is absent"; or if the roll call has been omitted, "Sir, the guard is formed." Only men absent without proper authority are reported absent. He then takes his place without command.

94. At night, the roll may be called by reliefs and numbers instead of names; thus, the first relief being on post: Second relief; No. 1; No. 2, etc. Third relief, Corporal; No. 1, etc.

95. Calling the roll will be dispensed with in forming the guard when it is turned out as a compliment, on the approach of an armed body, or in any sudden emergency; but in such cases the roll may be called before dismissing the guard. If the guard be turned out for an officer entitled to inspect it, the roll will, unless he directs otherwise, always be called before a report is made.

96. The sergeant of the guard has direct charge of the prisoners, except during such time as they may be under the charge of the prisoner guard or overseers, and is responsible to the commander of the guard for their security.

97. He will carry the keys of the guardroom and cells, and will not suffer them to leave his personal possession while he is at the guardhouse, except as hereinafter provided. (Par. 99.) Should he leave the guardhouse for any purpose, he will turn the keys over to the noncommissioned officer who takes his place. (Par. 85.)

98. He will count the knives, forks, etc., given to the prisoners with their food, and see that none of these articles remain in their possession. He will see that no forbidden articles of any kind are conveyed to the prisoners.

99. Prisoners, when paraded with the guard, are placed in line in its centre. The sergeant, immediately before forming the guard, will turn over his keys to the noncommissioned officer at the guardhouse. Having formed the guard, he will divide it into two nearly equal parts. Indicating the point of division with his hand, he commands:

1. Right (or left), 2. **FACE**, 3. Forward, 4. **MARCH**, 5. Guard, 6. **HALT**, 7. Left (or right), 8. **FACE**.

If the first command be right face, the right half of the guard only will execute the movements; if left face, the left half only will execute them. The command halt is given when sufficient interval is obtained to admit the prisoners. The doors of the guardroom and cells are then opened by the noncommissioned officer having the keys. The prisoners will file out under the supervision of the sergeant, the noncommissioned officer, and sentinel on duty at the guardhouse, and such other sentinels as may be necessary; they will form in line in the interval between the two parts of the guard.

100. To return the prisoners to the guardroom and cells, the sergeant commands:

1. Prisoners, 2. Right (or left), 3. **FACE**, 4. Column right (or left), 5. **MARCH**.

The prisoners, under the same supervision as before, return to their proper rooms or cells.

101. To close the guard, the sergeant commands:

1. Left (or right), 2. **FACE**, 3. Forward, 4. **MARCH**, 5. Guard, 6. **HALT**, 7. Right (or left), 8. **FACE**.

The left or right half only of the guard, as indicated, executes the movement.

102. If there be but few prisoners, the sergeant may indicate the point of division as above, and form the necessary interval by the commands:

1. **Right (or left) step**, 2. **MARCH**, 3. **Guard**, 4. **HALT**, and close the intervals by the commands:

1. **Left (or right) step**, 2. **MARCH**, 3. **Guard**, 4. **HALT**.

103. If sentinels are numerous, reliefs may, at the discretion of the commanding officer, be posted in detachments, and sergeants, as well as corporals, required to relieve and post them.

CORPORAL OF THE GUARD.

104. A corporal of the guard receives and obeys orders from none but noncommissioned officers of the guard senior to himself, the officers of the guard, the officer of the day, and the commanding officer.

105. It is the duty of the corporal of the guard to post and relieve sentinels, and to instruct the members of his relief in their orders and duties.

106. Immediately after the division of the guard into reliefs the corporals will assign the members of their respective reliefs to posts by number, and a soldier so assigned to his post will not be changed to another during the same tour of guard duty, unless by direction of the commander of the guard or higher authority. Usually, experienced soldiers are placed over the arms of the guard, and at remote and responsible posts.

107. Each corporal will then make a list of the members of his relief, including himself. This list will contain the number of the relief, the name, the company, and the regiment of every member thereof, and the post to which each is assigned. The list will be made in duplicate, one copy to be given to the sergeant of the guard as soon as completed, the other to be retained by the corporal.

108. When directed by the commander of the guard, the corporal of the first relief forms his relief, and then commands: **CALL OFF**.

Commencing on the right, the men call off alternately rear and front rank, "one," "two," "three," "four," and so on; if in single rank, they call off from right to left. The corporal then commands:

1. **Right**, 2. **FACE**, 3. **Forward**, 4. **MARCH**.

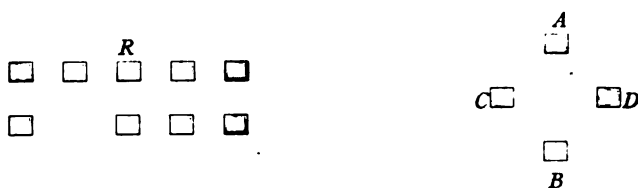
The corporal marches on the left, and near the rear file, in order to observe the march. The corporal of the old guard marches on the right of the leading file, and takes command when the last one of the old sentinels is relieved, changing places with the corporal of the new guard.

109. When the relief arrives at six paces from a sentinel (see par. 168), the corporal halts it and commands, according to the number of the post: **No. (—)**.

Both sentinels execute port arms or saber; the new sentinel approaches the old, halting about one pace from him. (See par. 172.)

110. The corporals advance and place themselves, facing each other, a little in advance of the new sentinel, the old corporal on his right, the new corporal on his left, both at a right shoulder, and observe that the old sentinel transmits correctly his instructions.

The following diagram will illustrate the positions taken:



R is the relief; A, the new corporal; B, the old; C, the new sentinel; D, the old.

111. The instructions relative to the post having been communicated, the new corporal commands, **POST**; both sentinels then resume the right shoulder,

face toward the new corporal, and step back so as to allow the relief to pass in front of them. The new corporal then commands, 1. **Forward**, 2. **MARCH**; the old sentinel takes his place in rear of the relief as it passes him, his piece in the same position as those of the relief. The new sentinel stands fast at a right shoulder until the relief has passed six paces beyond him, when he walks his post. The corporals take their places as the relief passes them.

112. Mounted sentinels are posted and relieved in accordance with the same principles.

113. On the return of the old relief, the corporal of the new guard falls out when the relief halts; the corporal of the old guard forms his relief on the left of the old guard, salutes, and reports to the commander of his guard: "Sir, the relief is present"; or "Sir, (so and so) is absent," and takes his place in the guard.

114. To post a relief other than that which is posted when the old guard is relieved, its corporal commands:

1. (Such) relief, 2. **FALL IN**; and if arms are stacked, they are taken at the proper commands.

The relief is formed facing to the front, with arms at an order; the men place themselves according to the numbers of their respective posts, viz., two, four, six, and so on, in the front rank, and one, three, five, and so on, in the rear rank. The corporal, standing about two paces in front of the center of his relief, then commands: **CALL OFF**.

The men call off as prescribed. The corporal then commands: 1. **Inspection**, 2. **ARMS**, 3. **Order**, 4. **ARMS**; faces the commander of the guard, executes the rifle salute, reports: "Sir, the relief is present," or "Sir (so and so), is absent"; he then takes his place on the right at order arms.

115. When the commander of the guard directs the corporal: "**Post your relief**," the corporal salutes and posts his relief as prescribed (pars. 108 to 111); the corporal of the relief on post does not go with the new relief, except when necessary to show the way.

116. To dismiss the old relief, it is halted and faced to the front at the guardhouse by the corporal of the new relief, who then falls out; the corporal of the old relief then steps in front of the relief and dismisses it by the proper commands.

117. Should the pieces have been loaded before the relief was posted, the corporal will, before dismissing the relief, see that no cartridges are left in the chambers or magazines. The same rule applies to sentinels over prisoners.

118. Each corporal will thoroughly acquaint himself with all the special orders of every sentinel on his relief, and see that each understands and correctly transmits such orders in detail to his successor.

119. There should be at least one noncommissioned officer constantly on the alert at the guardhouse, usually the corporal whose relief is on post. This noncommissioned officer takes post near the entrance of the guardhouse and does not fall in with the guard when it is formed. He will have his rifle constantly with him.

120. Whenever it becomes necessary for the corporal to leave his post near the entrance of the guardhouse, he will notify the sergeant of the guard, who will at once take his place, or designate another noncommissioned officer to do so.

121. He will see that no person enters the guardhouse, or guard tent, or crosses the posts of the sentinels there posted without proper authority.

122. Should any sentinel call for the corporal of the guard, the corporal will, in every case, at once and quickly proceed to such sentinel. He will notify the sergeant of the guard before leaving the guardhouse.

123. He will at once report to the commander of the guard any violation of regulations or any unusual occurrence which is reported to him by a sentinel, or which comes to his notice in any other way.

124. Should a sentinel call: "**The Guard,**" the corporal will promptly notify the commander of the guard.

125. Should a sentinel call: "**Relief,**" the corporal will at once proceed to the post of such sentinel, taking with him the man next for duty on that post. If the sentinel is relieved for a short time only, the corporal will again post him as soon as the necessity for his relief ceases.

126. When the countersign is used, the corporal at the posting of the relief during whose tour challenging is to begin gives the countersign to the members of the relief, excepting those posted at the guardhouse.

127. He will wake the corporal whose relief is next on post in time for the latter to verify the prisoners, form his relief, and post it at the proper hour.

128. Should the guard be turned out, each corporal will call his own relief, and cause its members to fall in promptly.

129. Tents or bunks in the same vicinity will be designated for the reliefs so that all the members of each relief may, if necessary, be found and turned out by the corporal in the least time and with the least confusion.

130. When challenged by a sentinel while posting his relief, the corporal commands: 1. **Relief**, 2. **HALT**; to the sentinel's challenge he answers "**Relief,**" and at the order of the sentinel he advances alone to give the countersign, or to be recognized. When the sentinel says, "**Advance relief,**" the corporal commands: 1. **Forward**, 2. **MARCH**.

If to be relieved, the sentinel is then relieved as prescribed.

131. Between retreat and reveille, the corporal of the guard will challenge all suspicious looking persons or parties he may observe, first halting his patrol or relief, if either be with him. He will advance them in the same manner that sentinels on post advance like parties (pars. 191 to 197), but if the route of a patrol is on a continuous chain of sentinels, he should not challenge persons coming near him unless he has reason to believe that they have eluded the vigilance of sentinels.

132. Between retreat and reveille, whenever so ordered by an officer entitled to inspect the guard, the corporal will call: "**Turn out the guard,**" announcing the title of the officer, and then, if not otherwise ordered, he will salute and return to his post.

133. As a general rule he will advance parties approaching the guard at night in the same manner that sentinels on post advance like parties. Thus, the sentinel at the guardhouse challenges and repeats the answer to the corporal, as prescribed hereafter (par. 200); the corporal advancing at "port arms," says: "**Advance (so and so) with the countersign,**" or "**to be recognized,**" if there be no countersign used; the countersign being correctly given, or the party being duly recognized, the corporal says: "**Advance (so and so)**"; repeating the answer to the challenge of the sentinel.

134. When officers of different rank approach the guardhouse from different directions at the same time, the senior will be advanced first, and will not be made to wait for his junior.

135. Out of ranks and under arms, the corporal salutes with the rifle salute. He will salute all officers whether by day or night.

136. The corporal will examine parties halted and detained by sentinels, and if he has reason to believe the parties have no authority to cross sentinel's posts, will conduct them to the commander of the guard.

137. The corporal of the guard will arrest all suspicious looking characters prowling about the post or camp, all persons of a disorderly character disturb-

ing the peace, and all persons taken in the act of committing crime against the Government on a military reservation or post. All persons arrested by corporals of the guard, or by sentinels, will at once be conducted to the commander of the guard by the corporal.

MUSICIANS OF THE GUARD.

138. The musicians of the guard will sound call as prescribed by the commanding officer.

139. Should the guard be turned out for national or regimental colors or standards, uncased, the field music of the guard will, when the guard present arms, sound, "To the color" or "To the standard"; or if, for any person entitled thereto, the march, flourishes, or ruffles, prescribed in paragraphs 375, 376, and 377, A. R.

ORDERLIES AND COLOR SENTINELS.

140. When so directed by the commanding officer, the officer who inspects the guard at guard mounting will select from the members of the new guard an orderly for the commanding officer and such number of other orderlies and color sentinels as may be required.

141. For these positions the soldiers will be chosen who are most correct in the performance of duty and in military bearing, neatest in person and clothing, and whose arms and accouterments are in the best condition. Clothing, arms, and equipments must conform to regulations. If there is any doubt as to the relative qualifications of two or more soldiers, the inspecting officer will cause them to fall out at the guardhouse and to form in line in single rank. He will then, by testing them in drill regulations, select the most proficient. The commander of the guard will be notified of the selection.

142. When directed by the commander of the guard to fall out and report, an orderly will give his name, company, and regiment to the sergeant of the guard, and, leaving his rifle in the arm rack in his company quarters, will proceed at once to the officer to whom he is assigned, reporting: "Sir, Private —, Company—, reports as orderly."

143. If the orderly selected be a cavalryman, he will leave his rifle in the arms rack of his troop quarters, and report with his belt on, but without side arms unless specially otherwise ordered.

144. Orderlies, while on duty as such, are subject only to the orders of the commanding officer and of the officers to whom they are ordered to report.

145. When an orderly is ordered to carry a message, he will be careful to deliver it exactly as it was given to him.

146. His tour of duty ends when he is relieved by the orderly selected from the guard relieving his own.

147. Orderlies are members of the guard, and their name, company, and regiment are entered on the guard report and lists of the guard.

148. If a color line is established, sufficient sentinels are placed on the color line to guard the colors and stacks.

149. Color sentinels are posted only so long as the stacks are formed. The commander of the guard will divide the time equally among them.

150. When stacks are broken, the color sentinels may be permitted to return to their respective companies. They are required to report in person to the commander of the guard at reveille and retreat. They will fall in with the guard, under arms, at guard mounting.

151. Color sentinels are not placed on the regular reliefs, nor are their posts

numbered. In calling for the corporal of the guard, they call: "Corporal of the guard. Color line."

152. Officers or enlisted men passing the uncased colors will render the prescribed salute. If the colors are on the stacks, the salute will be made on crossing the color line or on passing the colors.

153. A sentinel placed over the colors will not permit them to be moved, except in the presence of an armed escort. Unless otherwise ordered by the commanding officer, he will allow no one to touch them but the color bearer.

He will not permit any soldier to take arms from the stacks, or to touch them, except by order of an officer or noncommissioned officer of the guard.

If any person passing the colors or crossing the color line fails to salute the colors, the sentinel will caution him to do so, and if the caution be not heeded he will call the corporal of the guard and report the facts.

PRIVATES OF THE GUARD.

154. Privates are assigned to reliefs by the commander of the guard, and to posts, usually, by the corporal of their relief. They will not change from one relief or post to another during the same tour of guard duty unless by proper authority.

ORDERS FOR SENTINELS.

155. Orders for sentinels are of two classes: General orders and special orders. General orders apply to all sentinels. Special orders relate to particular posts and duties.

156. Sentinels will be required to memorize the following:

My general orders are:

1. To take charge of this post and all Government property in view.
2. To walk my post in a military manner, keeping always on the alert and observing everything that takes place within sight and hearing.
3. To report all violations of orders I am instructed to enforce.
4. To repeat all calls from posts more distant from the guardhouse than my own.
5. To quit my post only when properly relieved.
6. To receive, obey, and pass on to the sentinel who relieves me all orders from the commanding officer, officer of the day, and officers and noncommissioned officers of the guard only.
7. To talk to no one except in line of duty.
8. In case of fire or disorder to give the alarm.
9. To allow no one to commit a nuisance on or near my post.
10. In any case not covered by instructions to call the corporal of the guard.
11. To salute all officers, and all colors and standards not cased.
12. To be especially watchful at night, and, during the time for challenging, to challenge all persons on or near my post, and to allow no one to pass without proper authority.

REGULATIONS RELATING TO THE GENERAL ORDERS FOR SENTINELS.

No. 1: To take charge of this post and all Government property in view.

157. All persons, of whatever rank in the service, are required to observe respect toward sentinels and members of the guard when such are in the performance of their duties.

158. A sentinel will at once report to the corporal of the guard every unusual or suspicious occurrence noted.

159. He will arrest suspicious persons prowling about the post or camp at any time, all parties to a disorder occurring on or near his post, and all, except authorized persons, who attempt to enter the camp at night, and will turn over to the corporal of the guard all persons arrested.

160. The number, limits, and extent of his post will invariably constitute part of the special orders of a sentinel on post. The limits of his post should be so defined as to include every place to which he is required to go in the performance of his duties.

No. 2: To walk my post in a military manner, keeping always on the alert and observing everything that takes place within sight or hearing.

161. A sentinel is not required to halt and change the position of his rifle on arriving at the end of his post, nor to execute to the rear, march, precisely as prescribed in the drill regulations, but faces about while walking, in the manner most convenient to him, and at any part of his post as may be best suited to the proper performance of his duties. He carries his rifle on either shoulder, and in wet or severe weather, when not in a sentry box, may carry it at a secure.

162. Sentinels when in sentry boxes stand at ease. Sentry boxes will be used in wet weather only, or at other times when specially authorized by the commanding officer.

163. In very hot weather, sentinels may be authorized to stand at ease on their posts, provided they can effectively discharge their duties in this position, but they will take advantage of this privilege only on the express authority of the officer of the day or the commander of the guard.

164. A mounted sentinel may dismount occasionally and lead his horse but will not relax his vigilance.

No. 3: To report all violations of orders I am instructed to enforce.

165. A sentinel will ordinarily report a violation of orders when he is inspected or relieved, but if the case be urgent he will call the corporal of the guard, and also, if necessary, will arrest the offender.

No. 4: To repeat all calls from posts more distant from the guardhouse than my own.

166. To call the corporal, or the guard, for any purpose other than relief, fire, or disorder (pars. 167 and 173), a sentinel will call "Corporal of the guard, No. (—)," adding the number of his post. In no case will any sentinel call, "Never mind the corporal"; nor will the corporal heed such call if given.

No. 5: To quit my post only when properly relieved.

167. If relief becomes necessary, by reason of sickness or other cause, a sentinel will call, "Corporal of the guard, No. (—), Relief," giving the number of his post.

168. Whenever a sentinel is to be relieved, he will halt, and with arms at a right shoulder, will face toward the relief when it is thirty paces from him. He will come to a port arms with the new sentinel, and in a low tone will transmit to him all the special orders relating to the post, and any other information which will assist him to better perform his duties.

No. 6: To receive, obey, and pass on to the sentinel who relieves me, all orders from the commanding officer, officer of the day, and officers and non-commissioned officers of the guard only.

169. During this tour of duty a soldier is subject to the orders of the commanding officer, officer of the day, and officers and noncommissioned officers of the guard only; but any officer is competent to investigate apparent violations of regulations by members of the guard.

170. A sentinel will quit his piece on an explicit order from any person from whom he lawfully receives orders while on post; under no circumstances will he yield it to any other person. Unless necessity therefor exists, no person will require a sentinel to quit his piece, even to allow it to be inspected.

171. A sentinel will not divulge the countersign (pars. 209 to 217) to any one except the sentinel who relieves him, or to a person from whom he properly receives orders, on such person's verbal order given personally. Privates of the guard will not use the countersign except in the performance of their duties while posted as sentinels.

No. 7: To talk to no one except in line of duty.

172. When calling for any purpose, challenging, or holding communication with any person, a dismounted sentinel, armed with a rifle or saber, will take the position of "port" arms or saber. At night a dismounted sentinel, armed with a pistol, takes the position of raise pistol in challenging or holding communication. A mounted sentinel does not ordinarily draw his weapon in the daytime when challenging or holding conversation; but if drawn, he holds it at advance rifle, raise pistol, or port saber, according as he is armed with a rifle, pistol, or saber. At night, in challenging and holding conversation, his weapon is drawn and held as just prescribed, depending on whether he is armed with a rifle, pistol, or saber.

No. 8: In case of fire or disorder to give the alarm.

173. In case of fire, a sentinel will call, "Fire No. (—)," adding the number of his post; if possible, he will extinguish the fire himself. In case of disorder, he will call: "The Guard, No. (—)," adding the number of his post. If the danger be great, he will, in either case, discharge his piece before calling.

No. 11: To salute all officers and all colors and standards not cased.

174. When not engaged in the performance of a specific duty, the proper execution of which would prevent it, a member of the guard will salute all officers who pass him. This rule applies at all hours of the day or night, except in the case of mounted sentinels armed with a rifle or pistol, or dismounted sentinels armed with a pistol, after challenging. (See par. 181.)

175. Sentinels will salute as follows: A dismounted sentinel armed with a rifle or saber, salutes by presenting arms; if otherwise armed, he salutes with the right hand.

A mounted sentinel, if armed with a saber and the saber be drawn, salutes by presenting saber; otherwise he salutes in all cases with the right hand.

176. To salute, a dismounted sentinel, with piece at a right shoulder or saber at a carry, halts and faces toward the person to be saluted when the latter arrives within thirty paces.

The limit within which individuals and insignia of rank can be readily recognized is assumed to be about 30 paces, and therefore at this distance cognizance is taken of the person or party to be saluted.

177. The salute is rendered at 6 paces; if the person to be saluted does not arrive within that distance, then when he is nearest.

178. A sentinel in a sentry box, armed with a rifle, stands at attention in the doorway on the approach of a person or party entitled to salute, and salutes by presenting arms according to the foregoing rules.

If armed with a saber, he stands at a carry and salutes as before.

179. A mounted sentinel on a regular post halts, faces, and salutes in accordance with the foregoing rules. If doing patrol duty, he salutes, but does not halt unless spoken to.

180. Sentinels salute, in accordance with the foregoing rules, all persons and parties entitled to compliments from the guard (pars. 224, 227, and 228);

officers of the Army, Navy, and Marine Corps; military and naval officers of foreign powers; officers of volunteers, and militia officers when in uniform.

181. A sentinel salutes as just prescribed when an officer comes on his post; if the officer holds communication with the sentinel, the sentinel again salutes when the officer leaves him.

During the hours when challenging is prescribed, the first salute is given as soon as the officer has been duly recognized and advanced. A mounted sentinel armed with a rifle or pistol, or a dismounted sentinel armed with a pistol, does not salute after challenging.

He stands at advance rifle or raise pistol until the officer passes.

182. In case of the approach of an armed party of the guard, the sentinel will halt when it is about 30 paces from him, facing toward the party with his piece at the right shoulder. If not himself relieved, he will, as the party passes, place himself so that the party will pass in front of him; he resumes walking his post when the party has reached 6 paces beyond him.

183. An officer is entitled to the compliments prescribed, whether in uniform or not.

184. A sentinel in communication with an officer will not interrupt the conversation to salute. In the case of seniors the officer will salute, whereupon the sentinel will salute.

185. When the flag is being lowered at retreat, a sentinel on post and in view of the flag will face the flag, and, at the first note of the "Star Spangled Banner" or to the color will come to a present arms. At the sounding of the last note he will resume walking his post.

No. 12: To be especially watchful at night and during the time for challenging, to challenge all persons on or near my post, and to allow no one to pass without proper authority.

186. During challenging hours, if a sentinel sees any person or party on or near his post, he will advance rapidly along his post toward such person or party and when within about 30 yards will challenge sharply, "**HALT. Who is there?**" He will place himself in the best possible position to receive or, if necessary, to arrest the person or party.

187. In case a mounted party be challenged, the sentinel will call, "**HALT. DISMOUNT. Who is there?**"

188. The sentinel will permit only one of any party to approach him for the purpose of giving the countersign (pars. 209 to 217), or if no countersign be used, of being duly recognized. When this is done the whole party is advanced, i.e., allowed to pass.

189. In all cases the sentinel must satisfy himself beyond a reasonable doubt that the parties are what they represent themselves to be and have a right to pass. If he is not satisfied, he must cause them to stand and call the corporal of the guard. So, likewise, if he have no authority to pass persons with the countersign, or when the party has not the countersign, or gives an incorrect one.

190. A sentinel will not permit any person to approach so close as to prevent the proper use of his own weapon before recognizing the person or receiving the countersign.

191. When two or more persons approach in one party, the sentinel on receiving an answer that indicates that some one in the party has the countersign, will say, "Advance one with the countersign," and, if the countersign is given correctly, will then say, "Advance (So and so)," repeating the answer to his challenge. Thus, if the answer be, "Relief (friends with the countersign, patrol, etc.)," the sentinel will say, "Advance one with the countersign"; then, "Advance relief (friends, patrol, etc.)."

192. If a person having the countersign approach alone, he is advanced to give the countersign. Thus, if the answer be, "Friend with the countersign (or officer of the day, or etc.)," the sentinel will say, "Advance, friend (or officer of the day, or etc.) with the countersign"; then, "Advance, friend (or officer of the day, etc.)."

193. If two or more persons approach a sentinel's post from different directions at the same time, all such persons are challenged in turn and required to halt and to remain halted until advanced.

The senior is first advanced, in accordance with the foregoing rules.

194. If a party is already advanced and in communication with a sentinel, the latter will challenge any other party that may approach; if the party challenged be senior to the one already on his post, the sentinel will advance the new party at once. The senior may allow him to advance any or all of the other parties; otherwise, the sentinel will not advance any of them until the senior leaves him. He will then advance the senior only of the remaining parties, and so on.

195. The following order of rank will govern a sentinel in advancing different persons or parties approaching his post; Commanding officer, officer of the day, officer of the guard, officers, patrols, reliefs, noncommissioned officers of the guard in order of rank, friends.

196. A sentinel will never allow himself to be surprised, nor permit two parties to advance upon him at the same time.

197. If no countersign be used, the rules for challenging are the same. The rules for advancing parties are modified only as follows: Instead of saying "Advance (so and so) with the countersign," the sentinel will say, "Advance (so and so) to be recognized." Upon recognition he will say, "Advance (so and so)."

198. Answers to a sentinel's challenge intended to confuse or mislead him are prohibited, but the use of such answer as "Friends with the countersign," is not to be understood as misleading, but as the usual answer made by officers, patrols, etc., when the purpose of their visit makes it desirable that their official capacity should not be announced.

SPECIAL ORDERS FOR SENTINELS AT THE POST OF THE GUARD.

199. Sentinels posted at the guard will be required to memorize the following:

Between reveille and retreat to turn out the guard for all persons designated by the commanding officer, for all colors or standards not cased, and in time of war for all armed parties approaching my post, except troops at drill and reliefs and detachments of the guard.

At night, after challenging any person or party, to advance no one but call the corporal of the guard, repeating the answer to the challenge.

200. After receiving an answer to his challenge, the sentinel calls, "Corporal of the guard (So and so)," repeating the answer to the challenge.

He does not in such cases repeat the number of his post.

201. He remains in the position assumed in challenging until the corporal has recognized or advanced the person or party challenged, when he resumes walking his post, or, if the person or party be entitled thereto, he salutes and, as soon as the salute has been acknowledged, resumes walking his post.

202. The sentinel at the post of the guard will be notified by direction of the commanding officer of the presence in camp or garrison of persons entitled to the compliment. (Par. 224.)

203. The following examples illustrate the manner in which the sentinel at

the post of the guard will turn out the guard upon the approach of persons or parties entitled to the compliment (pars. 224, 227, and 228): "Turn out the guard, Commanding Officer"; "Turn out the guard, Governor of a Territory"; "Turn out the guard, national colors"; "Turn out the guard, armed party"; etc.

At the approach of the new guard at guard mounting the sentinel will call "Turn out the guard, armed party."

204. Should the person named by the sentinel not desire the guard formed, he will salute, whereupon the sentinel will call "Never mind the guard."

205. After having called "Turn out the guard," the sentinel will never call "Never mind the guard," on the approach of an armed party.

206. Though the guard be already formed he will not fail to call "Turn out the guard," as required in his special orders, except that the guard will not be turned out for any person while his senior is at or coming to the post of the guard.

207. The sentinels at the post of the guard will warn the commander of the approach of any armed body and of the presence in the vicinity of all suspicious or disorderly persons.

208. In case of fire or disorder in sight or hearing, the sentinel at the guard-house will call the corporal of the guard and report the facts to him.

COUNTERSIGNS AND PAROLES.

209. **Forty-fourth Article of War.** Any person belonging to the armies of the United States who makes known the watchword to any person not entitled to receive it, according to the rules and discipline of war, or presumes to give a parole or watchword different from that which he received, shall suffer death or such other punishment as a court-martial may direct. (See par. 171.)

210. The countersign is a word given daily from the principal headquarters of a command to aid guards and sentinels in identifying persons who may be authorized to pass at night.

It is given to such persons as may be authorized to pass and repass sentinels' posts during the night, and to officers, noncommissioned officers, and sentinels of the guard.

211. The parole is a word used as a check on the countersign in order to obtain more accurate identification of persons. It is imparted only to those who are entitled to inspect guards and to commanders of guards.

The parole or countersign, or both, are sent sealed in the form of an order to those entitled to them.

212. When the commander of the guard demands the parole, he will advance and receive it as the corporal receives the countersign. (See par. 133.)

213. As the communications containing the parole and countersign must at times be distributed by many orderlies, the parole intrusted to many officers, and the countersign and parole to many officers and sentinels, and as both the countersign and parole must, for large commands, be prepared several days in advance, there is always danger of their being lost or becoming known to persons who would make improper use of them; moreover, a sentinel is too apt to take it for granted that any person who gives the right countersign is what he represents himself to be; hence for outpost duty there is greater security in omitting the use of the countersign and parole, or in using them with great caution. The chief reliance should be upon personal recognition or identification of all persons claiming authority to pass.

Persons whose sole means of identification is the countersign, or concerning

whose authority to pass there is a reasonable doubt, should not be allowed to pass without the authority of the corporal of the guard after proper investigation; the corporal will take to his next superior any person about whom he is not competent to decide.

214. The countersign is usually the name of a battle; the parole, that of a general or other distinguished person.

215. When they can not be communicated daily, a series of words for some days in advance may be sent to posts or detachments that are to use the same parole or countersign as the main body.

216. If the countersign be lost, or if a member of the guard desert with it, the commander on the spot will substitute another for it and report the case at once to headquarters.

217. In addition to the countersign, use may be made of preconcerted signals, such as striking the rifle with the hand or striking the hands together a certain number of times, as agreed upon. Such signals may be used only by guards that occupy exposed points.

They are used before the countersign is given, and must not be communicated to any one not entitled to know the countersign. Their use is intended to prevent the surprise of a sentinel.

In the daytime signals such as raising a cap or a handkerchief in a pre-arranged manner may be used by sentinels to communicate with the guard or with each other.

GUARD PATROLS.

218. A guard patrol consists of one or more men detailed for the performance of some special service connected with guard duty.

219. If the patrol be required to go beyond the chain of sentinels, the officer or noncommissioned officer in charge will be furnished with the countersign, and the outposts and sentinels warned.

220. If challenged by a sentinel, the patrol is halted by its commander, and the noncommissioned officer accompanying it advances alone and gives the countersign.

WATCHMEN.

221. Enlisted men may be detailed as watchmen or as overseers over prisoners, and as such will receive their orders and perform their duties as the commanding officer may direct.

COMPLIMENTS FROM GUARDS.

222. The compliment from a guard consists in the guard turning out and presenting arms. (See par. 50.) No compliments will be paid between retreat and reveille except as provided in paragraphs 361 and 362, nor will any person other than those named in paragraph 224 receive the compliment.

223. Though a guard does not turn out between retreat and reveille as a matter of compliment, it may be turned out for inspection at any time by a person entitled to inspect it.

224. Between reveille and retreat the following persons are entitled to the compliment: The President, sovereign or chief magistrate of a foreign country, and members of a royal family; Vice President; President and President pro tempore of the Senate; American and foreign ambassadors; members of the Cabinet; Chief Justice; Speaker of the House of Representatives; committees

of Congress officially visiting a military post; governors within their respective States and Territories; governors general;¹ Assistant Secretary of War officially visiting a military post; all general officers of the Army; general officers of foreign services visiting a post; naval, marine, volunteer, and militia officers in the service of the United States and holding the rank of general officer; American or foreign envoys or ministers; ministers accredited to the United States; *chargés d'affaires* accredited to the United States; consuls general accredited to the United States; commanding officer of a coast artillery district, coast defense command post, fort or camp; officer of the day.

225. The relative rank between officers of the Army and Navy is as follows: General with admiral, lieutenant general with vice admiral, major general with rear admiral, brigadier general with commodore,² colonel with captain, lieutenant colonel with commander, major with lieutenant commander, captain with lieutenant, first lieutenant with lieutenant (junior grade), second lieutenant with ensign. (A. R. 12.)

226. Sentinels will not be required to memorize paragraph 224, and except in the cases of general officers of the Army, the commanding officer, and the officer of the day, they will be advised in each case of the presence in camp or garrison of persons entitled to the compliment.

227. Guards will turn out and present arms when the national or regimental colors or standards, not cased, are carried past by a guard or an armed party.

This rule also applies when the party carrying the colors is at drill. If the drill is conducted in the vicinity of the guardhouse, the guard will be turned out when the colors first pass, and not thereafter.

228. In case the remains of a deceased officer or soldier are carried past, the guard will turn out and present arms.

229. In time of war all guards will turn out under arms when armed parties, except troops at drill and reliefs or detachments of the guard, approach their post. (See par. 53.)

230. The commander of the guard will be notified of the presence in camp or garrison of all persons entitled to the compliment, except general officers of the Army, the commanding officer, and the officer of the day. Members of the guard will salute all persons entitled to the compliment and all officers in the military or naval service of foreign powers, officers of the Army, Navy, and Marine Corps, officers of volunteers, and officers of militia when in uniform.

GENERAL RULES CONCERNING GUARD DUTY.

231. **Thirty-sixth Article of War.** No soldier shall hire another to do his duty for him.

232. **Thirty-eighth Article of War.** Any soldier who is found drunk on his guard, party, or other duty shall suffer such punishment as a court-martial may direct.

233. All material instructions given to a member of the guard by an officer having authority will be promptly communicated to the commander of the guard by the officer giving them.

¹ The term "governors general" shall be taken to mean administrative officers under whom officers with the title of governor are acting.

² The grade of commodore ceased to exist as a grade on the active list of the Navy of the United States on Mar. 3, 1899. By section 7 of the act of Mar. 3, 1899, the nine junior rear admirals are authorized to receive the pay and allowances of a brigadier general of the Army.

234. Should the guard be formed, soldiers will fall in ranks under arms. At roll call, each man, as his name or number and relief are called, will answer "Here," and come to an order arms.

235. Whenever the guard or a relief is dismissed, each member not at once required for duty will place his rifle in the arms racks, if they be provided, and will not remove it therefrom unless he requires it in the performance of some duty.

236. Without permission from the commander of the guard, members of the main guard, except orderlies, will not leave the immediate vicinity of the guardhouse. Permission to leave will not be granted except in cases of necessity.

237. Members of the main guard, except orderlies, will not remove their accouterments or clothing without permission from the commander of the guard. (Par. 66.)

PRISONERS.

238. Articles of war 66, 67, 68, 69, and 70 have special reference to the confinement of prisoners and should be carefully borne in mind.

239. The commander of the guard will place a civilian in confinement on an order from higher authority only, unless such civilian is arrested while in the act of committing some crime within the limits of the military jurisdiction; in which case the commanding officer will be immediately notified.

240. Except as provided in the twenty-fourth article of war, or when restraint is necessary, no soldier will be confined without the order of an officer, who shall previously inquire into his offense. (A. R. 930.)

241. An officer ordering a soldier into confinement will send, as soon as practicable, a written statement, signed by himself, to the commander of the guard, setting forth the name, company and regiment of such soldier, and a brief statement of the alleged offense. It is a sufficient statement of the offense to give the number and article of war under which the soldier is charged.

242. A prisoner, after his first day of confinement, and until his sentence has been duly promulgated, is considered as held in confinement by the commanding officer. After due promulgation of his sentence, the prisoner is held in confinement by authority of the officer who reviews the proceedings of the court awarding sentence. The commander of the guard will state in his report, in the proper place, the name of the officer by whom the prisoner was originally confined.

243. Enlisted men against whom charges have been preferred will be designated as "awaiting trial"; enlisted men who have been tried will, prior to the promulgation of the result, be designated as "awaiting result of trial"; enlisted men serving sentence of confinement, not involving dishonorable discharge, will be designated as "garrison prisoners." Persons sentenced to dismissal or dishonorable discharge and to terms of confinement at military posts or elsewhere will be designated as "general prisoners." (A. R. 928.)

244. The sentences of prisoners will be read to them when the order promulgating the same is received. The officer of the guard, or the officer of the day if there be no officer of the guard, will read them unless the commanding officer shall direct otherwise.

245. See Manual of Courts-Martial, par. 401. (C. A. R. No. 55.)

246. When soldiers awaiting trial or the result of trial, or undergoing sentence, commit offenses for which they are tried, the second sentence will be executed upon the expiration of the first.

247. Prisoners awaiting trial by, or undergoing sentence of a general court-martial, and those confined for serious offenses, will be kept apart, when practicable, from those confined by sentence of an inferior court, or for minor offenses. Enlisted men in confinement for minor offenses, or awaiting trial or the result of trial for the same, will ordinarily be sent to work under charge of unarmed overseers instead of armed sentinels, and will be required to attend drills unless the commanding officer shall direct otherwise.

248. Prisoners, other than general prisoners, will be furnished with food from their respective companies or from the organizations to which they may be temporarily attached.

The food of prisoners will, when practicable, be sent to their places of confinement, but post commanders may arrange to send the prisoners, under proper guard, to their messes for meals.

When there is no special mess for general prisoners, they will be attached for rations to companies.

Enlisted men bringing meals for the prisoners will not be allowed to enter the prison room. (See par. 289.)

249. With the exception of those specially designated by the commanding officer, no prisoners will be allowed to leave the guard house unless under charge of a sentinel and passed by an officer or noncommissioned officer of the guard. The commanding officer may authorize certain garrison prisoners and paroled general prisoners to leave the guard house, not under the charge of a sentinel, for the purpose of working outside under such surveillance and restrictions as he may impose.

250. Prisoners reporting themselves sick at sick call, or at the time designated by the commanding officer, will be sent to the hospital under charge of proper guard, with a sick report kept for the purpose. The recommendation of the surgeon will be entered in the guard report.

251. The security of sick prisoners in the hospital devolves upon the post surgeon, who will, if necessary, apply to the post commander for a guard.

252. Prisoners will be paraded with the guard only when directed by the commanding officer or the officer of the day.

253. A prisoner under charge of a sentinel will not salute an officer.

254. All serviceable clothing which belongs to a prisoner, and his blankets, will accompany him to the post designated for his confinement, and will be fully itemized on the clothing list sent to that post. The guard in charge of the prisoner during transfer will be furnished with a duplicate of this list and will be held responsible for the delivery of all articles itemized therein, with the prisoner. At least one serviceable woolen blanket will be sent with every such prisoner so transferred. (A. R. 939.)

255. When mattresses are not supplied, each prisoner in the guardhouse will be allowed a bed sack and 30 pounds of straw per month for bedding. So far as practicable, iron bunks will be furnished to all prisoners in post guardhouses and prison rooms. (A. R. 1084.)

256. If the number of prisoners, including general prisoners, confined at a post justifies it, the commanding officer will detail a commissioned officer as "officer in charge of prisoners." At posts where the average number of prisoners continually in confinement is less than 12, the detail of an officer in charge of prisoners will not be made.

RULES AND REGULATIONS FOR THE GOVERNMENT OF GENERAL PRISONERS AT POSTS.

257. The officer in charge of prisoners, when one is detailed, will make a daily inspection of the cells and prison rooms and will inspect the food and submit to the commanding officer any complaints about the same.

258. He will have charge of the property, money, and valuables belonging to general prisoners, which they are not permitted to keep in their possession, and will disburse said money, when desired by the owner, for purposes approved by the commanding officer. If there be no officer in charge of prisoners, this duty will be intrusted to the adjutant.

259. No general prisoner will be released from confinement except on an order communicated by the commanding officer, who, before giving such order, will verify the date of expiration of the prisoner's sentence by examining all orders fixing or modifying the term of confinement.

260. The following records and reports will be kept: Record of general prisoner, on blank supplied by the Adjutant General's Department; morning report, and clothing book (ordinary blank book without special ruling furnished by the Quartermaster's Department).

261. Paragraphs 262 to 295 of this manual will be read to or by every general prisoner as soon as practicable after his confinement, and a copy of these rules and regulations, which will be furnished by the Adjutant General's Department, will be kept posted in each cell and room.

262. After a general prisoner, who is serving sentence at a post, has served one-half of his sentence, he may submit to the commanding officer of the post an application to be placed upon parole during working hours for the remainder of the term of confinement. Such application will contain a pledge on the part of the applicant to comply with all general conditions under which general prisoners may be paroled, and also with any special requirements that may from time to time be made of him. Upon receipt of such an application, the post commander may, in the exercise of his discretion, parole the prisoner during working hours for work in the Quartermaster Corps upon condition that if the prisoner's conduct is not good the parole status will be forfeited. The granting of the qualified parole here authorized does not constitute a release of the prisoner from military custody or control, but merely authorizes a relaxation of the strict rule which would otherwise require the presence of a guard whenever the prisoner is outside of the guardhouse. In determining what constitutes one-half of a sentence the calculation will be based upon the prisoner's term without deduction for good conduct. The authorized abatement for good conduct will continue to accrue during the good conduct of a general prisoner on parole. (A. R. 943.) No paroled general prisoner will be employed about the post exchange or the quarters of any officer except as a mechanic or laborer under the direction of the quartermaster.

263. Every general prisoner on admission will be minutely searched and will be permitted to retain in his possession only proper clothing and necessary toilet articles. He will then be required to bathe, his hair will be cut close, and his beard, whiskers, and mustache trimmed.

264. General prisoners will bathe at least once a week and will wear their hair short. The hair and beard of a general prisoner may be allowed to grow during the last month of his confinement.

265. All articles of personal property taken from a general prisoner will be marked with his name and stored until he is released, when they will be returned to him.

266. The prison rooms will be properly policed, good order and quiet de-

meanor maintained, and necessary measures taken for security. The names of occupants of cells will be posted on the doors. Each cell and prison room will be inspected at least once a day for the purpose of detecting contraband articles and of seeing whether any alterations have been made or attempted which might facilitate escape.

267. The diet of general prisoners shall be determined by the commanding officer. A general prisoner confined on bread-and-water diet will receive an allowance of 18 ounces of bread each day and as much water as he may desire.

268. Meals will be served in prison rooms or cells when no separate mess is provided. Ample time and a sufficient quantity of food will be allowed for each meal.

269. Each general prisoner will be furnished with and will have at all times one complete suit of outer clothing, two complete suits of underclothing, one pair of shoes, one hat, and one or two blankets, depending on the temperature. The outer clothing of general prisoners will be conspicuously marked "P" and divested of all ornament. When released such prisoner will have in his possession a serviceable suit of clothing, the outer garments bearing no prison mark.

270. At the weekly inspection each general prisoner will stand by his bed or bunk, and the inspecting officer will see that the rules for cleanliness have been observed. The bedding and clothing will be folded, clothing on top of the bedding. General prisoners will be held to a strict accountability for clothing in their possession, and they are forbidden to alter it without authority.

271. General prisoners will be kept at hard labor daily except Sunday, January 1, February 22, May 30, July 4, Labor Day, Thanksgiving Day, and Christmas Day, but in case of pressing necessity they may be employed on these days. So far as practicable, they will perform all scavenger duties at the post. They will not be employed in cultivating company or private gardens, nor upon ordinary police about stables or barracks.

272. General prisoners who desire an interview with the commanding officer will make application to the officer in charge, stating the purpose. The officer in charge will receive oral complaints which may be made by them, and will notify them of his action. Complaints in writing will also be addressed to him, and will be laid before the commanding officer with such information as he may possess bearing on the case. If there be no officer detailed in charge of prisoners, the officer of the day will receive application for interviews, complaints, etc., under this paragraph.

273. Wrongs will be righted, if possible, but those who make frivolous or untruthful complaints will be punished. General prisoners will be permitted to submit explanations for offenses for which reported. No general prisoner will sign any protest or petition in conjunction with other prisoners; each will make his own complaints or requests.

274. A record will be kept of all reports against general prisoners, with the disciplinary punishment awarded in each case.

275. Except as otherwise ordered by the commanding officer, general prisoners will be constantly under charge of the guard, and in the event of mutiny, attempted outbreak or escape, or any disorder immediate action will be taken by the guard and enough force used to restore order. The force used in any case will be limited to that necessary to the enforcement of these rules, the preservation of order, and the proper control of prisoners.

276. No disciplinary punishment will be inflicted upon general prisoners unless by direction of the commanding officer, and then only after a full investigation of each case.

277. A general prisoner who violates any of these rules, who is insolent, insubordinate, disrespectful, or disorderly, or who uses indecent or profane language may be disciplined by—

- (a) Being deprived of a meal.
- (b) Being locked in his cell when not at work.
- (c) Performing extra hard or disagreeable labor.
- (d) Solitary confinement on bread-and-water diet.
- (e) Forfeiture of good-conduct time.

In addition to being disciplined as indicated he may also be tried by court-martial if the gravity of the offense so demands.

Solitary confinement on bread and water will not exceed 14 consecutive days at any one period, and will not be repeated until an interval of 14 days shall have elapsed and shall not exceed 84 days in one year.

278. No good-conduct time can be forfeited in advance. When it is necessary to discipline a general prisoner who has none to his credit, the punishment must take some other form.

279. Any general prisoner who attempts to escape will forfeit all good-conduct time previously earned. A recaptured prisoner will suffer the same forfeiture. In either case, the prisoner may, in addition, be tried by court-martial.

280. A general prisoner who refuses to work may, for the first offense, be closely confined and deprived of his next meal, but food will be allowed him as soon as he consents to resume work; and he may be further punished for his offense by loss of not more than 20 days' good-conduct time, or by being locked in his cell for not more than 30 days, except when at work.

281. Letters will be sent out by general prisoners through the officer in charge or officer of the day. Each prisoner will be permitted to write to his family or friends once in each month, all letters to be submitted unsealed (without stamp or envelope) for inspection. Paper will be furnished to prisoners for official as well as private communications.

282. Prison authorities without the consent of a general prisoner will not open and inspect letters addressed to him. Such letters may, however, be retained unopened until the prisoner is released, or his letters otherwise disposed of under judicial process.

283. General prisoners will be permitted to make application for clemency as soon after their arrival at a post for confinement as they may desire, but thereafter not until six months shall have elapsed since the date of final action upon the last application. Applications should be addressed to the officer in charge (or the officer of the day), but applicants may state to what authority they wish to appeal.

284. Applications for clemency should be based on reasonable grounds. Good conduct is rewarded by an allowance of good-conduct time, but does not of itself furnish any claim to clemency or further mitigation of sentence. It will aid, however, in obtaining favorable consideration for applications based upon other grounds.

285. General prisoners, other than those confined in penitentiaries, will be allowed in abatement of their terms of confinement, when serving sentences of over 3 months and not over 12 months, 5 days for each complete period of 25 days during the whole of which their conduct has been good; but the abatement of 5 days so authorized shall not have the effect in any case of reducing the confinement below 3 months. On sentences exceeding 1 year there will be allowed the foregoing abatement for the first year of the sentence, including abatement, and thereafter 10 days for each complete period of 20 days during the whole of which the conduct of the prisoners has been good. Abatements

thus authorized may be forfeited wholly or in part by subsequent misconduct, such forfeiture to be determined by the commanding officer of the post where the prisoner is confined. A general prisoner serving sentence in a penitentiary will receive the abatement authorized for convicts in that penitentiary. (A. R. 942.)

286. In order to secure uniformity in computing abatement of terms of confinement, the following method of computation will be used:

A general prisoner will be credited at the beginning of his confinement with all the good-conduct time that can be earned in his case during the entire period of his sentence. All months will be assumed to consist of 30 days. When forfeitures of good-conduct time are imposed they will be deducted from the amount of the prisoner's credit, but care will be taken not to impose or deduct a forfeiture in excess of the amount of good-conduct time that has actually been earned at date of forfeiture. (A. R. 942.) Except when the loss of good-conduct time is prescribed for specific offenses, the other minor penalties enumerated in paragraph 275 will ordinarily be inflicted before resort is had to loss of good-conduct time.

287. Talking, gazing about, or laughing in ranks is prohibited. General prisoners who are not at work will stand at attention when addressed by an officer or noncommissioned officer. Those at work will, under no circumstances, leave their places of employment without the permission of the non-commissioned officer or sentinel in charge of the party.

288. A general prisoner desiring to speak to a sentinel will hold up his hand as a signal for the desired permission.

289. No persons will be permitted to enter the prison rooms without authority from the commanding officer, the officer of the day, or the officer in charge.

290. The beds will be neatly made up as soon as the cells are unlocked. The night buckets will be emptied, cleaned, and put in the place provided for them during the day. A small quantity of disinfecting fluid will be placed in each bucket, and the buckets will be taken into the cells immediately after supper.

291. Spitting on the walls or floors of cells and prison rooms, or defacing them, is forbidden. Any general prisoner who makes unnecessary litter or dirt in the prison will be reported to the officer in charge or officer of the day.

292. Trafficking with general prisoners is forbidden.

293. General prisoners will be in bed at taps. Loud talking or loud noises of any kind will not be permitted at any time. Strict silence is enjoined after tattoo.

294. General prisoners will be respectful in their treatment of one another. They are forbidden to hold any conversation with soldiers or citizens, except on a matter of duty, without authority from the commanding officer, officer of the day, or officer in charge.

295. A record of all violations of these rules will be kept by the provost sergeant or commander of the guard, and report of the same will be made to the officer in charge of prisoners or the officer of the day, in time to accompany the morning report of general prisoners.

296. The foregoing rules will be enforced with reference to garrison prisoners so far as applicable.

297. Garrison prisoners will be allowed in abatement of their terms of confinement when serving sentences of 1 month, 5 days for good conduct. On sentences exceeding 1 month they will be allowed the foregoing abatement for the first month of the sentence, and thereafter 10 days for each complete period of 20 days during the whole of which their conduct has been good. Abatements thus authorized may be forfeited, wholly or in part, by subsequent misconduct,

such forfeiture to be determined by the commanding officer of the post where the prisoner is confined. (A. R. 942.)

298. After a garrison prisoner has served one-half of his sentence he may, if his enlistment has not expired, submit to the commander of the post where the sentence is being executed a request to be put on probation for the remainder of the term of confinement adjudged, and upon the request being granted the soldier will be restored to duty upon condition that if his conduct is not good while on probation he will be required to serve the remainder of his sentence. In determining what constitutes one-half of a sentence the calculation will be based upon the prisoner's term without deduction for good conduct. The authorized abatement for good conduct will continue to accrue during the good conduct of a garrison prisoner on probation. (A. R. 943.)

GUARDING PRISONERS.

299. The sentinel at the post of the guard has charge of the prisoners except when they have been turned over to the prisoner guard or overseers. (Par. 247 and 300 to 304.)

(a) He will allow none to escape.

(b) He will allow none to cross his post leaving the guardhouse except when passed by an officer or noncommissioned officer of the guard.

(c) He will allow no one to communicate with prisoners without permission from proper authority.

(d) He will promptly report to the corporal of the guard any suspicious noise made by the prisoners.

(e) He will be prepared to tell whenever asked how many prisoners are in the guardhouse and how many are out at work or elsewhere.

Whenever prisoners are brought to his post returning from work or elsewhere, he will halt them and call the corporal of the guard, notifying him of the number of prisoners returning. Thus: "Corporal of the guard, (so many) prisoners."

He will not allow prisoners to pass into the guardhouse until the corporal of the guard has responded to the call and ordered him to do so.

300. Whenever practicable special guards will be detailed for the particular duty of guarding working parties composed of such prisoners as can not be placed under overseers. (Par. 247.)

301. The prisoner guard and overseers will be commanded by the police officer; if there be no police officer, then by the officer of the day.

302. The provost sergeant is sergeant of the prisoner guard and overseers, and as such receives orders from the commanding officer and the commander of the prisoner guard only.

303. Details for prisoner guard are marched to the guardhouse and mounted by being inspected by the commander of the main guard, who determines whether all of the men are in proper condition to perform their duties and whether their arms and equipments are in proper condition, and rejects any men found unfit.

304. When prisoners have been turned over to the prisoner guard or overseers, such guards or overseers are responsible for them under their commander, and all responsibility and control of the main guard ceases until they are returned to the main guard. (Par. 306.)

305. If a prisoner attempts to escape, the sentinel will call "Halt." If he fails to halt when the sentinel has once repeated his call, and if there be no other possible means of preventing his escape, the sentinel will fire upon him.

The following will more fully explain the important duties of a sentinel in this connection:

(Circular.)

War Department,
Adjutant General's Office,
Washington, November 1, 1887.

By direction of the Secretary of War the following is published for the information of the Army:

United States Circuit Court, Eastern District of Michigan, August 1, 1887.

The United States v. James Clark.

The circuit court has jurisdiction of a homicide committed by one soldier upon another within a military reservation of the United States.

If a homicide be committed by a military guard without malice and in the performance of his supposed duty as a soldier, such homicide is excusable, unless it was manifestly beyond the scope of his authority or was such that a man of ordinary sense and understanding would know that it was illegal.

It seems that the sergeant of the guard has a right to shoot a military convict if there be no other possible means of preventing his escape.

The common-law distinction between felonies and misdemeanors has no application to military offenses.

While the finding of a court of inquiry acquitting the prisoner of all blame is not a legal bar to a prosecution, it is entitled to weight as an expression of the views of the military court of the necessity of using a musket to prevent the escape of the deceased.

* * * * *

By order of the Secretary of War:

R. C. DRUM,
Adjutant-General.

The following is taken from Circular No. 3 of 1883, from Headquarters Department of the Columbia:

Vancouver Barracks, W. T.,
April 20, 1883.

To the Assistant Adjutant General,
Department of the Columbia.

Sir:

* * * * *

A sentinel is placed as guard over prisoners to prevent their escape, and for this purpose he is furnished a musket, with ammunition. To prevent escape is his first and most important duty.

* * * * *

I suppose the law to be this: That a sentinel shall not use more force or violence to prevent the escape of a prisoner than is necessary to effect that object, but if the prisoner, after being ordered to halt, continues his flight, the sentinel may maim or even kill him, and it is his duty to do so.

A sentinel who allows a prisoner to escape without firing upon him and firing to hit him, is, in my judgment, guilty of a most serious military offense, for which he should and would be severely punished by a general court-martial.

* * * * *

(Signed) HENRY A. MORROW,
Colonel 21st Infantry, Commanding Post.

[Third indorsement.]

Office Judge Advocate,
Military Division of the Pacific,
May 11, 1883.

Respectfully returned to the Assistant Adjutant General, Military Division of the Pacific, concurring fully in the views expressed by Colonel Morrow. I was not aware that such a view had ever been questioned. That the period is a time of peace does not affect the authority and duty of the sentinel or guard to fire upon the escaping prisoner, if this escape can not otherwise be prevented. He should, of course, attempt to stop the prisoner before firing, by ordering him to halt, and will properly warn him by the words, "Halt, or I fire," or words to such effect.

W. WINTHROP,
Judge Advocate.

[Fourth indorsement.]

Headquarters Military Division of the Pacific,
May 11, 1883.

Respectfully returned to the Commanding General, Department of the Columbia, approving the opinion of the commanding officer, Twenty-first Infantry, and of the Judge Advocate of the Division, in respect to the duty of and method to be adopted by sentinels in preventing prisoners from escaping.

* * * * *

By command of Major General Schofield:

J. C. KELTON,
Assistant Adjutant General.

See also Circular No. 53, A. G. O., December 22, 1900.

306. On approaching the post of the sentinel at the guardhouse, a sentinel of the prisoner guard or an overseer in charge of prisoners will halt them and call, "No. 1, (so many) prisoners." He will not allow them to cross the post of the sentinel until so directed by the corporal of the guard.

307. Members of the prisoner guard and overseers placed over prisoners for work will receive specific and explicit instructions covering the required work; they will be held strictly responsible that the prisoners under their charge properly and satisfactorily perform the designated work.

STABLE GUARDS.

308. Under the head of stable guards will be included guards for cavalry stables, artillery stables and parks, mounted infantry stables, machine-gun organization stables and parks and quartermaster stables and parks. Where the words "troop" and "cavalry" are used they will be held to include all of these organizations.

309. When troop stable guards are mounted they will guard the stables of the cavalry (see par. 13). When no stable guards are mounted, the stables will be guarded by sentinels posted from the main guard, under the control of the officer of the day.

The instructions given for troop stable guard will be observed as far as applicable by the noncommissioned officers and sentinels of the main guard when in charge of the stables.

TROOP STABLE GUARDS.

310. Troop stable guards will not be used except in the field, or when it is impracticable to guard the stables by sentinels from the main guard.

311. Troop stable guards will be under the immediate control of their respective troop commanders; they will be posted in each cavalry stable, or near the picket line, and will consist of not less than one noncommissioned officer and three privates.

Stable guards are for the protection of the horses, stables, forage, equipments, and public property generally. They will in addition enforce the special regulations in regard to stables, horses, and parks.

312. Sentinels of stable guards will be posted at the stables or at the picket lines when the horses are kept outside. The troop stable guard may be used as a herd guard during the day time or when grazing is practicable.

313. The troop stable guard, when authorized by the post commander, will be mounted under the supervision of the troop commander. It will be armed, at the discretion of the troop commander, with either rifle or pistol.

314. The tour continues for 24 hours, or until the guard is relieved by a new guard.

315. The employment of stable guards for police and fatigue duties at the stables is forbidden; but this will not prohibit them from being required to assist in feeding grain before reveille.

316. The troop stable guard will attend stables with the rest of the troop and groom their own horses, the sentinels being taken off post for the purpose.

317. Neither the noncommissioned officer nor the members of the stable guard will absent themselves from the immediate vicinity of the stables except in case of urgent necessity, and then for no longer time than is absolutely necessary. No member of the guard will leave for any purpose without the authority of the noncommissioned officer of the guard.

318. The noncommissioned officer and one member of the stable guard will go for meals at the proper hour; upon their return the other members of the guard will be directed to go by the noncommissioned officer.

319. When the horses are herded each troop will furnish its own herd guard. (Par. 14.)

320. Smoking in the stables or their immediate vicinity is prohibited. No fire or light, other than electric light or stable lanterns, will be permitted in the stables. A special place will be designated for trimming, filling, and lighting lanterns.

NONCOMMISSIONED OFFICER OF THE TROOP STABLE GUARD.

321. The noncommissioned officer receives his orders from his troop commander, to whom he will report immediately after posting his first relief, and when relieved will turn over all his orders to his successor. He instructs his sentinels in their general and special duties; exercises general supervision over his entire guard; exacts order and cleanliness about the guardroom; prevents the introduction of intoxicants into the guardhouse and stables; receives, by count, from his predecessor, the animals, horse equipments, and all property (both private and public) pertaining thereto; examines, before relieving his predecessor, all locks, windows, and doors, and should any be found insecure he will report the fact to his troop commander when he reports for orders. He will personally post and relieve each sentinel, taking care to verify the property responsibility of the sentinel who comes off post, and see that the sentinel who goes on post is aware of the property responsibility that he assumes.

322. That the noncommissioned officer may be more thoroughly informed of his responsibility, all horses returning, except those from a regular formation, will be reported to him. He will then notify the sentinel on post, and, in the absence of the stable sergeant, will see that the horses are promptly cared for.

In case of abuse, he will promptly report to the troop commander. Should the horse be the private property of an officer, he will report such abuse to the owner.

323. The noncommissioned officer will report any unusual occurrence during his tour direct to his troop commander.

324. Horses and other property for which the noncommissioned officer is responsible will not be taken from the stables without the authority of the post or troop commander.

325. The noncommissioned officer must answer the sentinel's calls promptly.

326. In case of fire, the noncommissioned officer will see that the requirements of paragraph 334 are promptly carried out.

327. Whenever it becomes necessary for the noncommissioned officer to leave his guard, he will designate a member of it to take charge and assume his responsibility during his absence.

SENTINELS OF THE TROOP STABLE GUARD.

328. The sentinel in the discharge of his duties will be governed by the regulations for sentinels of the main guard whenever they are applicable—such as courtesies to officers, walking post in a soldierly manner, challenging, etc.; he will not turn out the guard except when ordered by proper authority.

329. The sentinel will receive orders from the commanding officer, the troop commander, and the noncommissioned officers of the stable guard only, except when the commanding officer directs the officer of the day to inspect the stable guard.

330. In the field and elsewhere when directed by the commanding officer the sentinel when posted will verify the number of horses for which he is responsible, and when relieved will give the number to his successor.

331. The sentinel will not permit any horse or equipments to be taken from the stables, except in the presence of the noncommissioned officer.

332. Should a horse get loose, the sentinel will catch him and tie him up. If he be unable to catch the horse, the noncommissioned officer will at once be notified. In case a horse be cast, or in any way entangled, he will relieve him, if possible; if unable to relieve him, he will call the noncommissioned officer. Sentinels are forbidden to punish or maltreat a horse.

333. When a horse is taken sick, the sentinel will notify the noncommissioned officer, who in turn will call the farrier, and see that the horse is properly attended to.

334. In case of fire the sentinel will give the alarm by stepping outside the stable and firing his pistol or piece repeatedly, and calling out at the same time, "Fire, stables, Troop (——)."

As soon as the guard is alarmed, he will take the necessary precautions in opening or closing the doors so as to prevent the spreading of the fire and make it possible to remove the horses; he will drop the chains and bars, and, with the other members of the guard, proceed to lead out the horses and secure them at the picket line or such other place as may have been previously designated.

335. Sentinels over horses, or in charge of prisoners, receive orders from the stable sergeant, so far as the care of the horses and the labor of prisoners are concerned.

336. In field artillery and machine-gun organizations, the guard for the stables has charge of the guns, caissons, etc., with their ammunition and stores, as well as the horses, harness, and forage.

FLAGS.

337. The garrison, post, and storm flags are national flags and shall be of bunting. The union of each is as described in paragraph 216, Army Regulations, and shall be of the following proportions: Width, seven-thirteenths of the hoist of the flag; length, seventy-six one-hundredths of the hoist of the flag.

The garrison flag will have 38 feet fly and 20 feet hoist. It will be furnished only to posts designated in orders from time to time from the War Department, and will be hoisted only on holidays and important occasions.

The post flag will have 19 feet fly and 10 feet hoist. It will be furnished for all garrison posts and will be hoisted in pleasant weather.

The storm flag will have 9 feet 6 inches fly and 5 feet hoist. It will be furnished for all occupied posts for use in stormy and windy weather. It will also be furnished to national cemeteries. (A. R. 223.)

338. At every military post or station the flag will be hoisted at the sounding of the first note of the reveille, or of the first note of the march, if a march be played before the reveille. The flag will be lowered at the sounding of the last note of the retreat, and while the flag is being lowered the band will play "The Star Spangled Banner," or, if there be no band present, the field music will sound "to the color." When "to the color" is sounded by the field music while the flag is being lowered the same respect will be observed as when "The Star Spangled Banner" is played by the band, and in either case officers and enlisted men out of ranks will face toward the flag, stand at attention, and render the prescribed salute. (A. R. 437.)

The lowering of the flag will be regulated as to be completed at the last note of "The Star Spangled Banner" or "to the color."

339. The national flag will be displayed at a seacoast or lake fort at the beginning of and during an action in which a fort may be engaged, whether by day or by night. (A. R. 437.)

340. The national flag will always be displayed at the time of firing a salute. (A. R. 397.)

341. The flag of a military post will not be dipped by way of salute or compliment. (A. R. 405.)

342. On the death of an officer at a military post the flag is displayed at half-staff and so remains; between reveille and retreat, until the last salvo or volley is fired over the grave; or if the remains are not interred at the post, until they are removed therefrom. (A. R. 422.)

343. During the funeral of an enlisted man at a military post the flag is displayed at half-staff. It is hoisted to the top after the final volley or gun is fired or after the remains are taken from the post. The same honors are paid on the occasion of the funeral of a retired enlisted man. (A. R. 423.)

344. When practicable, a detail consisting of a noncommissioned officer and two privates of the guard will raise or lower the flag. This detail wears side arms or, if the special equipments do not include side arms, then belts only.

The noncommissioned officer, carrying the flag, forms the detail in line, takes his post in the center, and marches it to the staff. The flag is then securely attached to the halyards and rapidly hoisted. The halyards are then securely fastened to the cleat on the staff and the detail marched to the guardhouse.

345. When the flag is to be lowered, the halyards are loosened from the

staff and made perfectly free. At retreat the flag is lowered at the last note of retreat. It is then neatly folded and the halyards made fast. The detail is then reformed and marched to the guardhouse, where the flag is turned over to the commander of the guard.

The flag should never be allowed to touch the ground and should always be hoisted or lowered from the leeward side of the staff, the halyards being held by two persons.

REVEILLE AND RETREAT GUN.

346. The morning and evening gun will be fired by a detachment of the guard, consisting, when practicable, of a corporal and two privates. The morning gun is fired at the first note of reveille, or, if marches be played before the reveille, it is fired at the beginning of the first march. The retreat gun is fired at the last note of retreat.

The corporal marches the detachment to and from the piece, which is fired, sponged out, and secured under his direction.

GUARD MOUNTING.

347. Guard mounting will be formal or informal as the commanding officer may direct. It will be held as prescribed in the drill regulations of the arm of the service to which the guard belongs; if none is prescribed, then as for infantry. In case the guard is composed wholly of mounted organizations, guard mounting may be held mounted.

348. When infantry and mounted troops dismounted are united for guard mounting, all details form as prescribed for infantry.

FORMAL GUARD MOUNTING FOR INFANTRY.

349. Formal guard mounting will ordinarily be held only in posts or camps where a band is present.

350. At the assembly, the men designated for the guard fall in on their company parade grounds as prescribed in paragraph 106, I. D. R. The first sergeant then verifies the detail, inspects it, replaces any man unfit to go on guard, turns the detail over to the senior noncommissioned officer and retires. The band takes its place on the parade ground so that the left of its front rank shall be 12 paces to the right of the front rank of the guard when the latter is formed.

351. At adjutant's call, the adjutant, dismounted, and the sergeant major on his left, marches to the parade ground. The adjutant halts and takes post so as to be 12 paces in front of and facing the center of the guard when formed; the sergeant major continues on, moves by the left flank, and takes post, facing to the left, 12 paces to the left of the front rank of the band; the band plays in quick or double time; the details are marched to the parade ground by the senior noncommissioned officers; the detail that arrives first is marched to the line so that, upon halting, the breast of the front-rank man shall be near to and opposite the left arm of the sergeant major; the commander of the detail halts his detail, places himself in front of and facing the sergeant major, at a distance equal to or a little greater than the front of his detail, and commands: 1. **Right**, 2. **DRESS**. The detail dresses up to the line of the sergeant major and its commander, the right front-rank man placing his breast against the left arm of the sergeant major; the noncommissioned officers take post two paces in rear of the rear rank of the detail. The detail aligned, the commander of the detail commands: **FRONT**, salutes, and then reports: "The detail is

correct"; or "(So many) sergeants, corporals, or privates are absent"; the sergeant major returns the salute with the right hand after the report is made; the commander then passes by the right of the guard and takes post in the line of noncommissioned officers in rear of the right file or his detail.

Should there be more than one detail, it is formed in like manner on the left of the one preceding; the privates, noncommissioned officers, and commander of each detail dress on those of the preceding details in the same rank or line; each detail commander closes the rear rank to the right and fills blank files, as far as practicable, with the men from his front rank.

Should the guard from a company not include a noncommissioned officer, one will be detailed to perform the duties of commander of the detail. In this case the commander of the detail, after reporting to the sergeant major, passes around the right flank between the guard and the band and retires.

352. When the last detail has formed, the sergeant major takes a side step to the right, draws sword, verifies the detail, takes post two paces to the right and two paces to the front of the guard, facing to the left, causes the guard to count off, completes the left squad, if necessary, as in the school of the company, and if there be more than three squads, divides the guard into two platoons, again takes post as described above and commands: 1. **Open ranks**, 2. **MARCH**.

At the command **march**, the rear rank and file closers march backward four steps, halt, and dress to the right. The sergeant major aligns the ranks and file closers and again, taking post as described above, commands: **FRONT**, moves parallel to the front rank until opposite the center, turns to the right, halts midway to the adjutant, salutes, and reports: "Sir, the details are correct"; or, "Sir, (so many) sergeants, corporals, or privates are absent"; the adjutant returns the salute, directs the sergeant major: **Take your post**, and then draws saber; the sergeant major faces about, approaches to within two paces of the center of the front rank, turns to the right, moves three paces beyond the left of the front rank, turns to the left, halts on the line of the front rank, faces about, and brings his sword to the order. When the sergeant major has reported, the officer of the guard takes post, facing to the front, three paces in front of the center of the guard, and draws saber.

The adjutant then commands: 1. **Officer (or officers) and noncommissioned officers**, 2. **Front and center**, 3. **MARCH**.

At the command **center**, the officers carry saber. At the command **march**, the officer advances and halts three paces from the adjutant, remaining at the carry; the noncommissioned officers pass by the flanks, along the front, and form in order of rank from right to left, three paces in rear of the officer, remaining at the right shoulder; if there is no officer of the guard the noncommissioned officers halt on a line three paces from the adjutant; the adjutant then assigns the officers and noncommissioned officers according to rank, as follows: Commander of the guard, leader of first platoon, leader of second platoon, right guide of first platoon, left guide of second platoon, left guide of first platoon, right guide of second platoon, and file closers, or, if the guard is not divided into platoons: Commander of the guard, right guide, left guide, and file closers.

The adjutant then commands: 1. **Officer (or officers) and noncommissioned officers**, 2. **POSTS**, 3. **MARCH**.

At the command **posts**, all except the officer commanding the guard, face about. At the command **march**, they take the posts prescribed in the school of the company with open ranks. The adjutant directs: **Inspect your guard**, **sir**; at which the officer commanding the guard faces about, commands: **Prepare for inspection**, returns saber, and inspects the guard.

During the inspection, the band plays; the adjutant returns saber, observes the general condition of the guard, and falls out any man who is unfit for guard duty or does not present a creditable appearance. Substitutes will report to the commander of the guard at the guardhouse.

353. The adjutant, when so directed, selects orderlies and color sentinels, as prescribed in paragraphs 140 and 141, and notifies the commander of the guard of his selection.

354. If there be a junior officer of the guard he takes post at the same time as the senior, facing to the front, 3 paces in front of the center of the first platoon; in going to the front and center he follows and takes position on the left of the senior and is assigned as leader of the first platoon; he may be directed by the commander of the guard to assist in inspecting the guard.

If there be no officer of the guard, the adjutant inspects the guard. A non-commissioned officer commanding the guard takes post on the right of the right guide, when the guard is in line; and takes the post of the officer of the guard, when in column or passing in review.

355. The inspection ended, the adjutant places himself about 30 paces in front of and facing the center of the guard, and draws saber; the new officer of the day takes post in front of and facing the guard, about 30 paces from the adjutant; the old officer of the day takes post 3 paces to the right of and 1 pace to the rear of the new officer of the day; the officer of the guard takes post 3 paces in front of its center, draws saber with the adjutant and comes to the order; thereafter he takes the same relative positions as a captain of a company.

The adjutant then commands: 1. **Parade**, 2. **REST**, 3. **SOUND OFF**, and comes to the order and parade rest.

The band, playing, passes in front of the officer of the guard to the left of the line, and back to its post on the right, when it ceases playing.

The adjutant then comes to attention, carries saber, and commands: 1. **Guard**, 2. **ATTENTION**, 3. **Close ranks**, 4. **MARCH**.

The ranks are opened and closed as in paragraph 745, I. D. R.

The adjutant then commands: 1. **Present**, 2. **ARMS**, faces toward the new officer of the day, salutes, and then reports: **Sir, the guard is formed**. The new officer of the day, after the adjutant has reported, returns the salute with the hand and directs the adjutant: **March the guard in review, sir**.

The adjutant carries saber, faces about, brings the guard to an order, and commands: 1. **At trail, platoons (or guard) right**, 2. **MARCH**, 3. **Guard**, 4. **HALT**.

The platoons execute the movement; the band turns to the right and places itself 12 paces in front of the first platoon.

The adjutant places himself 6 paces from the flank and abreast of the commander of the guard; the sergeant major, 6 paces from the left flank of the second platoon.

The adjutant then commands: 1. **Pass in review**, 2. **FORWARD**, 3. **MARCH**.

The guard marches in quick time past the officer of the day, according to the principles of review, and is brought to eyes right at the proper time by the commander of the guard; the adjutant, commander of the guard, leaders of platoons, sergeant major, and drum major salute.

The band, having passed the officer of the day, turns to the left out of the column, places itself opposite and facing him, and continues to play until the guard leaves the parade ground. The field music detaches itself from the band when the latter turns out of the column, and, remaining in front of the guard, commences to play when the band ceases.

Having passed 12 paces beyond the officer of the day, the adjutant halts; the sergeant major halts abreast of the adjutant and 1 pace to his left; they then return saber, salute, and retire; the commander of the guard then commands: 1. **Platoons, right by squads**, 2. **MARCH**, and marches the guard to its post.

The officers of the day face toward each other and salute; the old officer of the day turns over the orders to the new officer of the day.

While the band is sounding off, and while the guard is marching in review, the officers of the day stand at parade rest with arms folded. They take this position when the adjutant comes to parade rest, resume the attention with him, again take the parade rest at the first note of the march in review, and resume attention as the head of the column approaches.

The new officer of the day returns the salute of the commander of the guard and the adjutant, making one salute with the hand.

356. If the guard be not divided into platoons, the adjutant commands: 1. **At trail, guard right**, 2. **MARCH**, 3. **Guard**, 4. **HALT**, and it passes in review as above; the commander of the guard is 3 paces in front of its center; the adjutant places himself 6 paces from the left flank and abreast of the commander of the guard; the sergeant covers the adjutant on a line with the front rank.

INFORMAL GUARD MOUNTING FOR INFANTRY.

357. Informal guard mounting will be held on the parade ground of the organization from which the guard is detailed. If it is detailed from more than one organization, then at such place as the commanding officer may direct.

358. At assembly, the detail for guard falls in on the company parade ground. The first sergeant verifies the detail, inspects their dress and general appearance, and replaces any man unfit to march on guard. He then turns the detail over to the commander of the guard and retires.

359. At adjutant's call, the officer of the day takes his place 15 paces in front of the center of the guard and commands: 1. **Officer (or officers) and noncommissioned officers**, 2. **Front and center**, 3. **MARCH**; whereupon the officers and noncommissioned officers take their positions, are assigned and sent to their posts as prescribed in formal guard mounting. (Par. 352.)

The officer of the day will then inspect the guard with especial reference for its fitness for the duty for which it is detailed, and will select as prescribed in paragraphs 140 and 141, the necessary orderlies and color sentinels. The men found unfit for guard will be returned to quarters and will be replaced by others found to be suitable, if available in the company. If none are available in the company, the fact will be reported to the adjutant immediately after guard mounting.

When the inspection shall have been completed, the officer of the day resumes his position and directs the commander of the guard to march the guard to its post.

RELIEVING THE OLD GUARD.

360. As the new guard approaches the guardhouse, the old guard is formed in line, with its field music 3 paces to its right; and when the field music at the head of the new guard arrives opposite its left, the commander of the new guard commands: 1. **Eyes**, 2. **RIGHT**; the commander of the old guard

commands: 1. **Present**, 2. **ARMS**; commanders of both guards salute. The new guard marches in quick time past the old guard.

When the commander of the new guard is opposite the field music of the old guard, he commands: **FRONT**; the commander of the old guard commands: 1. **Order**, 2. **ARMS**, as soon as the new guard shall have cleared the old guard.

The field music having marched 3 paces beyond the field music of the old guard, changes direction to the right, and, followed by the guard, changes direction to the left when on a line with the old guard; the changes of direction are without command. The commander of the guard halts on the line of the front rank of the old guard, allows his guard to march past him, and when its rear approaches forms it in line to the left, establishes the left guide 3 paces to the right of the field music of the old guard, and on a line with the front rank, and then dresses his guard to the left; the field music of the new guard is 3 paces to the right of its front rank.

361. The new guard being dressed, the commander of each guard, in front of and facing its center, commands: 1. **Present**, 2. **ARMS**, resumes his front, salutes, carries saber, faces his guard and commands: 1. **Order**, 2. **ARMS**.

Should a guard be commanded by a noncommissioned officer, he stands on the right or left of the front rank, according as he commands the old or new guard, and executes the rifle salute.

362. After the new guard arrives at its post, and has saluted the old guard, each guard is presented by its commander to its officer of the day; if there be but one officer of the day present, or if one officer acts in the capacity of old and new officer of the day, each guard is presented to him by its commander.

363. If other persons entitled to a salute approach, each commander of the guard will bring his own guard to attention if not already at attention. The senior commander of the two guards will then command "1. **Old and new guards**, 2. **Present**, 3. **ARMS**."

The junior will salute at the command "Present arms" given by the senior. After the salute has been acknowledged, the senior brings both guards to the order.

364. After the salutes have been acknowledged by the officers of the day, each guard is brought to an order by its commander; the commander of the new guard then directs the orderly or orderlies to fall out and report, and causes bayonets to be fixed if so ordered by the commanding officer; bayonets will not then be unfixed during the tour except in route marches while the guard is actually marching, or when specially directed by the commanding officer.

The commander of the new guard then falls out members of the guard for detached posts, placing them under charge of the proper noncommissioned officers, divides the guard into three reliefs, first, second, and third, from right to left, and directs a list of the guard to be made by reliefs. When the guard consists of troops of different arms combined, the men are assigned to reliefs so as to insure a fair division of duty, under rules prescribed by the commanding officer.

365. The sentinels and detachments of the old guard are at once relieved by members of the new guard; the two guards standing at ease or at rest while these changes are being made. The commander of the old transmits to the commander of the new guard all his orders, instructions, and information concerning the guard and its duties. The commander of the new guard then takes possession of the guardhouse and verifies the articles in charge of the guard.

366. If considerable time is required to bring in that portion of the old guard still on post, the commanding officer may direct that as soon as the orders and

property are turned over to the new guard, the portion of the old guard at the guardhouse may be marched off and dismissed. In such a case, the remaining detachment or detachments of the old guard will be inspected by the commander of the new guard when they reach the guardhouse. He will direct the senior noncommissioned officer present to march these detachments off and dismiss them in the prescribed manner.

367. In bad weather, at night, after long marches, or when the guard is very small, the field music may be dispensed with.

APPENDIX A.

When the guard for the day is supplied by more than one organization, the details due from the several companies will be determined as follows: Take the number of privates for duty in each company from its morning report for the day next preceding that on which the tour of duty is to commence, deducting details for detached service of over 24 hours, made after the morning report has been received; the total of these gives the total number of privates available. Then: The total strength is to the strength of a company as the total detail is to the detail from the company. Multiply the total detail by the strength of the company, and divide the result by total strength; carry out to two places of decimals, disregarding all smaller fractions. This rule is applied for each company.

The whole numbers in the results thus obtained are added together, and if the total is less than the total detail required add one to the whole number in the result that has the largest fraction, and so on for each company till the required total is obtained.

There will thus be a difference between the exact proportion and the number detailed from each company; this difference is entered in the credit column and the next day is carried forward and added or subtracted from the first proportion.

The number of sergeants, corporals, and musicians will be determined in like manner.

FIRST DAY.

| Company. | Strength. | Privates for guard required, including 3 for stable guard. | Total strength. | Proportion. | Detail. | Credits. | | | | |
|----------|------------|--|-----------------|-------------|---------|----------|-----------|---|-----------|------|
| A | 25 | × | 14 | ÷ | 160 | = | -2.18 | + | 2 | -.18 |
| B | 24 | × | 14 | ÷ | 160 | = | -2.10 | + | 2 | -.10 |
| C | 30 | × | 14 | ÷ | 160 | = | -2.62 | + | 3 | +.38 |
| D | 22 | × | 14 | ÷ | 160 | = | +1.92 | + | 2 | +.08 |
| E | 22 | × | 14 | ÷ | 160 | = | +1.92 | + | 2 | +.08 |
| F (Cav.) | 37 | × | 14 | ÷ | 160 | = | -3.23 | + | *3 | -.23 |
| | <u>160</u> | | | | | | <u>11</u> | | <u>14</u> | |
| | - | | | | | | | | | |

* Troop F furnishes 3 stable and no other guard.

Note: The proportion due from a company is always given a minus sign and the detail furnished given a plus sign.

SECOND DAY.

| Company. | Strength. | Privates for guard required, including 3 for stable guard. | Total strength. | First proportion. | Credits brought forward. | Final proportion. | Detail. | Credits. |
|----------|-----------|--|-----------------|-------------------|--------------------------|-------------------|---------|----------|
| A | 27 | $\times 14 \div 160 =$ | -2.36 | -.18 | -2.54 | + 2 | -.54 | |
| B | 23 | $\times 14 \div 160 =$ | -2.01 | -.10 | -2.11 | + 2 | -.11 | |
| C | 28 | $\times 14 \div 160 =$ | -2.45 | +.38 | -2.07 | + 2 | -.07 | |
| D | 23 | $\times 14 \div 160 =$ | -2.01 | +.08 | -1.93 | + 2 | +.07 | |
| E | 21 | $\times 14 \div 160 =$ | -1.83 | +.08 | -1.75 | + 2 | +.25 | |
| F (Cav.) | 38 | $\times 14 \div 160 =$ | -3.32 | -.23 | -3.55 | + *4 | +.45 | |
| | 160 | | | | 11 | 14 | | |

*Troop F furnishes 3 stable and 1 main guard.

A convenient form for the roster is as follows.

 ROSTER I.—PRIVATES.
 ENLISTED STRENGTH OF GUARD, 14 PRIVATES.

| | Guard required. | | |
|-----------------------|-----------------|----------------|----------------|
| | Jan. 1, 14. | Jan. 2, 14. | Jan. 3, 14. |
| A Company: | | | |
| Strength..... | 25 | 27 | 27 |
| First proportion..... | -2.18 | -2.36 | -2.36 |
| Final proportion..... | | -2.54 | -2.90 |
| Detail..... | +2 | +2 | +3 |
| Credits..... | - .18 | - .54 | + .10 |
| B Company: | | | |
| Strength..... | 24 | 23 | 23 |
| First proportion..... | -2.10 | -2.01 | -2.01 |
| Final proportion..... | | -2.11 | -2.12 |
| Detail..... | +2 | +2 | +2 |
| Credits..... | - .10 | - .11 | - .12 |
| C Company: | | | |
| Strength..... | 30 | 28 | 28 |
| First proportion..... | -2.62 | -2.45 | -2.45 |
| Final proportion..... | | -2.07 | -2.52 |
| Detail..... | +3 | +2 | +3 |
| Credits..... | + .38 | - .07 | + .48 |
| D Company: | | | |
| Strength..... | 22 | 23 | 23 |
| First proportion..... | -1.92 | -2.01 | -2.01 |
| Final proportion..... | | -1.93 | -1.94 |
| Detail..... | +2 | +2 | +2 |
| Credits..... | + .08 | + .07 | + .08 |
| E Company: | | | |
| Strength..... | 22 | 21 | 21 |
| First proportion..... | -1.92 | -1.84 | -1.84 |
| Final proportion..... | | -1.76 | -1.59 |
| Detail..... | +2 | +2 | +1 |
| Credits..... | + .08 | + .24 | - .59 |
| F Troop: | | | |
| Strength..... | 37 | 38 | 38 |
| First proportion..... | -3.23 | -3.32 | -3.32 |
| Final proportion..... | | -3.55 | -2.87 |
| Detail..... | +3 | +4 | +3 |
| Credits..... | - .23 | + .45 | + .13 |

APPENDIX B.

When details for guard and fatigue are made as prescribed in paragraph 11, no account will be taken of very small disproportions in the strength of companies.

When the disproportion is considerable a roster will be kept by the sergeant major under the supervision of the adjutant as follows: In accordance with the method explained in Appendix A, determine the proportion of privates each company would be required to furnish.

In the credit column, charge each company, except the one furnishing the guard, with this proportion, i.e., with the number of men it was due to furnish but did not furnish. Enter this number or proportion with a minus sign.

Then credit the company furnishing the guard with the number of men furnished, less the proportion it was due to furnish. The difference is the number of men it furnished in excess, and is entered in the credit column with a plus sign.

Whether the same or different companies furnish the guard on consecutive days, the debits and credits will be determined for each day and added algebraically to the credit or debit brought forward from the preceding day. The result will then be entered in the credit column for the day.

When a new company is to relieve the one furnishing the guard, that one will ordinarily be detailed which has the largest minus number in the credit column.

The following table indicates the form of the roster.

The order in which companies are shown in this table as furnishing the guard has no especial significance, as many reasons may enter into the determination of this matter.

ROSTER II.—PRIVATES.

| Guard furnished. | | | A Company. | | | B Company. | | | C Company. | | | D Company. | | | E Company. | | |
|------------------|----------|---------------------|------------|-------------|----------|------------|-------------|----------|------------|-------------|----------|------------|-------------|----------|------------|-------------|----------|
| | Company. | Number of privates. | Strength. | Proportion. | Credits. | Strength. | Proportion. | Credits. | Strength. | Proportion. | Credits. | Strength. | Proportion. | Credits. | Strength. | Proportion. | Credits. |
| Jan. 1 | A | 13 | 47 | 3.39 | + 9.61 | 29 | 2.09 | - 2.09 | 34 | 2.46 | - 2.46 | 34 | 2.46 | - 2.46 | 36 | 2.60 | - 2.60 |
| Jan. 2 | A | 13 | 47 | 3.39 | + 19.22 | 29 | 2.09 | - 4.18 | 34 | 2.46 | - 4.92 | 34 | 2.46 | - 4.92 | 36 | 2.60 | - 5.20 |
| Jan. 3 | E | 13 | 47 | 3.39 | + 15.82 | 29 | 2.09 | - 6.27 | 34 | 2.46 | - 7.38 | 34 | 2.46 | - 7.38 | 36 | 2.60 | + 5.20 |
| Jan. 4 | E | 10 | 47 | 2.51 | + 13.30 | 31 | 1.65 | - 7.92 | 36 | 1.93 | - 9.31 | 37 | 1.98 | - 9.36 | 36 | 1.93 | + 13.27 |
| Jan. 5 | D | 10 | 47 | 2.51 | + 10.79 | 31 | 1.65 | - 9.57 | 36 | 1.93 | - 11.24 | 37 | 1.98 | - 1.34 | 36 | 1.93 | + 11.34 |
| Jan. 6 | C | 10 | 47 | 2.51 | + 8.28 | 31 | 1.65 | - 11.22 | 36 | 1.93 | - 3.17 | 37 | 1.98 | - 3.32 | 36 | 1.93 | + 9.41 |
| Jan. 7 | C | 10 | 47 | 2.51 | + 5.77 | 31 | 1.65 | - 2.87 | 36 | 1.93 | - 5.10 | 37 | 1.98 | - 5.30 | 36 | 1.93 | + 7.48 |
| Jan. 8 | D | 10 | 47 | 2.51 | + 3.26 | 31 | 1.65 | - 4.52 | 36 | 1.93 | - 7.03 | 37 | 1.98 | + 2.72 | 36 | 1.93 | + 5.55 |
| Jan. 9 | C | 10 | 47 | 2.51 | + .75 | 31 | 1.65 | - 6.17 | 36 | 1.93 | + 1.04 | 37 | 1.98 | + .84 | 36 | 1.93 | + 3.62 |
| Jan. 10 | B | 10 | 47 | 2.51 | - 1.76 | 31 | 1.65 | + 2.18 | 36 | 1.93 | - .89 | 37 | 1.98 | - 1.14 | 36 | 1.93 | + 1.69 |
| Jan. 11 | A | 10 | 47 | 2.51 | + 9.25 | 31 | 1.65 | + .53 | 36 | 1.93 | - 2.82 | 37 | 1.98 | - 3.12 | 36 | 1.93 | - .24 |
| Jan. 12 | A | 10 | 47 | 2.51 | + 16.74 | 31 | 1.65 | - 1.12 | 36 | 1.93 | - 4.75 | 37 | 1.98 | - 5.10 | 36 | 1.93 | - 2.17 |
| Jan. 13 | D | 10 | 47 | 2.51 | + 14.23 | 31 | 1.65 | - 2.77 | 36 | 1.93 | - 6.68 | 37 | 1.98 | + 6.88 | 36 | 1.93 | - 4.10 |
| Jan. 14 | C | 10 | 47 | 2.51 | + 11.72 | 31 | 1.65 | - 4.42 | 36 | 1.93 | + 4.25 | 37 | 1.98 | + 4.90 | 36 | 1.93 | - 6.03 |
| Jan. 15 | E | 10 | 47 | 2.51 | + 9.21 | 31 | 1.65 | - 6.07 | 36 | 1.93 | + 2.32 | 37 | 1.98 | + 2.92 | 36 | 1.93 | + 2.04 |

PERSONAL HYGIENE AND FIRST AID

**FROM MANUAL NONCOMMISSIONED OFFI-
CERS AND PRIVATES OF INFANTRY OF THE
ORGANIZED MILITIA AND VOLUNTEERS**

1914

PERSONAL HYGIENE AND FIRST AID

PERSONAL HYGIENE

History shows that in almost every war many more men die of disease than from wounds received in battle. Much of this disease is preventable and is due either to the ignorance or carelessness of the person who has the disease or of other persons about him. It is a terrible truth that one man who violates any of the great rules of health may be the means of killing many more of his comrades than are killed by the bullets of the enemy.

It is therefore most important that every soldier should learn how to take care of his health when in the field and that he should also insist that his comrades do not violate any of the rules prescribed for this purpose.

A great many diseases are due to germs, which are either little animals or little plants so very small that they can only be seen by aid of the microscope. All diseases caused by germs are "catching." All other diseases are not "catching."

There are only five ways of catching disease:

(a) Getting certain germs on the body by touching some one or something which has them on it. Thus, one may catch venereal diseases, smallpox, measles, scarlet fever, chicken pox, mumps, boils, body lice, ringworm, barber's itch, dhobie itch, and some other diseases. Wounds are infected in this manner.

(b) Breathing in certain germs which float in the air. In this way one may catch pneumonia, consumption, influenza, diphtheria, whooping cough, tonsillitis, spinal meningitis, measles and certain other diseases.

(c) Taking certain germs in through the mouth in eating or drinking. Dysentery, cholera, typhoid fever, diarrhea, and intestinal worms may be caught in this manner.

(d) Having certain germs injected into the body by the bites of insects, such as mosquitoes, fleas, and bedbugs. Malaria, yellow fever, dengue fever, and bubonic plague may be caught in this way.

(e) Inheriting the germ from one's parents.

Persons may have these germs sometimes without apparently being sick with any disease. Such persons and persons who are sick with the diseases are a great source of danger to others about them. Germs which multiply in such persons are found in their urine and excretions from the bowels; in discharges from ulcers and abscesses; in the spit or particles coughed or sneezed into the air; in the perspiration or scales from the skin; and in the blood sucked up by biting insects.

Those who have taken care of their health and who have not become weakened by bad habits, exposure, and fatigue are not only less liable to catch disease, but are more apt to recover when taken sick.

Knowing all these things, the soldier can understand the reasons for the

following rules and how important it is that they should be carried out by each and every person:

Stay away from persons having "catching" diseases.

If you have any disease, don't try to cure it yourself, but go to the surgeon. Insist that other soldiers do likewise.

Typhoid fever is one of the most dangerous and common camp diseases. Modern medicine has, however, discovered an effective preventive for this disease in the typhoid prophylactic, which renders the person immune from typhoid fever. The treatment consists in injecting into the arm a preventive serum. The injection is given three times at 10-day intervals. All enlisted men of the Organized Militia should take this prophylactic, which will be administered by the medical officer free of charge.

Association with lewd women is dangerous. It may result in disabling you for life. It is the cause of a disease (syphilis) which may be transmitted by a parent to his children. Soldiers with venereal diseases should not use basins or toilet articles used by others, as the germs of these diseases if gotten into the eye very often cause blindness. Likewise, if they use the same drinking cup used by others, they may give others the disease. They should promptly report their trouble to the surgeon, that they may receive the best medical advice and attention.

Should a soldier expose himself to infection by having intercourse with an unknown woman, he should report as soon as possible afterwards to the regimental infirmary for prophylactic treatment, which, if taken within a few hours after intercourse, will prevent to a large degree the liability of contracting any disease.

Cooked germs are dead and therefore harmless. Water, even when clear, may be alive with deadly germs. Therefore, when the conditions are such that the commanding officer orders all drinking water to be boiled, be careful to live up to this order.

Use the latrines and don't go elsewhere to relieve yourself. In open latrines cover your deposit with dirt, as it breeds flies and may also be full of germs.

Flies carry germs from one place to another. Therefore see that your food and mess kit are protected from them.

All slops and scraps of food scattered about camp soon produce bad odors and draw flies. Therefore do your part toward keeping the camp free from disease by carefully depositing such refuse in the pits or cans used for this purpose.

Urinate only in the latrines, or in the cans set out for this purpose, never on the ground around camp, because it not only causes bad smells, but urine sometimes contains the germs of "catching" diseases.

Soapy water thrown on the ground soon produces bad odors. Therefore in camps of several days' duration this water should be thrown in covered pits or in cans used for this purpose.

As certain mosquitoes can transmit malaria and yellow fever, use your mosquito bar for this reason, as well as for personal comfort.

Keep your mouth clean by brushing your teeth once or twice a day. It helps to prevent the teeth from decaying. Decayed teeth cause toothache. They also lead one to swallow food without properly chewing it, and this leads to stomach troubles of various kinds. Foods left around and between the teeth is bad for teeth and forms good breeding places for germs.

Keep the skin clean. Through the pores of the skin the body gets rid of much waste and poisonous matter. Therefore remove this and keep the pores open by bathing once every day, if possible. If water is scarce, rub the body over with a wet towel. If no water is at hand, take a dry rub. Wash, care-

fully, the arm pits, between the legs, and under the foreskin, as this will prevent chafing.

The skin protects the sensitive parts underneath from injury and helps to keep out germs. Therefore when blisters are formed don't tear off the skin. Insert a needle under the skin a little distance back from the blister and push it through to the opposite side. Press out the liquid through the holes thus formed. Heat the needle red hot first, with a match or candle, to kill the germs.

When the skin is broken (in cuts and wounds) keep the opening covered with a bandage to keep out germs and dirt; otherwise the sore may fester. Pus is always caused by germs.

Keep your hair short. Long hair and a long beard in the field generally means a dirty head and a dirty face and favors skin diseases, lice, and dandruff.

Don't let any part of the body become chilled, as this very often is the direct cause of diarrhea, dysentery, pneumonia, rheumatism, and other diseases.

Wet clothes may be worn while marching or exercising without bad results, but there is great danger if one rests in wet clothing, as the body may become chilled.

Don't sit or lie or sleep directly on damp ground, as this is sure to chill the body.

When hot or perspiring or when wearing damp clothes, don't remain where a breeze can strike you. You are sure to become chilled.

Every day, if possible, hang your blanket and clothing out to air in the sun; shake or beat them with a small stick. Germs and vermin don't like this treatment, but damp, musty clothing suits them very well. Wash your shirts, underwear, and socks frequently. The danger of blood poisoning from a wound is greatly increased if the bullet passes through dirty clothes.

Ditch your tent as soon as you can, particularly a shelter tent, even if you camp for one night only. Otherwise a little rain may ruin a whole night's rest.

Always prepare your bed before dark. Level off the ground and scrape out a little hollow for your hips. Get some straw or dry grass, if possible. Green grass or branches from trees are better than nothing. Sleep on your poncho. This keeps the dampness from coming up from the ground and chilling the body. Every minute spent in making a good bed means about an hour's good rest later on.

Avoid the food and drink found for sale in the cheap stands about camp. The quality is generally bad, and it is often prepared in filthy places by very dirty persons.

The use of intoxicating liquor is particularly dangerous in the field. Its excessive use, even at long intervals, breaks down one's system. Drinking men are more apt to get sick and less liable to get well than are their more sober comrades. If alcohol is taken at all, it is best after the work of the day is over. It should never be taken when the body is exposed to severe cold, as it diminishes the resistance of the body. Hot tea or coffee is much preferable under these circumstances.

THE CARE OF THE FEET.

A soldier can not march with sore feet, and marching is the main part of an infantryman's daily duty in the field. All soldiers should be familiar with the proper methods of caring for the feet. The Germans treat sore feet as a military offense, as it is generally due to carelessness, neglect, or ignorance on the part of the soldier.

The most important factor in the care of the feet and the marching ability of the soldier is the shoe. Civilian shoes, particularly light, patent leather, or low shoes, are sure to cause injury and in time will ruin a man's foot. Only

the marching shoe issued by the Quartermaster Corps should be worn, and they must be properly fitted to the individual. It will not suffice to order a marching shoe of the same size as one's ordinary civilian shoes, for it must be remembered that a soldier may have to march many miles daily over rough roads and carrying a heavy pack. The pack itself causes the foot to spread out to a larger size, and the rough roads give so much exercise to the muscles of the feet that they swell greatly through the increased blood supply. (For directions as to measuring the foot for the marching shoe see General Order No. 26, War Department, 1912, a copy of which should be on hand in each company.)

Do not start out on a march wearing new shoes. This is a frequent cause of sore feet. New shoes should be properly broken in before beginning a march by wearing them for several hours daily for a week before the march, and they should be adapted to the contours of the feet by stretching them with shoe stretchers with adjustable knobs to take the pressure off painful corns and bunions. Such stretchers are issued by the Quartermaster Corps, and there should be one or more pair in every company of infantry. Should this be impracticable, then the following is suggested:

The soldier stands in his new shoes in about $2\frac{1}{2}$ inches of water for about five minutes until the leather is thoroughly pliable and moist; he should then walk for about an hour on a level surface, letting the shoes dry on his feet, to the irregularities of which the leather is thus moulded in the same way as it was previously moulded over the shoe last. On taking the shoes off a very little neat's-foot oil should be rubbed into the leather to prevent its hardening and cracking.

If it is desired to waterproof shoes at any time, a considerable amount of neat's-foot oil should be rubbed into the leather. Waterproof leather causes the feet of some men to perspire unduly and keeps them constantly soft.

Light woolen or heavy woolen socks will habitually be worn for marching. Cotton socks will not be worn unless specifically ordered by the surgeon. The socks will be large enough to permit free movement of the toes, but not so loose as to permit of wrinkling. Darned socks, or socks with holes in them, will not be worn in marching.

Until the feet have hardened they should be dusted with foot powder, which can be obtained at the regimental infirmary, before each day's march. Clean socks should be worn daily.

As soon as possible after reaching camp after a day of marching the feet should be washed with soap and water, and the soldier should put on a dry pair of socks and his extra pair of shoes from his surplus kit. If the skin is tender, or the feet perspire, wash with warm salt water or alum water, but do not soak the feet a long time, as this, although very comforting at the time, tends to keep them soft. Should blisters appear on the feet, prick and evacuate them by pricking at the lower edge with a pin which has been passed through the flame of a match and cover them with zinc oxide plaster applied hot. This plaster can be obtained on request at the regimental infirmary. If serious abrasions appear on the feet, or corns, bunions, and ingrowing nails cause trouble, have your name placed on sick report and apply to the surgeon for treatment. Cut the toe nails square (fairly close in the middle, but leaving the sides somewhat longer), as this prevents ingrowing nails.

A FEW FIRST-AID RULES.

The bandages and dressings contained in the first-aid packet have been so treated as to destroy any germs thereon. Therefore, when dressing a wound, be careful not to touch or handle that part of the dressing which is to be applied to the wound.

A sick or injured person should always be made to lie down on his back, if practicable, as this is the most comfortable position, and all muscles may be relaxed.

All tight articles of clothing and equipment should be loosened, so as not to interfere with breathing or the circulation of the blood. Belts, collars, and the trousers at the waist should be opened.

Don't let mere onlookers crowd about the patient. They prevent him from getting fresh air and also make him nervous and excited.

In case of injury the heart action is generally weak from shock, and the body, therefore, grows somewhat cold. So don't remove any more clothing than is necessary to expose the injury.

Cut or rip the clothing, but don't pull it. Try to disturb the patient as little as possible.

Don't touch a wound with your fingers or a handkerchief, or with anything else but the first-aid dressing. Don't wash the wound with water, as you may infect it.

Don't administer stimulants (whisky, brandy, wine, etc.) unless ordered to do so by a doctor. While in a few cases stimulants are of benefit, in a great many cases they do positive harm, especially where there has been any bleeding.



FIG. 1.

The heart may be considered as a pump and the arteries as a rubber hose, which carry the blood from the heart to every part of the body. The veins are the hose which carry the blood back to the heart. Every wound bleeds some, but, unless a large artery or a large vein is cut, the bleeding will stop after a short while if the patient is kept quiet and the first-aid dressing is bound over the wound so as to make pressure on it.

When a large artery is cut the blood gushes out in spurts every time the heart beats. In this case it is necessary to stop the flow of blood by pressing upon the hose somewhere between the heart and the leak.

If the leak is in the arm or hand, apply pressure as in figure 1.

If the leak is in the leg, apply pressure as in figure 2.

If the leak is in the shoulder or armpit, apply pressure as in figure 3.

The reason for this is that at the places indicated the arteries may be pressed against a bone more easily than at any other places.

Another way of applying pressure (by means of a tourniquet) is shown in figure 4. Place a pad of tightly rolled cloth or paper, or any suitable object, over the artery. Tie a bandage loosely about the limb and then insert your bayonet, or a stick, and twist up the bandage until the pressure of the pad

on the artery stops the leak. Twist the bandage slowly and stop as soon as the blood ceases to flow, in order not to bruise the flesh or muscles unnecessarily.

A tourniquet may cause pain and swelling of the limb, and if left on too long may cause the limb to die. Therefore, about every half hour or so, loosen the



FIG. 2.

bandage very carefully, but if the bleeding continues pressure must be applied again. In this case apply the pressure with the thumb for five or ten minutes, as this cuts off only the main artery and leaves some of the smaller arteries and the veins free to restore some of the circulation. When a tourniquet is painful, it is too tight and should be carefully loosened a little.

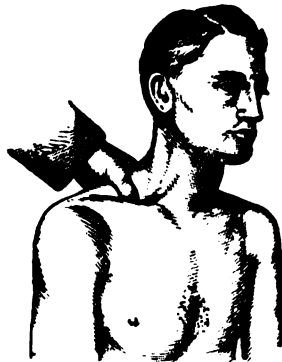


FIG. 3.

If the leg or arm is held upright, this also helps to reduce the bleeding in these parts, because the heart then has to pump the blood uphill.

A broken bone is called a fracture. The great danger in the case of a fracture is that the sharp, jagged edges of the bones may stick through the flesh and skin, or tear and bruise the arteries, veins, and muscles. If the skin is not broken, a fracture is not so serious, as no germs can get in. Therefore never

move a person with a broken bone until the fracture has been so fixed that the broken ends of the bone can not move.

If the leg or arm is broken, straighten the limb gently, and, if necessary, pull upon the end firmly to get the bones in place. Then bind the limb firmly to a splint to hold it in place. A splint may be made of any straight, stiff material—a shingle or piece of board, a bayonet, a rifle, a straight branch of a tree, etc. Whatever material you use must be well padded on the side next to the limb. Be careful never to place the bandages over the fracture, but always above and below. (Figs. 5, 6, 7, 8.)

Many surgeons think that the method of binding a broken leg to the well one, and of binding the arm to the body, is the best plan in the field, as being the quickest and one that serves the immediate purpose.



FIG. 4.—Improvised tourniquet.

With wounds about the body, the chest, and abdomen you must not meddle, except to protect them, when possible without much handling, with the materials of the packet.

FAINTING, SHOCK, HEAT EXHAUSTION.

The symptoms of fainting, shock, and heat exhaustion are very similar. The face is pale, the skin cool and moist, the pulse is weak, and generally the patient is unconscious. Keep the patient quiet, resting on his back, with his head low. Loosen the clothing, but keep the patient warm, and give stimulants (whisky, hot coffee, tea, etc.).

SUNSTROKE.

In the case of sunstroke the face is flushed, the skin is dry and very hot, and the pulse is full and strong. In this case place the patient in a cool spot, remove the clothing, and make every effort to lessen the heat in the body by cold applications to the head and surface generally. Do not, under any circumstances, give any stimulants or hot drinks.

FREEZING AND FROSTBITE.

The part frozen, which looks white or bluish white, and is cold, should be very slowly raised in temperature by brisk but careful rubbing in a cool place and never near a fire. Stimulants are to be given cautiously when the patient can swallow, and followed by small amounts of warm liquid nourishment. The object is to restore the circulation of the blood and the natural warmth gradually and not violently. Care and patience are necessary to do this.

RESUSCITATION OF THE APPARENTLY DROWNED.

In the instruction of the Army in First Aid the method of resuscitation of the apparently drowned, as described by "Schaefer," will be taught instead of the "Sylvester Method," heretofore used. The Schaefer method of artificial respiration is also applicable in cases of electric shock, asphyxiation by gas, and of the failure of respiration following concussion of the brain.

Being under water for four or five minutes is generally fatal, but an effort to revive the apparently drowned should always be made, unless it is known



FIG. 5.



FIG. 6.

that the body has been under water for a very long time. The attempt to revive the patient should not be delayed for the purpose of removing his clothes or placing him in the ambulance. Begin the procedure as soon as he is out of the water, on the shore or in the boat. The first and most important thing is to start artificial respiration without delay.

The Schaefer method is preferred because it can be carried out by one person without assistance, and because its procedure is not exhausting to the operator, thus permitting him, if required, to continue it for one or two hours. When it is known that a person has been under water for but a few minutes continue the artificial respiration for at least one and a half to two hours before considering the case hopeless. Once the patient has begun to breathe watch carefully to see that he does not stop again. Should the breathing be very faint, or should he stop breathing, assist him again with artificial respiration. After he starts breathing do not lift him nor permit him to stand until the breathing has become full and regular.

As soon as the patient is removed from the water, turn him face to the ground, clasp your hands under his waist, and raise the body so any water may drain out of the air passages while the head remains low. (Figure 9.)

SCHAEFER METHOD.

The patient is laid on his stomach, arms extended from his body beyond his head, face turned to one side so that the mouth and nose do not touch the ground. This position causes the tongue to fall forward of its own weight and so prevents its falling back into the air passages. Turning the head to one side prevents the face coming into contact with mud or water during the operation. The position also facilitates the removal from the mouth of foreign bodies, such as tobacco, chewing gum, false teeth, etc., and favors the expulsion of mucus, blood, vomitus, serum, or any liquid that may be in the air passages.



FIG. 7.



FIG. 8.

The operator kneels, straddles one or both of the patient's thighs, and faces his head. Locating the lowest rib, the operator, with his thumbs nearly parallel to his fingers, places his hands so that the little finger curls over the twelfth rib. If the hands are on the pelvic bones the object of the work is defeated; hence the bones of the pelvis are first located in order to avoid them. The hands must be free from the pelvis and resting on the lowest rib. By operating on the bare back it is easier to locate the lower ribs and avoid the pelvis. The nearer the ends of the ribs the hands are placed without sliding off the better. The hands are thus removed from the spine, the fingers being nearly out of sight.

The fingers help some, but the chief pressure is exerted by the heels (thenar and hypothenar eminences) of the hands, with the weight coming straight from

the shoulders. It is a waste of energy to bend the arms at the elbows and shove in from the sides, because the muscles of the back are stronger than the muscles of the arms.

The operator's arms are held straight, and his weight is brought from his shoulders by bringing his body and shoulders forward. This weight is gradually



FIG. 9.—Schaefer method of artificial respiration. Inspiration.

increased until at the end of the three seconds of vertical pressure upon the lower ribs of the patient the force is felt to be heavy enough to compress the parts; then the weight is suddenly removed. If there is danger of not returning the hands to the right position again, they can remain lightly in place; but it is usually better to remove the hands entirely. If the operator is light and



FIG. 10.—Schaefer method of artificial respiration. Expiration.

the patient an overweight adult, he can utilize over 80 per cent of his weight by raising his knees from the ground and supporting himself entirely on his toes and the heels of his hands, the latter properly placed on the ends of the floating ribs of the patient. In this manner he can work as effectively as a heavy man.

A light feather or a piece of absorbent cotton drawn out thin and held near the nose by some one will indicate by its movements whether or not there is

a current of air going and coming with each forced expiration and spontaneous inspiration.

The natural rate of breathing is 12 to 15 times per minute. The rate of operation should not exceed this. The lungs must be thoroughly emptied by three seconds of pressure, then refilling takes care of itself. Pressure and release of pressure—one complete respiration—occupies about five seconds. If the operator is alone, he can be guided in each act by his own deep, regular respiration or by counting or by his watch lying by his side. If comrades are present, he can be advised by them.

The duration of the efforts as artificial respiration should ordinarily exceed an hour; indefinitely longer if there are any evidences of returning animation, by way of breathing, speaking, or movements. There are liable to be evidences of life within 25 minutes in patients who will recover from electric shock, but where there is doubt the patient should be given the benefit of the doubt. In drowning, recoveries are on record after two hours or more of unconsciousness; hence, the Schaefer method, being easy of operation, is more likely to be persisted in.

Aromatic spirit of ammonia may be poured on a handkerchief and held continuously within 3 inches of the face and nose. If other ammonia preparations are used, they should be diluted or held farther away. Try it on your own nose first.

When the operator is a heavy man it is necessary to caution him not to bring force too violently upon the ribs, as one of them might be broken.

Do not attempt to give liquids of any kind to the patient while unconscious. Apply warm blankets and hot-water bottles as soon as they can be obtained.

EXTRACTS FROM SIGNAL BOOK
UNITED STATES ARMY
PERTAINING TO INFANTRY
1916

The following extracts are taken from the Signal Book which was prepared by the chief signal officer of the Army and published to the Army April 15, 1916.

EXTRACTS FROM SIGNAL BOOK

UNITED STATES ARMY

PART I.

GENERAL INSTRUCTIONS FOR ARMY SIGNALING.

1. Each signal station will have its call, consisting of one or two letters, as Washington, "W"; and each operator or signalist will also have his personal signal of one or two letters, as Jones, "Jo." These being once adopted will not be changed without due authority.

2. To lessen liability of error, numerals which occur in the body of a message should be spelled out.

3. In receiving a message the man at the telescope should call out each letter as received, and not wait for the completion of a word.

4. A record of the date and time of the receipt or transmission of every message must be kept.

5. The duplicate manuscript of messages received at, or the original sent from, a station should be carefully filed.

6. In receiving messages nothing should be taken for granted, and nothing considered as seen until it has been positively and clearly in view. Do not anticipate what will follow from signals already given. Watch the communicating station until the last signals are made, and be very certain that the signal for the end of the message has been given.

7. Every address must contain at least two words and should be sufficient to secure delivery.

8. All that the sender writes for transmission after the word "To" is counted.

9. Whenever more than one signature is attached to a message count all initials and names as a part of the message.

10. Dictionary words, initial letters, surnames of persons, names of cities, towns, villages, States, and Territories, or names of the Canadian Provinces will be counted each as one word; e.g., New York, District of Columbia, East St. Louis should each be counted as one word. The abbreviation of the names of cities, towns, villages, States, Territories, and provinces will be counted the same as if written in full.

11. Abbreviations of weights and measures in common use, figures, decimal points, bars of division, and in ordinal numbers the affixes "st," "d," "nd," "rd," and "th" will be each counted as one word. Letters and groups of letters, when such groups do not form dictionary words and are not combinations of dictionary words, will be counted at the rate of five letters or fraction of five letters to a word. When such groups are made up of combinations of dictionary words, each dictionary word so used will be counted.

12. The following are exceptions and are counted as shown:

| | |
|----------------|--------|
| A. M. | 1 word |
| P. M. | 1 word |
| O. K. | 1 word |
| Per cent. | 1 word |

13. No message will be considered sent until its receipt has been acknowledged by the receiving station.

Paragraphs 14-17 (Part II) have been omitted because they have no application to Infantry.

PART III.

THE INTERNATIONAL MORSE OR GENERAL SERVICE CODE.

18. The International Morse Code is the General Service Code and is prescribed for use by the Army of the United States and between the Army and the Navy of the United States. It will be used on radio systems, submarine cables using siphon recorders, and with the heliograph, flash-lantern, and all visual signaling apparatus using the wig-wag.

Alphabet.

| | | |
|---------|---------|--------|
| A --- | J ----- | S --- |
| B ---- | K ---- | T --- |
| C ----- | L ---- | U ---- |
| D ---- | M ---- | V ---- |
| E - | N -- | W -- |
| F ---- | O ---- | X ---- |
| G ---- | P ---- | Y ---- |
| H ---- | Q ---- | Z ---- |
| I -- | R -- | |

Numerals.

| | | |
|---------|---------|---------|
| 1 ----- | 5 ----- | 9 ----- |
| 2 ----- | 6 ----- | 0 ----- |
| 3 ----- | 7 ----- | |
| 4 ----- | 8 ----- | |

Punctuation.

| | |
|---|-------|
| Period | ----- |
| Comma | ----- |
| Interrogation | ----- |
| Hyphen or dash | ----- |
| Parentheses (before and after the words) | ----- |
| Quotation mark (beginning and ending), | ----- |
| Exclamation | ----- |
| Apostrophe | ----- |
| Semicolon | ----- |
| Colon | ----- |
| Bar indicating fraction | ----- |
| Underline (before and after the word or words it is wished to underline) | ----- |
| Double dash (between preamble and address, between address and body of message, between body of message and signature, and immediately before a fraction) | ----- |
| Cross | ----- |

CONVENTIONAL SIGNALS FOR USE BY RADIO STATIONS WITH THE INTERNATIONAL MORSE CODE.

19. The following conventional signals will be used by radio stations of the United States Army with the International Morse Code:

Distress signal (ship stations only) ... -----

Attention (or call) The call is composed of the attention signal ----- followed by the call letters of the station called, repeated three times (if unknown use CQ (-----) in place of call letters of station called), followed by DE (---) and then the call letters of the calling station, repeated three times.

Have you anything for me..... QRU (----- --- ---)

How many words have you to send... QRJ (----- --- ---)

Invitation to transmit (go ahead).....-----

Signal separating preamble from address, address from text, and text from signature-----

End of message-----

End of work-----, followed by the call letter of sending station and ---

Received (acknowledgment of receipt of message)R (---), followed by the call letter of the receiving station and personal signal of the receiving operator.

Here is another message----- (attention call).

Understood (or I understand)-----, followed by the call letters of station.

Not understood (or repeat)----- (Interrogatory) and the last word received.

Error-----

Wait-----

Official messageOFM (----- ---)

(First word of preamble on all radio-gramsRADIO (--- --- ---))

FasterQRQ (-----)

SlowerQRS (-----)

Stop sendingQRT (-----)

InterferenceXX (-----)

Use International Code of Signals.... PRB (-----)

General inquiry call (when call of station is not known).....CQ (-----) (see attention call).

How do you receive me..... QRK (-----)

TRANSMISSION OF MESSAGES BY INTERNATIONAL MORSE. EXAMPLE.

20. WVB sending to WVA a plain commercial message filed at 4 p.m., of the 12th, after receiving ----

RADIO

Circle CityOffice of destination.

De.

FairbanksOffice of origin.

2Number of message.

LOperator's sign.

8Check.

Twelfth 4 pm.....Date and hour of filing.

-----Break or double dash.

Brown 175 King Street

Circle CityAddress.

-----Break.

Arrive tomorrowText.

-----Break.

JonesSignature.

KMO

PART IV.

VISUAL SIGNALING IN GENERAL.

21. Methods of visual signaling are divided as follows:

(a) By flag, torch, hand lantern, or beam of searchlight (without shutter). (General Service Code.)

(b) By heliograph, flash lantern, or searchlight (with shutter). (General Service Code.)

(c) By Ardois. (General Service Code.)

(d) By hand flags or by stationary semaphore. (Two-arm semaphore Code.)

(e) By preconcerted signals with Coston lights, rockets, bombs, Very pistols, small arms, guns, etc.

(f) By flag signals by permanent hoists. (International Code.)

22. The following conventional signals, with exceptions noted, will be used in the first four classes.

End of word.

End of sentence.

End of message.

Interval.

Double interval.

Triple interval.

Exceptions.

Ardois and semaphore.

Exceptions.

| | | |
|--|----------------------------|--|
| Signal separating preamble from address; address from text; text from signature. | ----- | Double interval, signature preceded also by "Sig." Interval. |
| Acknowledgement. | R. | |
| Error. | ----- | A. |
| Negative. | K. | |
| Preparatory. | L. | |
| Annuling. | N. | |
| Affirmative. | P. | |
| Interrogatory. | ----- | O |
| Repeat after word. | Interrogatory, A (word). | |
| Repeat last message. | Interrogatory three times. | |
| Send faster. | QRQ | |
| Send slower. | QRS | |
| Cease sending. | QRT | |
| Wait a moment. | ----- | None. |
| Execute. | IX, IX | |
| Move to your right. | MR | |
| Move to your left. | ML | |
| Move up. | MU | |
| Move down. | MD | |
| Finished (end of work). | ----- | None. |

Note: In order to differentiate these signals from important battle signals, the Navy uses certain distinguishing variations which are not necessary in signaling in the Army. In making the conventional signals for "A," Error, and "O," Interrogatory, in Ardois, the Navy indicates them by pulsating the upper light, in making them in semaphore, by agitating the arms of flags. "K," Negative; "L," Preparatory; "N," Annuling; "O," Interrogatory; and "P," Affirmative, in the Navy are secondary meanings, and are used only in connection with Navy Code Books. They should not be used in communication between the Army and Navy.

In communicating with the Navy, by all methods, numerals will be spelled out.

"Intervals" are expressed as follows in the various systems:

| | Interval. | Double Interval. | Triple Interval. |
|------------------|----------------------------------|------------------|---|
| Radio. | | | |
| Flashing. | }—space. | ----- | ----- |
| Occulting light. | | | |
| Sound. | | | |
| Wigwag. | Front. | (Twice.) | (3 times.) |
| Semaphore. | Flags crossed or machine closed. | 2 chops. | 3 chops, withdraw flags or close machine and indicator arm. |
| Ardois. | ----- | (Twice.) | (3 times.) |

PART V.

**VISUAL SIGNALING: BY FLAG, TORCH, HAND LANTERN, OR
BEAM OF SEARCHLIGHT (WITHOUT SHUTTER).****GENERAL SERVICE CODE.**

23. For the flag used with the General Service Code there are three motions and one position. The position is with the flag held vertically, the signalman facing directly toward the station with which it is desired to communicate. The first motion (the dot) is to the right of the sender, and will embrace an arc of 90°, starting with the vertical and returning to it, and will be made in a plane at right angles to the line connecting the two stations. The second motion (the dash) is a similar motion to the left of the sender. The third motion (front) is downward directly in front of the sender and instantly returned upward to the first position. Front is used to indicate an interval.

24. The beam of the searchlight, though ordinarily used with the shutter like the heliograph, may be used for long-distance signaling, when no shutter is suitable or available, in a similar manner to the flag or torch, the first position being a vertical one. A movement of the beam 90° to the right of the sender indicates a dot, a similar movement to the left indicates a dash; the beam is lowered vertically for front.

25. To use the torch or hand lantern, a footlight must be employed as a point of reference to the motion. The lantern is most conveniently swung out upward to the right of the footlight for a dot, to the left for a dash, and raised vertically for front.

PART VI.

**SIGNALING WITH HELIOGRAPH, FLASH LANTERN, OR SEARCH-
LIGHT (WITH SHUTTER).****GENERAL SERVICE CODE.**

26. The first position is to turn a steady flash on the receiving station. The signals are made by short and long flashes. Use a short flash for dot and a long steady flash for dash. The elements of a letter should be slightly longer than in sound signals.

27. To call a station make its call letter until acknowledged.

28. If the call letter of a station be unknown, signal A until acknowledged. Each station will then turn on a steady flash and adjust. When the adjustment is satisfactory to the called station, it will cut off its flash, and the calling station will proceed with its message.

29. If the receiver sees that the sender's mirror or light needs adjustment, he will turn on a steady flash until answered by a steady flash. When the adjustment is satisfactory, the receiver will cut off his flash and the sender will resume his message.

30. To break the sending station for other purposes, turn on a steady flash.

31. It may be noted that in the daytime and in ordinary weather the searchlight with shutter can be readily used for distances up to 10 miles at sea. This method of day signaling is considered of exceptional value by the Navy, and is commonly used by the Coast Artillery in target practice from the shore to the tug towing the target. It is independent of background and may be used behind armor or other shelter; it should be frequently used for signaling by day as well as by night.

Paragraphs 32-43 have been omitted because they have no application to Infantry.

PART VIII.

SIGNALING BY TWO-ARM SEMAPHORE.

HAND FLAGS.



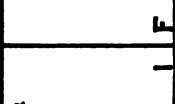




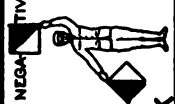

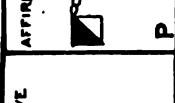
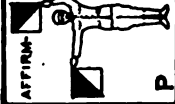



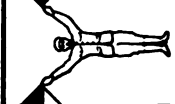
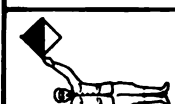
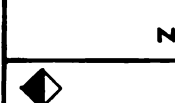











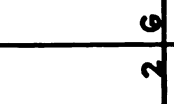




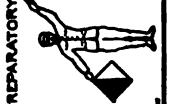
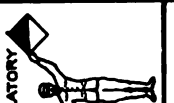

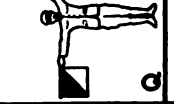
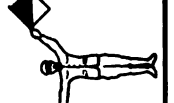






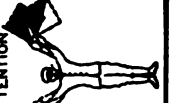




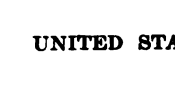


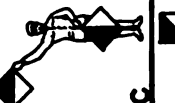
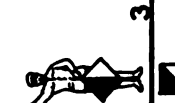
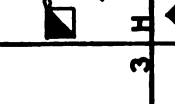
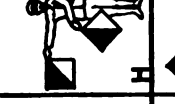

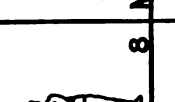

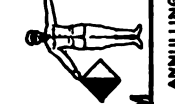
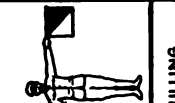
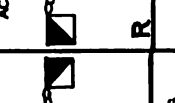
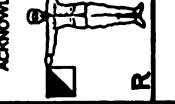
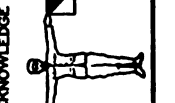
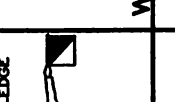


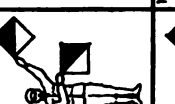
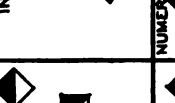


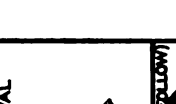



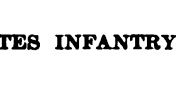

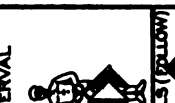


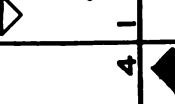



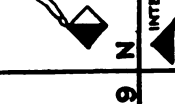


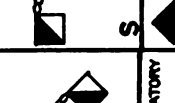

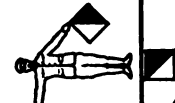

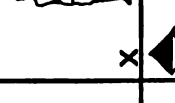


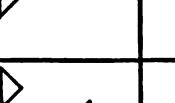

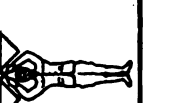




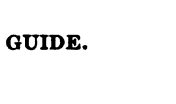




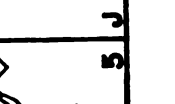
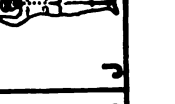
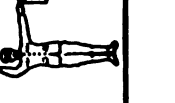

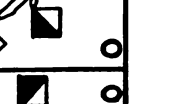

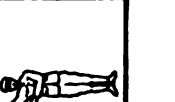


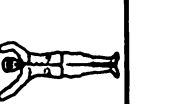
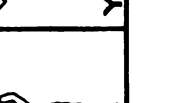
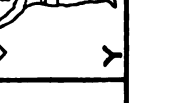
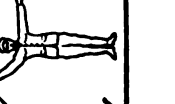
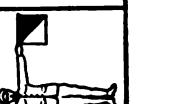
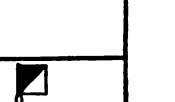

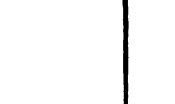

































44. Hand flags are authorized for general use by the Army, though on account of their small range they are of limited application, and are chiefly serviceable for use within organizations, within fixed positions, or for incidental signaling. The range with flags of the usual size is of course dependent upon light and background, but is seldom more than one mile with the naked eye. This system of signaling has been highly developed in the Navy, and on account of its rapidity and simplicity is of use to the Army and should be familiar to all soldiers. It is limited to visual signaling work and not adapted to general signaling as is the General Service Code. It will be found useful under many circumstances and is adapted to special work when rapid communication for short distances is needed. This method is also used to advantage for interior signaling within batteries of the field artillery and regiments of infantry, and will, at times, be convenient for the cavalry.

45. The semaphore hand flags for service use, except those now temporarily issued to the field and the coast artillery, are 18 inches square divided diagonally into two parts, one of red and the other white; the staffs are 24 inches long. (See plate.)

For the field and the coast artillery there is now issued a semaphore hand flag of orange with a scarlet center and scarlet with an orange center, one of each constituting a kit. The flags are 18 inches square, the centers 9 inches square, and the staffs 24 inches long.

The hand flags of the Navy are from 12 to 15 inches square, of blue with a white square, or red and yellow diagonally, the colors to be used depending upon the background. The flags are usually attached to a light wooden staff about 2 feet in length.

46. Hand flags are used in the same manner as the semaphore machine, except that in making the interval the flags are crossed downward in front of the body (just above the knees); the double interval is the "chop-chop" signal made twice. The triple interval is "chop-chop" signal made three times. In calling a station face it squarely and make its call. If there is no immediate reply wave the flags over the head to attract attention, making the call at frequent intervals. When the sender makes "end of message" the receiver, if message is understood, extends the flags horizontally and waves them until the sender does the same, when both leave their stations. Care must be taken with hand flags to hold the staffs so as to form a prolongation of the arms.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|
|  A |  B |  C |  D |  E |  F |  G |  H |  I |  J |  K |  L |  M |  N |  O |  P |  Q |  R |  S |  T |  U |  V |  W |  X |  Y |  Z |  AA |  AB |  AC |  AD |  AE |  AF |  AG |  AH |  AI |  AJ |  AK |  AL |  AM |  AN |  AO |  AP |  AQ |  AR |  AS |  AT |  AU |  AV |  AW |  AX |  AY |  AZ |  BA |  BB |  BC |  BD |  BE |  BF |  BG |  BH |  BI |  BJ |  BK |  BL |  BM |  BN |  BO |  BP |  BQ |  BR |  BS |  BT |  BU |  BV |  BW |  BX |  BY |  BZ |  CA |  CB |  CC |  CD |  CE |  CF |  CG |  CH |  CI |  CJ |  CK |  CL |  CM |  CN |  CO |  CP |  CQ |  CR |  CS |  CT |  CU |  CV |  CW |  CX |  CY |  CZ |  DA |  DB |  DC |  DD |  DE |  DF |  DG |  DH |  DI |  DJ |  DK |  DL |  DM |  DN |  DO |  DP |  DQ |  DR |  DS |  DT |  DU |  DV |  DW |  DX |  DY |  DZ |  EA |  EB |  EC |  ED |  EE |  EF |  EG |  EH |  EI |  EJ |  EK |  EL |  EM |  EN |  EO |  EP |  EQ |  ER |  ES |  ET |  EU |  EV |  EW |  EX |  EY |  EZ | FA | FB | FC | FD | FE | FF | FG | FH | FI | FJ | FK | FL | FM | FN | FO | FP | FQ | FR | FS | FT | FU | FV | FW | FX | FY | FZ | GA | GB | GC | GD | GE | GF | GG | GH | GI | GJ | GK | GL | GM | GN | GO | GP | GQ | GR | GS | GT | GU | GV | GW | GX | GY | GZ | HA | HB | HC | HD | HE | HF | HG | HH | HI | HJ | HK | HL | HM | HN | HO | HP | HQ | HR | HS | HT | HU | HV | HW | HX | HY | HZ | IA | IB | IC | ID | IE | IF | IG | IH | II | IJ | IK | IL | IM | IN | IO | IP | IQ | IR | IS | IT | IU | IV | IW | IX | IY | IZ | JA | JB | |
|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|--|--|--|--|--|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|---|---|---|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|---|--|

PART IX.
LETTER CODES.
INFANTRY.

47. For use with General Service Code or semaphore hand flags.

| Letter of alphabet. | If signaled from the rear to the firing line. | If signaled from the firing line to the rear. |
|---|---|--|
| AM..... | Ammunition going forward. | Ammunition required. |
| CCC..... | Charge (mandatory at all times). | Am about to charge if no instructions to the contrary. |
| CF..... | Cease firing. | Cease firing. |
| DT..... | Double time or "rush." | Double time or "rush." |
| F..... | Commence firing. | |
| FB..... | Fix bayonets. | |
| FL..... | Artillery fire is causing us losses. | |
| G..... | Move forward. | Preparing to move forward. |
| HHH..... | Halt. | Negative. |
| K..... | Negative. | Left. |
| LT..... | Left. | What is the (R. N., etc.)? Interrogatory. |
| O..... | What is the (R. N., etc.)? Interrogatory. | What is the (R. N., etc.)? Interrogatory. |
| (Ardois and semaphore only.) | | |
| ----- | | |
| (All methods but ardois and semaphore.) | What is the (R. N., etc.)? Interrogatory. | What is the (R. N., etc.)? Interrogatory. |
| P..... | Affirmative. | Affirmative. |
| RN..... | Range. | Range. |
| RT..... | Right. | Right. |
| SSS..... | Support going forward. | Support needed. |
| SUF..... | Suspend firing. | Suspend firing. |
| T..... | Target. | Target. |

Paragraphs 48-85 (Parts X-XIV) have been omitted because they have no application to Infantry.

PART XV.

**GENERAL INSTRUCTIONS FOR LOCATING AND OPERATING
VISUAL SIGNAL STATIONS.**

86. To select a visual signal station, choose a point perfectly in view of the communicating station; fix the exact position in which the flagman is to stand, so arranged, if possible, that when viewed from the communicating station he will have behind him a background of the same color for every position in which the signals may be shown.

87. Before communication by signals is opened, the telescope should be placed in the most suitable position for its most efficient use and shelter.

88. To determine the color of the background, first ascertain whether the communicating station is higher, lower, or level with your own. If it be higher, the background for your signals, viewed thence, will be the color of the field, woods, etc., behind and lower than your flagman. If it be lower, your background will be the color of the ground, etc., behind and lying higher than your flagman. If the stations are of equal elevation, then the background for your signals will be that directly behind the flagman.

89. Secrecy in communication is vitally important. Even though the code used is unknown to the enemy, yet the waving flag or other means of visual

signaling will inform the enemy that he has probably been observed. This should be avoided, and stations located where they will be most difficult of discovery. If there is reason to believe that signals are seen by the enemy, they should be made in cipher and only upon the expressed authorization of the signal officer charged with the duties of maintenance. Extraordinary care should be taken in transmitting cipher messages, and, where practicable, they should be repeated.

90. The color of the flag must contrast as strongly as possible with that of the background. With green or dark, or with earth-covered background, the white flag should be used. The distant station is the best judge of background, and should it indicate the color of flag wanted, that flag should be used.

91. Avoid, if you can, a station where a camp is located between it and the distant station, as the intervening lights will cause annoyance and delay.

92. Complete visibility of stations being provided, stations should be so located that messages may be readily carried to them. Do not establish stations far from commonly-traveled roads, unless there be reasons in the physical contour of the country or otherwise for such locations.

93. The following table shows the extent of horizon for different heights above the sea level; that is, it shows how far an object at the sea level can be seen.

| Height of the eye above sea level (in feet). | Distance (in statute miles). | Height of the eye above sea level (in feet). | Distance (in statute miles). |
|--|------------------------------|--|------------------------------|
| 10 | 4 | 115 | 14 |
| 15 | 5 | 130 | 15 |
| 20 | 6 | 150 | 16 |
| 30 | 7 | 200 | 18 |
| 40 | 8 | 230 | 20 |
| 50 | 9 | 300 | 23 |
| 60 | 10 | 350 | 25 |
| 70 | 11 | 500 | 30 |
| 85 | 12 | 700 | 35 |
| 100 | 13 | 900 | 40 |

94. Hence, an observer whose eye is 30 feet above the sea can distinguish an object 7 miles distant, provided it is at the sea level; but if the object is itself 15 feet above the sea he can make it out $7+5=12$ miles off.

95. To find a signalman near any known station, note with the unaided eye some prominent landmark near which the looked-for person or object is supposed to be, and direct the telescope upon the place; if the eye is placed at the eyeglass of the telescope, the prominent or directing landmark will be found in the field of view. It will be easy then to scale the country near the marker until the signalman is found. When the compass bearing of the object sought for is known, the telescope may be aligned by a line drawn with the proper compass bearing. Commencing then with the view at the horizon, the telescope is slowly moved from side to side, taking in fresh fields of view each time a little nearer the observer, until the whole country shall have been observed from the horizon to quite near the station. When the direction only of the object can be given, and it is sought for, the whole landscape in that direction to the horizon should be divided into sections by imaginary lines, the limits of these sections being bounded between visible landmarks through which the bounding lines are supposed to pass. Each section should be scrutinized little by little, until the glass has been passed over every spot. Such search will seldom fail to be successful.

96. The magnetic bearing of all stations with which another station has

to work should be carefully noted and recorded in the office directly concerned. In addition, guide lines may be established by driving two stakes firmly into the ground and close to each other. A prolongation of a line through the center of one stake and marked on the adjacent one will strike the distant station. Under each line should be written the name of the station which it marks.

97. A signal officer should provide himself and the persons working under him with the latest and most accurate topographic maps of the country in which the Army is operating. He should familiarize himself with and instruct his subordinates as to the location of each signal station, so that information can be promptly transmitted. He should have a list of the "calls" of each office and the personal signal of each man under his jurisdiction.

98. The person in charge of a station is responsible for the discipline of his party.

99. Daily inspection should be made to insure that all signaling instruments, appliances, and material are in readiness for instant use.

100. Signal rockets, bombs, and other pyrotechnics, should be packed in waterproof chests or pouches and carefully guarded from moisture. Whenever there are indications that they have been affected by moisture, they must be fully aired and thoroughly dried.

101. Whenever one's station call is observed, the called station should at once respond, making at the close of the response the particular signal by which it is identified.

102. The calling station should at intervals when calling give its own call or signal.

103. Strict and entire attention should be required of each man connected with a station, and no persons should be allowed to loiter around or within hearing of the words called out to the signalman.

104. Assignment of men will be made so that a continuous watch for signals may be kept and responsibility for neglect to promptly answer calls determined.

105. When a station has sent all messages on hand, the signal "Cease signaling" should invariably be made. When nothing more is to be sent from either station, both will make "Cease signaling."

106. If a signal station asks another to move its station either to its right or left, so that its signal will be more distinct, each station will see that a signalman holds a flag or lighted torch above his head. The station asking for the change will lower its flag immediately upon the distant station arriving at a position with a good background.

107. Signalmen upon stations will examine, from time to time, every prominent point within signal distance to see if communication is attempted therefrom.

108. Attempts to attract the attention of a station, in order to be successful, must be persistent. They should never be abandoned until every device has been exhausted, and they should be renewed and continued at different hours of the day and night.

109. During the time that signals are being made to attract attention, the calling stations must watch closely with a telescope the station called, not relaxing its efforts until communication is established or the station ordered abandoned.

110. Stations for use with either visual or sound signals should be so placed as to avoid exposure to an enemy. On the other hand, they should be so placed as to be as readily accessible as practicable to those entitled to use them.

Paragraphs 111-141 (Part XVI) have been omitted because they have no application to Infantry.

PART XVII.

THE FIELD MESSAGE.

142. The term "field message" is applied to all messages sent over field lines of information. All field messages for transmission over field lines of information by electrical or visual means should be plainly written by the sender on the blank forms in the Field Message Book. The practice of verbally delivering telegrams to enlisted men for transmission should invariably be discouraged.

143. In framing telegrams, all words not important to the sense will be omitted. The last name of the officer addressed, or his title, and the last name of the sender, are generally sufficient (A. R., par. 1188). Proper names in any part of the message should be written or printed in ROMAN CAPITALS, thus: SMITH, TOLEDO, MAUMEE ROAD.

144. The Field Message Book issued by the Signal Corps contains 50 message blanks with duplicate tissue sheets and two sheets of carbon paper. Proper instructions for their use are printed on the cover of the Field Message Book, as shown in Part XXI of this book.

PART XVIII.

INFANTRY COMPANY SIGNAL FLAGS.

145. The following is from the Infantry Drill Regulations, United States Army, 1911:

146. The signal flags described are carried by the company musicians in the field. In a regiment in which it is impracticable to make the permanent battalion division alphabetically, the flags of a battalion are as shown; flags are assigned to the companies alphabetically, within their respective battalions, in the order given.

First battalion:

- Company A. Red field, white square.
- Company B. Red field, blue square.
- Company C. Red field, white diagonals.
- Company D. Red field, blue diagonals.

Second battalion:

- Company E. White field, red square.
- Company F. White field, blue square.
- Company G. White field, red diagonals.
- Company H. White field, blue diagonals.

Third battalion:

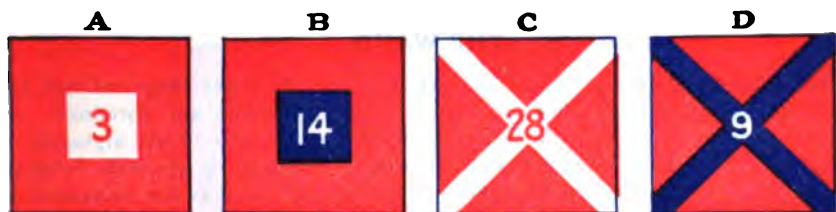
- Company I. Blue field, red square.
- Company K. Blue field, white square.
- Company L. Blue field, red diagonals.
- Company M. Blue field, white diagonals.

147. In addition to their use in visual signaling, these flags serve to mark the assembly point of the company when disorganized by combat, and to mark the location of the company in bivouac and elsewhere, when such use is desirable.

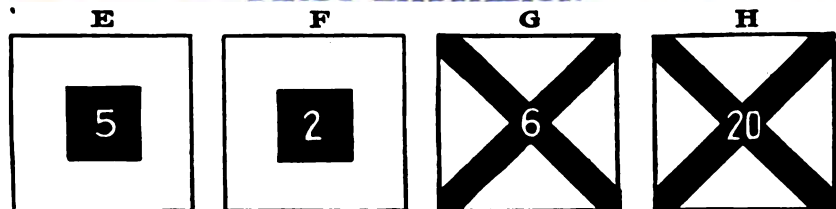
148. For communication between the firing line and the reserve or commander in rear, the signals shown are prescribed. In transmission, their concealment from the enemy's view should be insured. In the absence of signal flags the headdress or other substitute may be used.

COMPANY SIGNAL FLAGS

INFANTRY



FIRST BATTALION



SECOND BATTALION



THIRD BATTALION

MILITIA AND VOLUNTEERS



FIRST BATTALION



SECOND BATLN.

THIRD BATLN.

PART XIX.

VISUAL SIGNALING EQUIPMENT.

THE WAND.

149. The wand is a stick of light wood about 18 inches long and one-half inch in diameter. It is held loosely between the thumb and forefinger and waved rapidly to the right or left to indicate the elements of the alphabet. It is used for practice purposes, and the signals made by it are only intended to be read at very short distances. Its effectiveness may be increased by tying a handkerchief near the outward end.

FLAG KITS, GENERAL SERVICE AND SEMAPHORE.

150. Three kinds of flag kits are issued by the Signal Corps for use with the General Service Code and the Two-arm Semaphore Code; the combination, standard, 2-foot kit; the combination infantry, 2-foot kit; and the standard 4-foot kit.

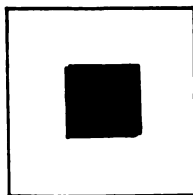
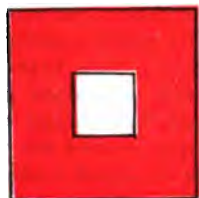
151. **The Combination, Standard, 2-foot Kit.** The combination, standard, 2-foot kit consists of 1 case, canvas; 1 staff, 3-joint; 1 flag, red, white square; 1 flag, white, red square; 2 staffs, semaphore; and 2 flags, semaphore, standard. The red flag is made of red galatea, 2 feet square, with an 8-inch white center. The white flag is of similar size and material, the only difference being an alternation of colors in the body and center. The means of attachment to the staff consists of a loop at the center and two ends of white tape at each edge of the back of the flag body. The staff for these flags is made of hickory in three joints, each joint being 23 inches long, and is assembled by means of a brass screw ferrule. Brass eyes are provided on the first and second joints to receive the tape ends at the edge of the flag. The semaphore flags are 18 inches square, divided diagonally into two parts, one of red and the other white, the red portion constituting the upper half of the flag. The staffs are 24 inches long. The carrying case is of convenient size and shape to carry the flags and staffs above enumerated and is bound with leather and fitted with shoulder straps.

152. **The Combination Infantry, 2-foot Kit.** The combination, infantry, 2-foot kit is essentially the same as the combination, standard, 2-foot kit, except that 1 infantry flag, as prescribed by paragraph 183, is substituted for the two 2-foot red and white flags above described.

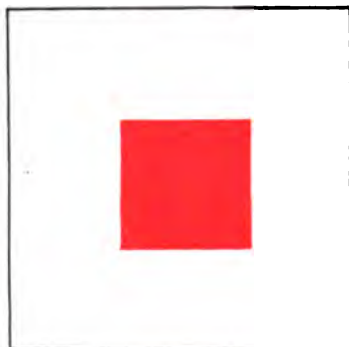
153. **The Standard 4-foot Kit.** The standard 4-foot kit consists of 1 case, canvas; 1 staff, 3-joint, and 1 flag, red, white square; and 1 flag, white, red square. The flags are 3 feet 9 inches square, with 12-inch centers, and the staffs are considerably heavier than those of the standard 2-foot kit, each joint being 36 inches long. The 4-foot kit is the standard field flag kit, and the range at which signals can be exchanged with it depends on a variety of factors, such as conditions of the weather, the location of stations, the proficiency of signalmen, etc. The speed for continuous signaling is seldom greater than five to six words per minute.

154. **Powers and Limitations of Flag Signaling.** The advantages which may be claimed for this method of signaling are portability of apparatus, adaptability to varied weather conditions, and great rapidity of station establishment. The disadvantages are the lack of celerity of the signals, their impenetrability to

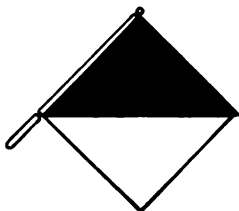
SIGNAL CORPS TWO FOOT FLAGS



SIGNAL CORPS FOUR FOOT FLAGS



SEMAPHORE HAND FLAGS



dust or smoke, and the comparatively short ranges at which they can be read. These ranges vary with the background, light, vision, and power of glasses if used.

155. Care of Flag Material. Signal flags should be examined at the close of drill or practice and repairs made to any rents or loose ties discovered. Flags, when soiled, should be thoroughly washed and dried in the sun. Signals made by clean flags are much more easily read than those made by dirty ones. Staffs should be handled with care, especially when jointing or unjointing. Care should be taken not to bruise the ends of the brass ferrules. Ferrules fitting together so loosely as to permit separation of the joints in signaling must not be hammered or jammed, but should be tightened by wrapping one or more thicknesses of thin paper around the one which is inserted in the other. If a ferrule becomes loose on a staff it should be tightened without delay.

REGULATIONS FOR FIELD MANEUVERS

UNITED STATES ARMY

1910

War Department,
Office of the Chief of Staff,
Washington, May 4, 1910.

The following Regulations for Field Maneuvers, revised by the General Staff of the Army, are approved and published for the information and government of the Regular Army and Organized Militia of the United States.

By order of the Secretary of War:

TASKER H. BLISS,
Brigadier General, Acting Chief of Staff.

FIELD MANEUVERS.

GENERAL PRINCIPLES.

1. Field maneuvers complete the course of instruction begun with garrison drills and continued in minor field exercises. They simulate the conditions of war and acquaint troops with the possibilities and difficulties of actual campaign. They afford almost the only opportunity in peace for the exercise of the functions of the higher commanders in the field, and furnish officers of all grades, and enlisted men as well, opportunities to study the military operations of the arms combined. In maneuvers alone can the importance of time, space and weather conditions be fully realized, and a satisfactory knowledge gained of the labor attending the movement, transportation and supply of troops.

2. To secure the maximum benefit from maneuvers, troops should be familiar, not only with the usual extended order drill and battle exercises, but with the elementary principles and practice of security and information, and the ordinary duties required of officers and men in the field. This knowledge is gained in exercises at their stations, on practice marches and during the annual target practice.

3. When practicable, maneuvers in warm climates are held in September or later. At this season troops suffer less from heat, the greater part of the crops is harvested, less damage results and the country is more open.

4. The region selected for maneuvers should fulfill the following conditions:

It should be large enough to permit the troops to operate as in war. Its location should be central with reference to the stations of participating troops.

It should be readily accessible by railroad or water transportation, and there should be good wagon roads to the proposed camp sites.

The terrain should be diversified, most of it practicable for troops of all arms, and with large open spaces for camps, etc. Undulating grazing country with scattered woods is most suitable.

It should be naturally free from contagious diseases, and have an ample supply of pure water.

5. The commanding general of the department in which maneuvers are to be held, causes a timely examination to be made of the available sites, and on or before March 31 of the year designated, submits to the War Department a general scheme for the proposed maneuvers, including a list of the organizations to participate, a plan of concentration, and an estimate of the cost. After approval thereof by the War Department, the commander of maneuvers, chief umpire, and staff officers are designated in ample time to work out the details of encampment, transportation, supply, and sanitation. Request is made for the necessary engineer, signal and sanitary troops, when not available in the department. Suitable maps are prepared by officers detailed for that purpose. The commander of maneuvers prepares the program of instruction.

6. For the general use of officers, maps of maneuver grounds are prepared

on a scale of 3 inches to 1 mile, with 20-foot contours. In addition, for the preparation of problems and for the use of the higher commanders, guide maps of the maneuver ground and surrounding country, about 1 inch to the mile, are necessary. These can generally be obtained from the United States Geological Survey. For the chief umpire and for use at the discussions, one or two detailed maps, 12 inches to the mile, are prepared on canvas or heavy paper. Reproductions of the 3-inch map, reduced to a scale of 1 inch to the mile, are prepared for general distribution to the troops.

7. During maneuvers and other field exercises, the commander from time to time may require the troops to take the field and live as in actual campaign.

8. The opposing forces are designated Blue and Red. All troops at maneuvers wear the prescribed field service uniform, except that in the Red forces a broad red band is worn around the hat.¹ At the discretion of the commander of maneuvers, the service coat may be omitted, but in this case the rank of officers and noncommissioned officers is indicated on the shirt.

The headquarters of the opposing forces are marked by blue and red banners, respectively. Headquarters of organizations may be marked, according to the force to which they belong, by blue or red flags or pennants with appropriate insignia. In maneuver combats the national, regimental, or battalion colors or standards are not carried.

When desirable the troops may be located in two camps some miles apart.

PROGRAM OF INSTRUCTION.

9. The program of instruction, showing in general terms the daily work contemplated, is distributed to the troops upon arrival. When the troops have not had suitable preliminary preparation, the program includes instruction by practical demonstrations, regimental and brigade drills, exercises in security and information, deployments, small maneuvers, etc. These minor maneuvers should be progressive, beginning with the company and ending with all arms combined. If practicable, there should also be a review of the entire command.

Instruction is also imparted by lectures and conferences.

10. Under the direction of the commander of maneuvers, the problems are prepared as outlined in the program of instruction. These problems are framed under the assumption of a state of war involving hostile operations, and are usually expressed in general and special situations.

The general situation is given to both parties and contains the information supposed to be generally known. A special situation is given to each commander and contains full information in regard to his own command, and such information of the enemy as might have been obtained in actual warfare.

Simple situations generally admit of a number of solutions and are more useful than those based upon numerous and remote suppositions. Unnatural assumptions are avoided.

With large opposing forces the same general situation may serve for several days, or even for the whole maneuver period; with smaller commands changes are usually necessary. Unreal conditions, permitting a force to discover the actual strength and location of its adversary through means which could not be employed in war, are avoided.

The technical work of engineer, signal, and sanitary troops is carried out as far as practicable. First-aid and dressing stations are established, and field hospitals set up as in war.

Combat, field, and supply trains are represented by all the wagons available.

¹ Outside of the insignia, difference in headgear is about all that distinguishes modern armies in the field.

UMPIRES.

11. The commander of maneuvers, when not performing the duties of chief umpire, is assisted by an officer bearing that title. This officer has charge of the details of the preparation and conduct of the problems, and is assisted during the exercises by additional umpires, sufficient in number to secure proper control.

Umpires are selected from grades above that of first lieutenant. They are staff officers of the commander of maneuvers, and their orders, signals, and decisions are considered as emanating from him. They are therefore promptly obeyed without question. That they may be readily recognized they wear a broad white band around the hat. Their orderlies or messengers wear a broad white band on the left arm above the elbow.

Though umpires may accompany particular units, they are not ordinarily assigned thereto, but are distributed by the chief umpire so as to cover all ground involved in the exercise. Knowing the plans of the commanders, umpires can be at points of contact, or where decisions will probably be required, at the proper time.

12. **Conduct.** So far as possible, umpires furnish commanders the information derived in war from the actual flight of the bullets and projectiles themselves; for instance, that the troops are under fire of a certain kind and volume. With this information the commanders decide upon their own line of action, namely, to deploy, advance, seek cover, fall back, open fire, etc. Umpires, however, are careful to give no information that troops could not obtain in actual warfare. At important epochs during a maneuver, umpires note on their maps the positions of the troops under their observation.

When a commander receives information from an umpire which, in the opinion of the latter, should cause a change of formation, position, or action of the troops, and the commander does not voluntarily make a change, the umpire renders a decision in accordance with section 16. The decision causes the troops to do what the umpire thinks they actually would do in war under the circumstances.

The work of umpires is intended to supply, as far as practicable, the impressions and effects of actual war. Their decisions take the place of bullets and other projectiles, and prevent unnatural or impossible situations. As a rule, maneuver exercises tend to develop too rapidly. This tendency is counteracted by the decisions which produce the delays incident to war. In this manner exercises are logically developed and the creation of false impressions is prevented.

In addition, umpires note the leadership and conduct of troops, and thereby enable the chief umpire to call attention to the same at the subsequent discussion and in his final report.

Umpires give prompt and definite decisions and see that they are carried out. When several umpires meet, the senior announces the decision. If an umpire concludes from further information that he has made an erroneous decision, he so reports to the chief umpire at the earliest practicable moment.

The orders of an umpire to troops are given, when practicable, through their commander.

The chief umpire usually assembles the umpires on the afternoon or evening preceding an exercise, furnishes them copies of the problem, and gives the necessary instructions. At the close of an exercise he may assemble them to compare data, receive criticisms, and decide disputed points, or he may require them to submit written reports of their observations and the actions.

In maneuvers of considerable magnitude the position of the chief umpire is usually indicated by a white flag with a diagonal red cross.

13. Signals. When practicable, signals to troops and umpires are communicated by means of a balloon. Notices to commence, suspend, or cease operations, etc., may be given by the use of bombs or rockets; in the absence of other means the trumpet is used.

When the chief umpire makes use of the trumpet the signal Attention is sounded by his order only, and is used as follows:

"Attention, cease firing, attention"—all firing ceases and all troops halt in their places.

"Attention, commence firing, attention"—operations are resumed.

"Attention, recall, attention"—troops return to their respective camps or bivouacs.

Officers commanding troops cause the chief umpire's calls to be repeated, but no trumpeter repeats these calls without an order from an officer.

To control the exercises in particular localities, umpires may make use of whistle signals. Such signals are obeyed by the troops in hearing, but are not repeated in other parts of the field.

14. At the close of an exercise the chief umpire prepares data for the subsequent discussion. At the close of the maneuvers he prepares such report as the commander may require.

DISCUSSIONS.

15. After the conclusion of an exercise in which the whole or a large part of the command has participated, the officers concerned are assembled, weather permitting, for the purpose of discussing the tactical and other military features involved. At such discussions the commander of maneuvers, or some officer designated by him, presides. The discussion is opened by the chief umpire, who reads the general and special situations, gives an outline of the exercise as it actually developed, and offers such criticisms and comments as he deems desirable. The commanders of the opposing forces are then called upon to read or state the orders issued by them, and to give their reasons therefor. The discussion is then made general.

During the discussion assistant umpires, when called upon by the commander of maneuvers or the chief umpire, describe the movements and action of the troops that came under their observation, but make no criticism in regard thereto.

When the troops are located in two camps and it is not practicable, after a combined maneuver, to assemble the officers at one place, a discussion is held in each camp, an umpire being detailed to perform the duties of chief umpire in the latter's absence, the camp commander presiding when the commander of maneuvers is not present.

Criticisms must be entirely free from remarks having a personal bearing, individuals being referred to by their official titles and not by name. When errors are pointed out by the chief umpire he indicates the course of action which, in his opinion, would have been proper under the circumstances.

Discussions are regarded as confidential, and no person not on duty with the troops, or serving as umpire, is allowed to attend unless invited by the commander of maneuvers.

Where, for purposes of instruction as outlined in section 9, smaller exercises are held, an officer is assigned as chief umpire of each, and the discussion is held, when practicable, on the ground at the conclusion of the exercise, the officers concerned being assembled for that purpose. The senior officer presides, and the discussion follows the lines indicated above.

EFFECT OF FIRE—UMPIRES' DECISIONS.

16. The effect of fire is influenced by so many considerations that it is impossible to predict the result with accuracy.

There are many factors whose effects can not be computed. However, by practice in calculating losses in hypothetical cases, a knowledge of the principal factors governing the effect of fire is obtained, and a faculty acquired of quickly estimating their influence or effect upon troops. This faculty umpires are supposed to have acquired by previous study and experience. At maneuvers there is no time to make complicated calculations or to consult a table of losses; the umpires, therefore, decide promptly according to their best judgment. Such decisions are ordinarily as follows:

1. That troops can not continue their march.

For instance, when in close order they come under a fire which, in war, would compel a deployment or change of direction.

2. That they can not advance for a certain period of time.

For instance, when advancing more rapidly than they would in actual warfare.

3. That they can not advance at all unless reinforced.

For instance, when the enemy's fire is so effective that troops would probably not advance against it in actual warfare.

4. That they must retire to a designated point affording cover.

For instance, when they have been surprised and are more or less demoralized, or have been driven from a position, or have failed in an attack.

5. That they can not take the offensive for a stated period.

For instance, when they have just made an unsuccessful attack, suffered heavy losses, or have made an exhausting march at double time.

6. That they must retire from the field for a stated period.

For instance, when a patrol in actual warfare would have been annihilated or captured. Umpires seldom rule whole commands entirely out of action.

The decisions of umpires are based upon the actual strength of the troops engaged.

RULES TO ASSIST UMPIRES.**SMALL ARMS.**

17. The efficacy of infantry fire is influenced by many circumstances, such as distance and form of the target, degree of accuracy in estimating the range, adjustment of sights, fire discipline, physical condition of the soldier, etc.

At ranges from 1,600 to 1,200 yards the well directed and controlled fire of a considerable force is very effective against stationary targets as large as two companies of infantry in close order.

Under 1,200 yards skirmish lines without cover and under effective fire can not continue the advance unless supported by a fire superior to that of the enemy.

Between 1,200 and 900 yards supports or reserves in close order without cover can advance, make short halts standing, or move by a flank, only when supported by a fire superior to that of the enemy.

Under 900 yards troops without cover, even though preceded by a strong firing line, can move only to the front or rear over fire-swept ground.

Under 600 yards a fire fight without cover must terminate in a short time in an assault or a retreat.

In open country without cover, cavalry mounted should not appear in front

of unshaken infantry nearer than 1,200 yards, unless advancing to the attack in proper formation.

Mounted patrols should not be ordered to the rear or out of action on account of being exposed to long range fire, if they adopt suitable formations and gaits to lessen the chances of being hit.

The result of an infantry charge depends upon the effect of the preceding infantry and artillery fire, the relative strength of the contending forces, nature of the ground, direction and execution of the attack, conduct of the defenders, etc. As the losses would probably be severe, the attackers or defenders are generally ordered to the rear for a stated period.

Enfilading fire, or a well directed fire at close range delivered as a surprise, is given greatly increased weight.

The fire of dismounted cavalry is considered as effective as that of infantry, but the strength of the unit is reduced at least one-fourth on account of the horse holders and guard for the led horses.

Frontal fire of infantry against artillery provided with shields has little effect, but a battalion of infantry firing at a single battery from a position thirty or more degrees removed from the line of fire of the battery, and at a range not exceeding 1,200 yards, is sufficient to silence the battery.

At a distance of 1,200 yards or less, favorable conditions, such as actual cover, are necessary to enable artillery to limber or unlimber. At less than 1,200 yards it soon loses its mobility. If it accompanies infantry in the advance it suffers corresponding losses.

MACHINE GUNS.

18. The fire of machine guns is affected by the following considerations: the suddenness with which it is opened, the size and density of the target, the correctness of the sighting and the facilities for observing its effects. The well-directed fire of machine guns is very effective against bodies of troops in close order at ranges under 1,800 yards; it is also effective against skirmishers standing—making a continuous advance impracticable. With good facilities for observation it is effective against skirmishers lying down at ranges up to 1,200 yards, but when the facilities for observation are not good, skirmishers lying down do not constitute a favorable target beyond 700 yards.

Machine-gun fire is mechanical infantry fire, of the same range as ordinary infantry fire, but capable, in battle, of supplying a greater power of resistance and producing a greater ultimate effect.

It has greater moral effect than ordinary infantry fire, because of its nerve-racking rattle and quick action upon exposed targets.

Machine guns are untrustworthy and comparatively ineffective weapons in the hands of untrained men.

For all ranges less than 600 yards, 1 machine gun = 16 men; for ranges from 600 to 1,200 yards, 1 machine gun = 22 men; for ranges above 1,200 yards, long and distant, 1 machine gun = 39 men.

At targets and ranges when the lateral dispersion of the machine gun is less than the width of the intervals between the elements composing the targets, as would be the case in firing at a skirmish line with intervals, machine-gun fire is much less profitable than infantry.

At targets and ranges when the dispersion of the machine gun covers a number of the elements composing the target, the fire of one machine gun is superior to the fire of the number of rifles it displaces.

In firing at ranges where it is a question of covering certain points or defined areas with a beaten zone as in fire of position, machine-gun fire is greatly superior to infantry fire.

ARTILLERY.

19. In judging the effect of artillery fire, the following circumstances must be considered: Whether the artillery has opened a sudden and effective fire from a concealed position; the number of guns firing upon the same object; the rapidity and duration of the fire; the range; the size and formation of the objective; whether moving or not; and finally, whether the artillery itself is under fire.

A battery opening fire with a knowledge of the range gained from another battery already in action, is assumed to begin effective fire with the first shot; otherwise the time for finding the range must be considered. This time varies with the range, the difficulties of observation, and the degree of training of the battery, but in ordinary cases, at ranges above 2,000 yards, will not be less than two minutes, reckoned from the first shot.

At a distance of about 3,500 yards, artillery which has found the range can make it difficult, and in some cases impossible, for even a superior opposing force of artillery to unlimber. Artillery, unless it is much superior in strength, can rarely produce an effect on opposing artillery at distances over 3,500 yards without the coöperation of other arms.

At ranges less than 3,000 yards a slight superiority will make itself felt. Enfilade fire from artillery is much more effective than frontal fire.

In the face of a well sustained and properly directed artillery fire at distances of 3,500 yards or less, infantry must deploy and move at a rapid gait. At ranges less than 2,500 yards infantry can move only in line of skirmishers and then only to the front and rear. This rule is modified according to the cover afforded by the ground and the relative size of the forces.

Indirect fire is generally not effective against bodies of cavalry smaller than a squadron and moving at a trot.

ATTACK BY CAVALRY MOUNTED.

20. The rapid course of a cavalry attack renders correct decisions difficult. The umpire should be on hand to observe the advance, the deploying, the execution of the attack, and the strength of the opposing forces.

Mounted cavalry receiving a charge at a halt is declared defeated.

A cavalry force charged while in the act of deployment, or struck in flank, is declared defeated even if numerically somewhat superior.

In the attack on cavalry it is of less importance to pass over long distances rapidly than to deliver the shock with cohesion and force. Envelopment of a flank increases the efficacy of the attack.

When two cavalry forces of equal strength and proper formation meet in mounted action, the victory would probably fall to the side bringing up the last formed reserve.

In the combat of cavalry against cavalry the defeated force is required to retire 300 yards before the victor is allowed to pursue. The latter may then assemble his forces or continue the pursuit with the force available, preserving a distance of at least 100 yards. The defeated force continues to retreat before an effective pursuit without assembling, unless support is received. The umpire prevents a long pursuit and may rule the defeated force out of action for a stated period.

Against demoralized or badly shaken infantry, a cavalry attack can dispense with deep formations, and comparatively small bodies may do effective work.

Against unshaken infantry favorable conditions are necessary to give a probability of success; for example, cover while approaching, favorable ground,

surprise, attack against a flank or while the infantry is changing formation. The cavalry must be in deep formation and cross the fire swept zone at a rapid gait. Great losses to the cavalry are to be expected in such attacks.

Artillery in motion is considered helpless against a cavalry attack, unless protected by other troops. Artillery in action is most vulnerable on an unsupported flank. Frontal attack against artillery and machine guns requires favorable ground, skillful handling, and an adequate force; the losses would probably be heavy.

Should the cavalry succeed in reaching the artillery, the result would still depend upon their ability to disable or carry off the pieces, or to secure the victory in some other way.

CONDUCT OF TACTICAL EXERCISES.

21. Maps of the maneuver district are issued to troops on or before their arrival at the maneuver grounds.

22. The commander of maneuvers issues the necessary orders to secure compliance with the program of instruction. Problems are given out in time to enable commanders to estimate the situation and prepare their initial orders. This time should vary so as to introduce the feature of sudden encounters, and compel commanders to render quick decisions.

23. The commanders of the opposing forces are guided by the general and special situations and instructions received by them. They issue orders as in campaign, and furnish the chief umpire, before each exercise, a copy of their initial orders. They also furnish the umpire accompanying them a copy or statement of all orders and instructions subsequently issued by them. Commanders explain their intentions to umpires when requested by the latter.

24. All duties pertaining to the maneuvers are performed, as far as practicable, as they should be in actual war.

The practice of riding far beyond the outposts without escort, to make a preliminary study of the terrain, bears little resemblance to what is done in war, and is forbidden.

25. It is the duty of commanders of units to take cognizance of the fire of their opponents and govern themselves accordingly. It is especially necessary to counteract the tendency to disregard long range artillery and infantry fire, so difficult to appreciate at maneuvers.

26. Intrenchments, gun pits, obstacles, etc., are actually constructed unless peace conditions forbid. Instructions in such matters are given by the commander of maneuvers before an exercise begins.

When not actually constructed, intrenchments, gun pits, obstacles, and the demolition of bridges, loopholing of walls, etc., are outlined or indicated. The position of intrenchments is indicated by small flags—blue for the Blue army and red for the Red army. The destruction of bridges, etc., is indicated by suitable inscriptions, the time of destruction being stated. When the construction of works or demolitions is assumed, the commander informs the nearest umpire, who decides how much of the work could have been done with the means and in the time available, and causes proper notice to be taken by the opponent. Claims for the construction of works or for demolitions are not allowed unless the necessary tools, material, and troops have actually been available for such work.

27. Officers under no circumstances dispute with an umpire at the time a decision is given. Should a decision be deemed erroneous, officers may, after the close of the exercise, make an appeal in writing, setting forth the facts as they appear to them. It must be remembered, however, that the decision of an umpire is rendered in accordance with his best judgment, and

though the decision may appear wrong, the outcome in actual combat, due to the element of chance in war, might have been as he decided.

28. During pauses ordered by the commander of maneuvers or the umpires, a complete standstill in the operations is required; messages must not be sent, orders issued, or the positions of troops changed.

29. When important decisions are rendered, commanders at once notify their superiors and the commanders of adjoining troops.

30. **Umpiring.** In a combat exercise the problem is drawn so as to cause the exercise to develop within the limits represented on the chief umpire's map. The chief umpire assigns or distributes his assistants as he deems advisable, and causes them to make as careful a study of the ground and map as time permits. One umpire is assigned to accompany each of the supreme commanders. For convenience these two umpires are referred to respectively as the senior umpire, Blues, and the senior umpire, Reds.

At the proper time the chief umpire establishes his headquarters at some central or convenient point (central station) and opens communication with the senior umpires. The latter establish communication with their assistants who report the progress of events in their parts of the field. By this means the plans of commanders, locations and movements of troops, targets and character of fire, etc., can be forwarded to the central station, and, when necessary, passed on to the opposite side to enable the local umpires to impart proper information to the troops and to render logical decisions.

In extensive maneuvers where signal troops are available, information between the umpires may be transmitted as follows:

A line is established connecting the central station with the senior umpires on each side; communication between the senior umpires and their assistants is maintained by messenger service and by using the signal lines established between the supreme commanders and the principal fractions of their commands (for instance in case of attack, connecting headquarters with the artillery, the main and secondary attacks and with the reserve); the umpires use the nearest signal stations, or send information by messenger. Messengers are used to supplement the wire service. For short distances or where long orders or messages are sent, information is generally carried by messenger. For instance, at urgent speed and for distances up to about half a mile, a mounted messenger can deliver a message of ten words in less time than it can be delivered by wire.

If an assistant umpire can send a message more easily to the central station than to his senior umpire, he does so. As the troops approach more closely, assistant umpires may be able to "cross over," or communicate more easily with the opposing side than through the central stations, but important decisions made under such circumstances must be promptly reported to the central station.

At the central station the chief umpire is assisted by a typewriter and three officers, one to keep a record of events, the others to assist in receiving and sending messages, and in following the progress of events on the map, which is done by means of "troop signs."¹ The chief umpire is not necessarily confined to the central station, but goes wherever he deems his presence necessary, the work at the central station being carried on by his assistants.

Due to the fact that umpires are required to use the lines of information established by the opposing forces, troops are forbidden to cut signal wires unless authorized to do so by the commander of maneuvers. Umpires, however, make the proper rulings in regard to lines captured or "destroyed." All umpires' messages are confidential.

¹ Colored pins, etc.

When signal troops are used, the central station should be provided with two mounted or cyclist orderlies, and each senior and assistant umpire with one mounted orderly. Without signal troops these numbers should be doubled. The central station is also provided with a light wagon for use in case a change of position becomes necessary.

By this method of umpiring, troops are informed of the kind, volume and direction of fire to which they are subjected (information acquired in war from the projectiles themselves), their commanders given an opportunity to make the necessary dispositions, and the umpire enabled to render intelligent decisions.

31. Ammunition. The supply of ammunition is usually limited, and it often happens that firing ceases because the supply is exhausted. In such cases the troops simulate firing, and the opposing troops are notified through the umpires that firing of a certain character and volume continues. When ammunition is limited the time of actual firing may be prolonged by permitting only a fraction of the troops engaged to fire at a time, for instance, one man in four. In such cases it is assumed that all of the troops concerned are engaged.

32. Unless contrary orders are given by the commander of maneuvers, all troops march fully armed and equipped—except as to ammunition. Blank ammunition only is carried, the number of rounds being regulated in orders.

It is of such great importance, however, to accustom troops to the amount of ammunition used in war, to instruct officers in regulating its expenditure, and to solve practically the problem of ammunition supply, some, at least, of the tactical exercises should be conducted with the full service allowance of cartridges.

33. Before leaving the camp or bivouac, an inspection is made to ascertain that no ball cartridges are carried. These inspections are made by officers, and reports thereof are made to the senior umpires on each side.

All members of a command taking part in, or attending a field exercise, are forbidden to carry on their persons, or horses, or with field pieces, caissons, or other means of transportation, fixed ammunition or ball cartridges of any kind whatever. No weapons, other than those constituting part of the regulation equipment of officers and men, are carried.

34. Contact. The actual collision of opposing forces must be prevented, commanders of units being held responsible. When the combat reaches the stage just preceding the crisis, the commander of maneuvers or the chief umpire gives the signal for suspension of operation, and the relative numbers and positions of the contending forces are carefully noted. The chief umpire or commander of maneuvers then decides whether to continue the exercise or not. If continued one or both of the opposing forces may be required to withdraw to a suitable distance before hostilities are resumed. Local combats are similarly controlled by the local umpires.

35. Firing by opposing parties is discontinued when they arrive within 100 yards of each other, and the umpires then make a decision. Usually a definite decision is reached before the troops come to such close contact.

36. When, as a result of close contact in wooded country, the opposing forces are intermingled or the troops out of hand, it may be advisable for the umpires to order a suspension of operations until the lines are reestablished.

37. Should a force succeed in approaching within 100 yards of another without being discovered, captures may be made by giving the command "Halt, surrender." The umpire considers the strength of the opposing forces, the nature of the ground, and other circumstances, and decides whether actual capture was possible. Captured troops are disposed of in accordance with rule 6, section 16.

38. Commanders of opposing dismounted forces approaching within 100 yards of each other, in the absence of umpires, order firing to cease, halt their men and direct them to hold their rifles vertically, butt uppermost, as a signal that the decision of an umpire is awaited. Troops in this situation must not be attacked.

39. Cavalry charges against dismounted troops must be brought to a full stop at 100 yards from the troops attacked. Against mounted troops the charge stops at 50 yards; in the charge as foragers cavalry is permitted to ride up to and through wagon trains and batteries not firing, but no revolver firing is permitted at less than 50 yards.

40. When patrols of equal strength meet, the umpire decides which has the advantage and causes the other to withdraw. If a patrol meets a stronger force, it retires unless the umpire decides that superior leading entitles it to advance, in which case the other force retires to the distance prescribed by the umpire.

41. An individual, mounted or dismounted, when halted and called upon to surrender, or when fired upon, by two or more dismounted men at a distance of 100 yards or less, gives himself up. The same rule applies up to 150 yards for an individual fired upon while at a halt and in good view. In the case of moving individuals, mounted or dismounted, at a distance greater than 100 yards, the umpire decides according to the amount of fire and other circumstances.

42. Mounted men who find their retreat cut off by superior numbers of mounted opponents, surrender when it is evident that they can not escape without being closely pursued.

43. In all exercises the greatest attention is given to fire discipline. Violation of the rules and a waste of ammunition will be the subject of unfavorable report by the umpires.

44. **Recall.** Exercises are terminated by the proper signal from the commander of maneuvers or the chief umpire. The troops then return to their camps or bivouacs.

45. At the conclusion of an exercise the commanders of the opposing forces submit such data to the chief umpire as the latter may require for the subsequent discussion and for his final report.

PRIVATE PROPERTY.

46. There must be no firing in the immediate vicinity of houses, barns, haystacks, ricks of fodder, etc. No camps or bivouacs are established in orchards, parks, or fields under cultivation, without the owner's consent.

47. Troops at maneuvers confine themselves to the maneuver grounds; they do not enter houses or other buildings, yards, gardens, lawns, tobacco fields, vineyards, nurseries, or orchards in fruit season, without the owner's consent. Other fields or grounds from which troops are excluded are marked by white flags. Marching troops not engaged in tactical exercises confine themselves to the public roads.

48. Officers and noncommissioned officers on duty with troops and umpires prevent unnecessary injury to property.

49. Officers and noncommissioned officers are held responsible for wanton damage committed in their presence. Offenders are immediately placed under guard and brought to trial. In all cases of depredation or wanton damage, boards of officers are appointed by the commanding officer to assess damages.

MISCELLANEOUS PROVISIONS.

50. The chief surgeon, under the direction of the commander of maneuvers, supervises the hygiene of the maneuver camps. Under his charge daily sanitary inspections are made; if faults are found the attention of regimental commanders is called to them, and the necessary steps are taken by the latter for their correction. Any failure to remedy unsanitary conditions is reported to the commander of maneuvers.

All drinking water on the maneuver ground is examined and marked "good" or "bad" before the exercises begin.

51. When necessary a provost marshal with a suitable mounted force is detailed to act as police during the exercises. It is the duty of the marshal to see that spectators are directed to points affording good view, and that they do not interfere with the exercise or damage property. Spectators will be requested not to precede the advance guard of either force, nor gather in positions liable to mislead the combatants.

52. Military attachés, duly accredited military and naval observers from foreign countries, and from the organized militia, and officers of the Regular Army attending the maneuvers in an official capacity, either accompany the commander of maneuvers or are otherwise suitably disposed of. Such persons wear a broad white band on the right arm above the elbow.

53. Military attachés and duly accredited military or naval observers are provided with suitable mounts and orderlies and an officer is detailed to see that they are properly cared for. They are furnished with such shelter, messing facilities, transportation and information as the commander of maneuvers directs, and are saluted and accorded the honors due their rank.

54. Properly accredited correspondents of newspapers and other publications accompanying United States troops in the field or attending maneuvers, are afforded information and other facilities not inconsistent with the success of the operations. Such correspondents wear a red band on the right arm above the elbow.

ARMY RATION ISSUE AND CONVERSION TABLES.

(Adapted to the ration prescribed by Army Regulations, 1913, and Bulletin No. 21, W. D., May 28, 1914.)

Published by authority of the Secretary of War for use in the Army of the United States.

War Department, Office of the Quartermaster General of the Army, Washington.

RATIONS TO BULK.

Substituting given number of rations for R in formulas below, the result will be the number of the units shown in last column.

| Article. | Garrison ration. | Garrison ration. (Alaska.) | Reserve ration. | Travel ration. | Philippine ration. | Result. No. of— |
|--------------------|-------------------------------|-------------------------------|---------------------|----------------------|-----------------------|------------------------|
| Beef, fresh | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | $R - \frac{1}{4} R$ | Pounds |
| Mutton, fresh | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | | Pounds |
| Bacon | $R - \frac{1}{4} R$ | R | $R - \frac{1}{4} R$ | | $R \div 2$ | Pounds |
| Pork, salt | | $R \times 11 \div 8$ | | | | Pounds |
| Beef, salt | | | | | | Pounds |
| Beef, corned | $R \div 2$ | $R \div 2$ | $R \div 2$ | $R \times 3 \div 8$ | $R \div 4$ | 2-lb. cans |
| Beef, fresh, roast | $R \div 2$ | $R \div 2$ | $R \div 2$ | $R \times 3 \div 8$ | $R \div 4$ | 2-lb. cans |
| Hash, corned beef | | | | | | |
| Beef, corned | $R \times 2 \div 3$ | $R \times 2 \div 3$ | $R \times 2 \div 3$ | $R \div 2$ | $R \div 3$ | No. 2 cans |
| Beef, fresh, roast | $R \times 2 \div 3$ | $R \times 2 \div 3$ | $R \times 2 \div 3$ | | $R \div 3$ | No. 2 cans |
| Hash, corned beef | $R \times 2 \div 3$ | $R \times 2 \div 3$ | $R \times 2 \div 3$ | $R \div 2$ | | No. 2 cans |
| Fish, dried | $R - \frac{1}{4} R$ | $R - \frac{1}{4} R$ | | | | Pounds |
| Fish, pickled | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | $R - \frac{1}{4} R$ | Pounds |
| Fish, canned | R | R | | | $R - \frac{1}{4} R$ | No. 1 cans |
| Fish, fresh | | | | | | Pounds |
| Turkey, dressed | R | R | | | | Pounds |
| Flour | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | $R \div 2$ | Pounds |
| Soft bread | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | $R + \frac{1}{4} R$ | $R \div 2$ | Pounds |
| Hard bread | R | R | | R | $R \div 2$ | Pounds |
| Corn meal | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | R | | $R \div 2$ | Pounds |
| Baking powder | $R \div 100$ | $R \div 100$ | | | | Pounds |
| Beans | $(R + \frac{1}{4} R) \div 10$ | $(R + \frac{1}{4} R) \div 10$ | | | $R \times 4 \div 100$ | No. $\frac{1}{4}$ cans |
| Beans, baked | | | | | | Pounds |
| Beans, baked | | | | $R \times 4 \div 10$ | | No. 1 cans |
| Rice | $R \div 10$ | $R \div 10$ | | $R \div 8$ | | No. 3 cans |
| Hominy | $R \div 10$ | $R \div 10$ | | | $R + \frac{1}{4} R$ | Pounds |

ARMY RATION ISSUE AND CONVERSION TABLE.—Continued.

| Article. | Garrison ration. | Garrison ration. (Alaska.) | Reserve ration. | Travel ration. | Filipino ration. | Result. No. of— |
|------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------|------------------------|
| Potatoes, fresh | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | $R \div 2$ | Pounds |
| Potatoes, canned | $R \div 2$ | $R \times 6 \div 10$ | | | | 30-oz. cans |
| Onions, fresh | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | $R \div 2$ | Pounds |
| Tomatoes, canned | $R \times 5 \div 8$ | $R - \frac{1}{4} R$ | | $R \div 4$ | | Small cans |
| Tomatoes, canned | $R \times 5 \div 26$ | $R \times 3 \div 13$ | | $R \div 13$ | | No. 10 cans |
| Other fresh vegetables | $R + \frac{1}{4} R$ | $R + \frac{1}{4} R$ | | | | Pounds |
| Prunes | $R \times 8 \div 100$ | $R \times 8 \div 100$ | | | | Pounds |
| Apples, evaporated | $R \times 8 \div 100$ | $R \times 8 \div 100$ | | | | Pounds |
| Peaches, evaporated | $R \times 8 \div 100$ | $R \times 8 \div 100$ | | | | Pounds |
| Jam | $R \times 16 \div 315$ | $R \times 16 \div 315$ | | $R \div 18$ | | No. 2 cans |
| Coffee, R. and G. | $R \times 7 \div 100$ | $R \times 7 \div 100$ | $R \times 7 \div 100$ | $R \times 7 \div 100$ | $R \div 16$ | Pounds |
| Coffee, roasted | $R \times 7 \div 100$ | $R \times 7 \div 100$ | | | | Pounds |
| Coffee, green | $(R - \frac{1}{4} R) \div 10$ | $(R - \frac{1}{4} R) \div 10$ | | | | Pounds |
| Tea | $R \times 2 \div 100$ | $R \times 2 \div 100$ | | | | Pounds |
| Sugar | $R \times 2 \div 10$ | $R \times 2 \div 10$ | $(R + \frac{1}{4} R) \div 10$ | $(R + \frac{1}{4} R) \div 10$ | $R \div 8$ | Pounds |
| Milk, evaporated | $R \div 24$ | $R \div 24$ | | $R \div 24$ | | Family cans |
| Milk, evaporated | $R \div 64$ | $R \div 64$ | | $R \div 64$ | | Hotel cans |
| Vinegar | $R \div 200$ | $R \div 200$ | | | $R \div 400$ | Gallons |
| Pickles, cucumber | $R \div 200$ | $R \div 200$ | | | | Gallons |
| Salt | $R \times 4 \div 100$ | $R \times 4 \div 100$ | $R \div 100$ | | $R \times 4 \div 100$ | Pounds |
| Pepper | $R \div 100$ | $R \div 100$ | | | $R \div 200$ | No. $\frac{1}{4}$ cans |
| Cinnamon | $R \times 7 \div 2000$ | $R \times 7 \div 2000$ | | | | No. $\frac{1}{4}$ cans |
| Cloves | $R \times 7 \div 2000$ | $R \times 7 \div 2000$ | | | | No. $\frac{1}{4}$ cans |
| Ginger | $R \times 7 \div 2000$ | $R \times 7 \div 2000$ | | | | No. $\frac{1}{4}$ cans |
| Nutmeg | $R \times 7 \div 8000$ | $R \times 7 \div 8000$ | | | | Pounds |
| Lard | $R \times 4 \div 100$ | $R \times 4 \div 100$ | | | | Pounds |
| Lard | $R \div 104$ | $R \div 104$ | | | | No. 5 pails |
| Lard substitute | $R \times 4 \div 100$ | $R \times 4 \div 100$ | | | | Pounds |
| Butter | $R \div 32$ | $R \div 32$ | | | | Pounds |
| Oleomargarine | $R \div 32$ | $R \div 32$ | | | | Pounds |
| Sirup | $R \div 100$ | $R \div 100$ | | | | Gallons |
| Flavoring extract | $R \times 7 \div 1000$ | $R \times 7 \div 1000$ | | | | 2-oz. bottles |
| Flavoring extract | $R \times 7 \div 4000$ | $R \times 7 \div 4000$ | | | | 8-oz. bottles |

BULK TO RATIOMS.

Substituting the Given Number of Units (Shown in Column 2) for U in the Formulas Below, the Result Will be the Number of Rations of the Article.

| Article. | Units. | Garrison ration. | Garrison ration. (Alaska.) | Reserve ration. | Travel ration. | Pilipino ration. |
|--------------------|-----------------------|---------------------------------|---------------------------------|---------------------|----------------------|-----------------------|
| Beef, fresh | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | $U + \frac{1}{2} U$ | | $U + \frac{1}{2} U$ |
| Mutton, fresh | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | | |
| Bacon | Pound | $U + \frac{1}{2} U$ | U | | | $U \times 2$ |
| Pork, salt | Pound | | $U \times 8 \div 11$ | | | |
| Beef, salt | Pound | | $U \times 2$ | $U \times 2$ | $U \times 8 \div 3$ | $U \times 4$ |
| Beef, corned | 2-lb. can | $U \times 2$ | $U \times 2$ | $U \times 2$ | | $U \times 4$ |
| Beef, fresh, roast | 2-lb. can | $U \times 2$ | $U \times 2$ | $U \times 2$ | $U \times 8 \div 3$ | $U \times 4$ |
| Hash, corned beef | No. 2 can | $U \times 3 \div 2$ | $U \times 3 \div 2$ | $U \times 3 \div 2$ | $U \times 2$ | $U \times 3$ |
| Beef, corned | No. 2 can | $U \times 3 \div 2$ | $U \times 3 \div 2$ | $U \times 3 \div 2$ | | $U \times 3$ |
| Beef, fresh, roast | No. 2 can | $U \times 3 \div 2$ | $U \times 3 \div 2$ | $U \times 3 \div 2$ | $U \times 2$ | $U \times 3$ |
| Hash, corned beef | No. 2 can | $U + \frac{1}{2} U$ | $U + \frac{1}{2} U$ | $U \times 3 \div 2$ | | |
| Fish, dried | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | | $U + \frac{1}{2} U$ |
| Fish, pickled | Pound | U | U | | | $U + \frac{1}{2} U$ |
| Fish, canned | No. 1 can | U | U | | | |
| Fish, fresh | Pound | U | U | | | |
| Turkey, dressed | Pound | U | U | | | |
| Flour | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | | $U \times 2$ |
| Soft bread | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | $U - \frac{1}{2} U$ | $U \times 2$ |
| Hard bread | Pound | U | U | | U | $U \times 2$ |
| Corn meal | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | U | | |
| Baking powder | No. $\frac{1}{4}$ can | $U \times 100$ | $U \times 100$ | | | $U \times 100 \div 4$ |
| Beans | Pound | $(U - \frac{1}{2} U) \times 10$ | $(U - \frac{1}{2} U) \times 10$ | | | |
| Beans, baked | No. 1 can | | | | | |
| Beans, baked | No. 3 can | | | | | |
| Rice | Pound | $U \times 10$ | $U \times 10$ | | $U \times 10 \div 4$ | $U - \frac{1}{2} U$ |
| Hominy | Pound | $U \times 10$ | $U \times 10$ | | $U \times 8$ | |
| Potatoes, fresh | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | | $U \times 2$ |
| Potatoes, canned | 30-oz. can | $U - \frac{1}{2} U$ | $U \times 10 \div 6$ | | | |
| Onions, fresh | Pound | $U - \frac{1}{2} U$ | $U - \frac{1}{2} U$ | | | $U \times 2$ |

BULK TO RATIOnS.—Continued.

| Article. | Units. | Garrison ration. | Garrison ration. (Alaska.) | Reserve ration. | Travel ration. | Filipino ration. |
|------------------------|--------------|------------------|-------------------------------|-----------------|----------------|------------------|
| Tomatoes, canned | Small can | U×8÷5 | U+½ U | | U×4 | |
| Tomatoes, canned | No. 10 can | (U×5)÷½; U | U×13÷3 | | U×13 | |
| Other fresh vegetables | Pound | U-½ U | U-½ U | | | |
| Prunes | Pound | U×100÷8 | U×100÷8 | | | |
| Apples, evaporated | Pound | U×100÷8 | U×100÷8 | | | |
| Peaches, evaporated | Pound | U×100÷8 | U×100÷8 | | | |
| Jam | No. 2 can | U×315÷16 | U×315÷16 | | | |
| Coffee, R. and G. | Pound | U×100÷7 | U×100÷7 | U×100÷7 | U×18 | U×16 |
| Coffee, roasted | Pound | U×100÷7 | U×100÷7 | | U×100÷7 | |
| Coffee, green | Pound | (U+½ U)×10 | (U+½ U)×10 | | | |
| Tea | Pound | U×100÷2 | U×100÷2 | | | |
| Sugar | Pound | U×10÷2 | U×10÷2 | (U-½ U)×10 | (U-½ U)×10 | U×8 |
| Milk, evaporated | Family can | U×24 | U×24 | | U×24 | |
| Milk, evaporated | Hotel can | U×64 | U×64 | | U×64 | |
| Vinegar | Gallon | U×200 | U×200 | | | U×400 |
| Pickles, cucumber | Gallon | U×200 | U×200 | | | |
| Salt | Pound | U×100÷4 | U×100÷4 | U×100 | | U×100÷4 |
| Pepper | No. ¼ can | U×100 | U×100 | | | U×200 |
| Cinnamon | No. ¼ can | U×2000÷7 | U×2000÷7 | | | |
| Cloves | No. ¼ can | U×2000÷7 | U×2000÷7 | | | |
| Ginger | No. ¼ can | U×2000÷7 | U×2000÷7 | | | |
| Nutmeg | Pound | U×8000÷7 | U×8000÷7 | | | |
| Lard | Pound | U×100÷4 | U×100÷4 | | | |
| Lard | No. 5 pail | U×104 | U×104 | | | |
| Lard substitute | Pound | U×100÷4 | U×100÷4 | | | |
| Butter | Pound | U×32 | U×32 | | | |
| Oleomargarine | Pound | U×32 | U×32 | | | |
| Sirup | Gallon | U×100 | U×100 | | | |
| Flavoring extract | 2-oz. bottle | U×1000÷7 | U×1000÷7 | | | |
| Flavoring extract | 8-oz. bottle | U×4000÷7 | U×4000÷7 | | | |

Trade packages of ration articles being of varying weights, their contents are estimated as follows in making issues: Corned beef, fresh roast beef, and corn beef hash, in No. 2 cans at 24 ounces; fish, No. 1 cans at 16 ounces; baking powder, No. ¼ cans at 8 ounces; baked beans, No. 1 cans at 10 ounces and No. 3 cans at 32 ounces; tomatoes, small cans (No. 2½ or No. 3) at 32 ounces and No. 10 at 104 ounces; jam, No. 2 cans at 25.2 ounces; evaporated milk, family cans at 12 ounces and hotel cans at 32 ounces; lard, No. 5 pails at 66.56 ounces; spices No. ¼ cans at 4 ounces; flavoring extract, No. 2 bottles at 2 ounces and No. 8 bottles at 8 ounces.

DESCRIPTION OF THE AUTOMATIC PISTOL, CALIBRE .45

MODEL OF 1911

**WITH RULES FOR MANAGEMENT, MEMORANDA OF
TRAJECTORY, AND DESCRIPTION OF AMMUNITION**

**APRIL 1, 1912
REVISED FEBRUARY 14, 1914**

**War Department,
Office of the Chief of Ordnance,
Washington, February 14, 1914.**

**This Manual is published for the information and government of the Regular
Army and Organized Militia of the United States.**

By order of the Secretary of War:

**WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.**

DESCRIPTION OF THE AUTOMATIC PISTOL, CALIBER .45.

The automatic pistols, caliber .45, model of 1911, in the military service are marked on the right side, "Model of 1911, U. S. Army"; on the left side, "United States Property." They are also marked with the serial number of the pistol.

COMPONENT PARTS.

- | | | |
|--------------------------|-----------------------------|-------------|
| 1. Receiver. | 28. Mainspring cap. | |
| 2. Barrel. | 29. Mainspring-cap pin. | |
| 3. Slide. | 30. Sear. | |
| 4. Plunger tube. | 31. Sear spring. | |
| 5. Slide-stop plunger. | 32. Sear pin. | |
| 6. Plunger spring. | 33. Disconnecter. | |
| 7. Safety-lock plunger. | 34. Trigger. | |
| 8. Slide stop. | 35. Grip safety. | |
| 9. Rear sight. | 36. Safety lock. | |
| 10. Front sight. | 37. Mainspring housing. | |
| 11. Link. | 38. Housing pin. | |
| 12. Link pin. | 39. Housing-pin retainer. | |
| 13. Barrel bushing. | 40. Lanyard loop. | |
| 14. Recoil spring. | 41. Lanyard-loop pin. | |
| 15. Recoil-spring guide. | 42. Magazine tube. | } Magazine. |
| 16. Plug. | 43. Magazine base. | |
| 17. Extractor. | 44. Magazine pins (2). | |
| 18. Ejector. | 45. Magazine loop. | |
| 19. Ejector pin. | 46. Magazine spring. | |
| 20. Firing pin. | 47. Magazine follower. | |
| 21. Firing-pin spring. | 48. Magazine catch. | |
| 22. Firing-pin stop. | 49. Magazine-catch spring. | |
| 23. Hammer. | 50. Magazine-catch lock. | |
| 24. Hammer pin. | 51. Stocks, right and left. | |
| 25. Hammer strut. | 52. Stock screws (4). | |
| 26. Hammer-strut pin. | 53. Screw bushings (4). | |
| 27. Mainspring. | | |

PLATES.

Plate I is a side view of the pistol.

Plate II is a longitudinal section of the pistol, and shows the component parts in assembled position.

Plate III shows the receiver, barrel, and slide.

PLATE I.



PLATE II.

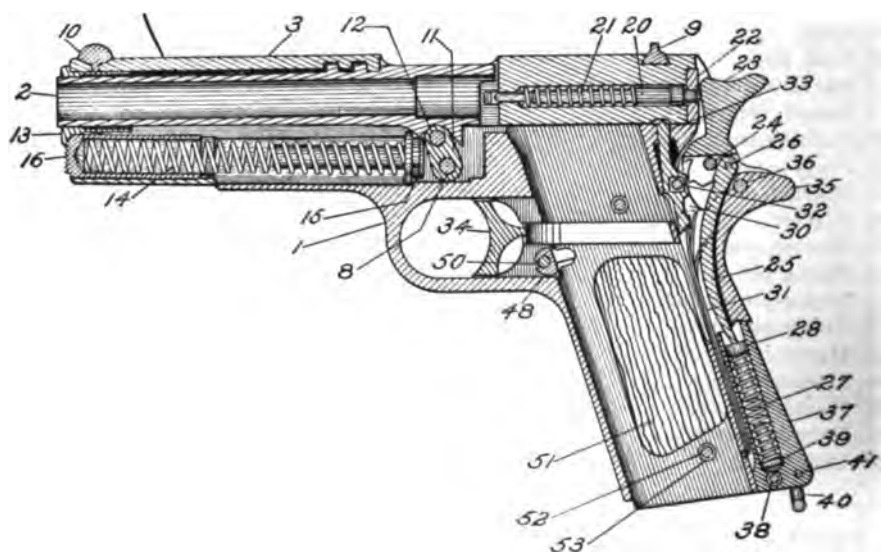


PLATE III.

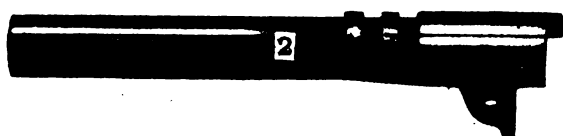


PLATE IV.



PLATE V.

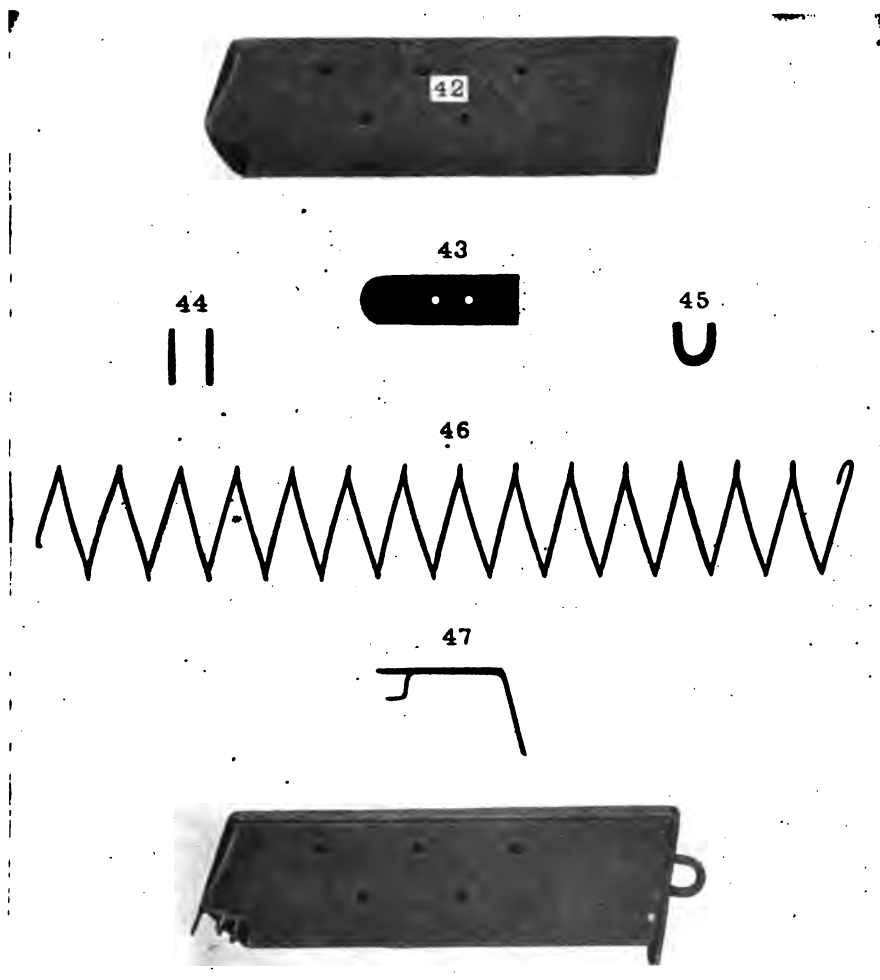
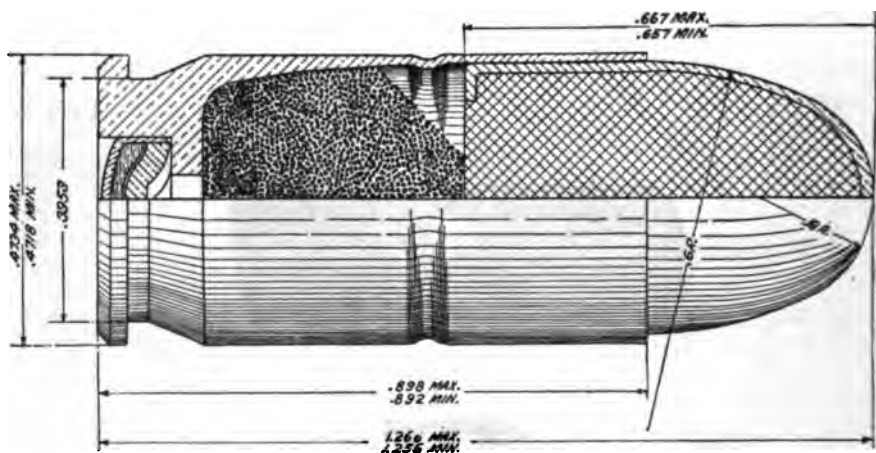


PLATE VI,



PISTOL BALL CARTRIDGE, CALIBER .45, MODEL OF 1911.

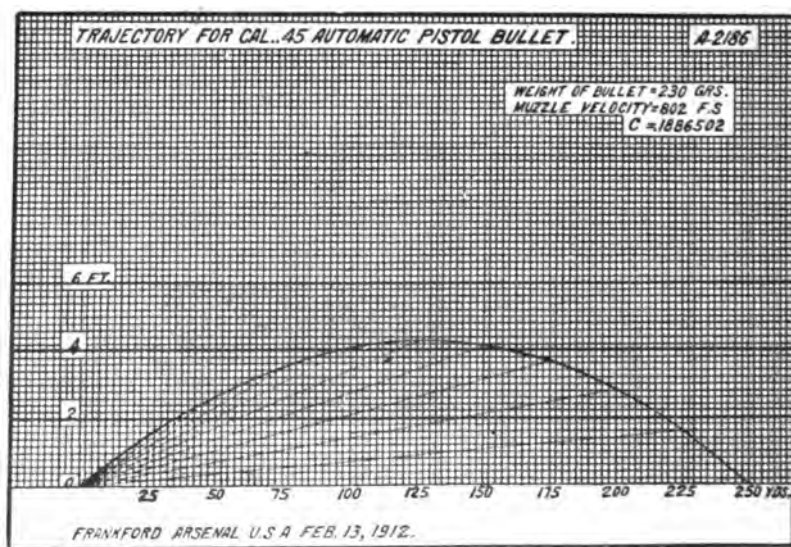


Plate IV shows the other component parts.

Plate V shows the magazine and its component parts.

Plate VI shows the cartridge and the trajectory.

In the plates the numbers correspond with those given in the list of component parts and in the description that follows.

DETAILED DESCRIPTION.

The three principal parts of the pistol are the receiver (1), barrel (2), and slide (3).

The receiver (1) has suitable guides for the reciprocating slide (3), and a hollow handle in which the magazine is inserted from below and locked in place by the magazine catch (48). The magazine may be removed by pressure upon the checkered end of the magazine catch (48), which projects from the left side of the receiver (1) in a convenient position for operation by the thumb.

The magazine catch (48) engages with and locks the magazine under the pressure of the magazine catch spring (49) and is held in the receiver (1) by means of the magazine catch lock (50).

The magazine consists of a magazine tube (42) closed at the bottom by means of the magazine base (43) secured with two magazine pins (44). The magazine base (43) has riveted to it the magazine loop (45) to which can be attached a lanyard to prevent loss of the magazine. Within the magazine tube (42) is contained the magazine spring (46) exerting a pressure against the magazine follower (47), which serves as a movable platform for the cartridges.

Secured at each end of the handle of receiver (1) on both sides are screw bushings (53), on to which are fitted the stocks (51) and into which, to secure the latter, are screwed the stock screws (52).

In front of the handle of receiver (1), in the trigger guard, is seated the trigger (34); in rear and above the handle the firing mechanism is arranged, comprising the hammer (23), mounted on the hammer pin (24), the sear (30) and (automatic) disconnecter (33), mounted together on the sear pin (32), the grip safety (35), and safety lock (36); also the mainspring (27), and the sear spring (31). The mainspring (27) is seated within the mainspring housing (37) and there held by the mainspring-cap pin (29). The mainspring housing (37) also contains the mainspring cap (28) and the housing-pin retainer (39). The conical point of the latter protrudes slightly into the hole for the housing pin (38), engaging with the groove around the middle thereof, thereby holding the housing pin (38) in place. Into the base of the mainspring housing (37) is fitted the lanyard loop (40) secured by the lanyard-loop pin (41).

The sear spring (31) has a rib on its lower end which fits into a slot in the rear wall of the magazine seat and keeps the spring from moving vertically. The mainspring housing (37), bearing against the rear of the spring, locks it in position and gives to it the required tension. The hammer strut (25) is attached to the hammer (23) in rear of its pivot by means of the hammer-strut pin (26). Its lower end rests in the mainspring cap (28).

Above the handle on the left side are the slide-stop plunger (5) and safety lock plunger (7) with their ends protruding from the front and rear, respectively, of the plunger tube (4). The plunger spring (6) is seated between the plungers (5 and 7) within the plunger tube (4) and yieldingly holds them in position.

The ejector (18) is seated at the top of the receiver (1) near the rear end at the left side. It is held in place by the ejector pin (19).

The top of the receiver (1) forward of the trigger guard has a semitubular extension which forms the seat for the rear portion of the recoil spring (14).

The barrel (2) of the pistol is largest at the breech, and at the top has two transverse locking ribs, the forward edges of which, together with the forward edge of the breech portion, serve to positively interlock the barrel (2) with the slide (3) when in the firing position. At its rear is an extension which facilitates the entrance of the cartridge from the magazine into the chamber. The rear end of the barrel (2) is attached to the receiver (1) by the link (11), link pin (12), and the pin of the slide stop (8), and swinging thereon can move a limited distance lengthwise and also in a vertical plane.

The side walls of the slide (3) overlap the sides of the receiver (1), and being provided with longitudinal ribs corresponding with similar grooves at the top of the receiver (1), the slide (3) is free to move longitudinally.

The slide (3) has at its front end a strong tubular abutment which is in line with the forward portion of the receiver (1), and which permits the slide (3) to move to the rear until the rear end of the abutment comes in contact with the flange of the recoil spring guide (15) against the shoulder in the receiver (1) at its forward end, thereby positively limiting the rearward movement of the slide (3). The latter is therefore necessarily assembled to the receiver (1) from the front, and is prevented from being thrown rearward from the receiver (1) under any circumstances.

In the abutment at the front end of the slide (3) is seated the forward end of the recoil spring (14), fitted into the plug (16). The rear end of the recoil spring (14) fitted onto the recoil spring guide (15) rests against the shoulder in the front end of the receiver (1).

On the top of slide (3) are mounted the front sight (10) and rear sight (9).

The barrel bushing (13) fits into the front end of the slide (3), supports the muzzle end of the barrel (2), and holds the plug (16) and recoil spring (14) in place.

When the slide (3) and the barrel (2) therein are mounted upon the receiver (1) and the slide stop (8) is in its place, so that the pin part of the slide stop (8) locks the barrel (2) to the receiver (1) through the link (11), the slide (3) is thereby positively locked in place upon the receiver (1).

The firing pin (20), firing-pin spring (21), and (shell) extractor (17) are carried in the rear end of the slide (3) and locked by the firing-pin stop (22). By pressing the firing pin (20) forward so as to clear the firing-pin stop (22), the latter is released and may be removed downwardly, leaving both firing pin (20) and extractor (17) free for removal.

The slide stop (8) consists of the pin part, which serves as a pivot and passes through the link (11), and a body, on which is a thumb piece, for releasing the slide (3) from the open position.

The safety lock (36) consists of a thin plate, a projecting pin, a thumb piece, and a projecting stud. The pin part serves as a pivot for the safety lock (36) and is at the same time a pivot for the grip safety (35). The upper corner of the plate has an angle which will fit into a correspondingly shaped recess in the slide (3). When the slide (3) is in its forward position, and the hammer (23) is full cocked, the safety lock (36) may be pushed up manually, by means of the thumb piece, thereby positively locking the hammer and the slide. While the safety lock (36) is being pushed up into the locking position the stud on the safety lock (36) is being carried upward and it finally stands in rear of the lower arm of the sear (30), blocking the sear (30) and causing the locking of the hammer (23). If the safety lock (36) is pressed down so as to release the slide (3) the projecting stud on the safety lock (36) clears the sear (30), permitting the sear (30) to be operated by the trigger (34), thereby causing the release of the hammer (23) if the grip safety (35) is pressed inward, as by the hand grasping the handle of the pistol, and the trigger (34) is pulled.

The grip safety (35) is pivoted in the upper part of the receiver (1). Its lower part projects from the rear face of the handle under pressure of the short leaf of the sear spring (31), thereby locking the trigger whenever the handle of the pistol is released. But when the handle is grasped, as in the firing position, the grip safety (35) releases the trigger (34) without requiring the attention or thought of the firer.

The (automatic) disconnecter (33) is mounted in the receiver (1) in rear of the magazine seat. In the underside of the slide (3) and near its rear end, a recess is provided which stands above the top of the disconnecter (33) when the slide (3) is in the forward firing position. With the slide in this position the disconnecter (33) is raised to its operative position by the center leaf of the sear spring (31) and it then will transmit the movement of the trigger (34) to the sear (30). The forward surfaces of the recess of the slide (3) and of the projecting end of the disconnecter (33) are inclining, so that the rearward movement of the slide (3) depresses the connector (33) until the slide (3) again returns to its forward position. In this depressed position of the disconnecter (33) the trigger (34) is disconnected from the sear (30), allowing the sear (30) to reengage the hammer (23). This arrangement automatically and positively prevents firing of the pistol except when all its parts are in the fully closed and locked firing position, and it also prevents more than one shot from following each pull of the trigger (34).

TO DISMOUNT AND ASSEMBLE THE PISTOL.

Remove the magazine by pressing the magazine catch (48).

Press the plug (16) inward and turn the barrel bushing (13) to the right until the plug (16) and the end of the recoil spring (14) protrude from their seat, releasing the tension of the spring (14). As the plug (16) is allowed to protrude from its seat, the finger or thumb should be kept over it, so that it will not jump away and be lost or strike the operator. Draw the slide (3) rearward until the smaller rear recess in its lower left edge stands above the projection on the thumb piece of the slide stop (8); press gently against the end of the pin of the slide stop (8) which protrudes from the right side of the receiver (1) above the trigger guard and remove the slide stop (8).

This releases the link (11), allowing the barrel (2), with the link (11) and the slide (3), to be drawn forward together from the receiver (1), carrying with them the barrel bushing (13), recoil spring (14), plug (16), and recoil-spring guide (15).

Remove these parts from the slide (3) by withdrawing the recoil-spring guide (15) from the rear of the recoil spring (14), and drawing the plug (16) and the recoil spring (14) forward from the slide (3). Turn plug (16) to right to remove from recoil spring (14). Turn the barrel bushing (13) to the left until it may be drawn forward from the slide (3). This releases the barrel (2) which, with the link (11), may be drawn forward from the slide (3), and by pushing out the link pin (12) the link (11) is released from the barrel (2).

Press the rear end of the firing pin (20) forward until it clears the firing-pin stop (22), which is then drawn downward from its seat in the slide (3); the firing pin (20), firing-pin spring (21), and extractor (17) are then removed from the rear of the slide (3).

The safety lock (36) is readily withdrawn from the receiver (1) by cocking the hammer (23) and pushing from the right on the pin part or pulling outward on the thumb piece of the safety lock (36) when it is midway between its upper and lower positions. The cocked hammer (23) is then lowered and removed after removing the hammer pin (24) from the left side of the receiver (1). The housing pin (38) is then pushed out from the right side of

the receiver (1), which allows the mainspring housing (37) to be withdrawn downward and the grip safety (35) rearward from the handle. The sear spring (31) may then be removed. By pushing out the sear pin (32) from the right to the left side of the receiver (1), the sear (30) and the disconnecter (33) are released.

To remove the mainspring (27), mainspring cap (28), and housing-pin retainer (39) from the mainspring housing (37), compress the mainspring (27) and push out the small mainspring cap pin (29).

To remove the magazine catch (48) from the receiver (1), its checkered left end must be pressed inward, when the right end of the magazine catch (48) will project so far from the right side of the receiver (1) that it may be rotated one-half turn. This movement will release the magazine catch lock (50) from its seat in the receiver (1), when the magazine catch (48), the magazine catch lock (50), and the magazine catch spring (49) may be removed.

With the improved design of magazine catch lock (50) the operation of dismounting the magazine catch (48) is simplified in that when the magazine catch (48) has been pressed inward the magazine catch lock (50) is turned by means of a screw driver or the short leaf of the sear spring (31) a quarter turn to the left when the magazine catch (48) with its contents can be removed. The improved design will be recognized from the fact that the head of the magazine catch lock (50) is slotted.

The trigger (34) can then be removed rearwardly from the receiver (1).

The hammer strut (25) or the long arm of the screw driver can be used to push out all the pins except the mainspring-cap pin (29), lanyard-loop pin (41), and ejector pin (19).

To assemble the pistol, proceed in the reverse order.

It should be noted that the disconnecter (33) and sear (30) are assembled as follows: Place the cylindrical part of the disconnecter (33) in its hole in the receiver (1) with the flat face of the lower part of the disconnecter (33) resting against the yoke of the trigger (34). Then place the sear (30), lugs downward, so that it straddles the disconnecter (33). The sear pin (32) is then inserted in place, so that it passes through both the disconnecter (33) and the sear (30).

The sear (30), disconnecter (33), and hammer (23) being in place and the hammer (23) down, to replace the sear spring (31), locate its lower end in the cut in the receiver (1), with the end of the long leaf resting on the sear (30); then insert the mainspring housing (37) until its lower end projects below the frame about one-eighth of an inch, replace the grip safety (35), cock the hammer (23), and replace the safety lock (36); then lower the cocked hammer (23), push the mainspring housing (37) home and insert the housing pin (38).

In assembling the safety lock (36) to the receiver (1) use the tip of the magazine follower (47) or the screw driver to press the safety-lock plunger (7) home, thus allowing the seating of the safety lock (36). It should be remembered that when assembling the safety lock (36) the hammer (23) must be cocked.

When replacing the slide (3) and barrel (2) on the receiver (1), care must be taken that the link (11) is tilted forward as far as possible and that the link pin (12) is in place.

METHOD OF OPERATION.

A loaded magazine is placed in the handle and the slide (3) drawn fully back and released, thus bringing the first cartridge into the chamber (if the slide is open, push down the slide stop (8) to let the slide (3) go forward). The hammer (23) is thus cocked and the pistol is ready for firing.

If it is desired to make the pistol ready for instant use and for firing with the least possible delay the maximum number of shots, draw back the slide (3), insert a cartridge by hand into the chamber of the barrel (2), allow the slide (3) to close, then lock the slide (3) and the cocked hammer (23) by pressing the safety lock (36) upward, and insert a loaded magazine. The slide (3) and hammer (23) being thus positively locked, the pistol may be carried safely at full cock, and it is only necessary to press down the safety lock (36) (which is located within easy reach of the thumb) when raising the pistol to the firing position.

The grip safety (35) is provided with an extending horn, which not only serves as a guard to prevent the hand of the shooter from slipping upward and being struck or injured by the hammer (23), but also aids in accurate shooting by keeping the hand in the same position for each shot; and, furthermore, permits the lowering of the cocked hammer (23) with one hand by automatically pressing in the grip safety (35) when the hammer (23) is drawn slightly beyond the cocked position. In order to release the hammer (23), the grip safety (35) must be pressed in before the trigger (34) is pulled.

SAFETY DEVICES.

It is impossible for the firing pin (20) to discharge or even touch the primer, except on receiving the full blow of the hammer (23).

The pistol is provided with two automatic safety devices:

(1) The (automatic) disconnector (33) which positively prevents the release of the hammer (23) unless the slide (3) and barrel (2) are in the forward position and safely interlocked; this device also controls the firing and prevents more than one shot from following each pull of the trigger (34).

(2) The (automatic) grip safety (35) at all times locks the trigger (34) unless the handle is firmly grasped and the grip safety (35) pressed in.

The pistol is in addition provided with a safety lock (36) by which the closed slide (3) and the cocked hammer (23) can be at will positively locked in position.

OPERATION IN DETAIL.

The magazine may be charged with any number of cartridges from one to seven.

The charged magazine is inserted in the handle and the slide (3) drawn once to the rear. This movement cocks the hammer (23), compresses the recoil spring (14), and, when the slide (3) reaches the rear position, the magazine follower (47) raises the upper cartridge into the path of the slide (3). The slide (3) is then released and, being forced forward by the recoil spring (14), carries the first cartridge into the chamber of the barrel (2). As the slide (3) approaches its forward position, it encounters the rear extension of the barrel (2) and forces the barrel forward; the rear end of the barrel (2) swings upward on the link (11), turning on the muzzle end as on a fulcrum. When the slide (3) and barrel (2) reach their forward position they are positively locked together by the locking ribs on the barrel (2) and their joint forward movement is arrested by the barrel lug encountering the pin on the slide stop (8).

The pistol is then ready for firing.

When the hammer (23) is cocked, the hammer strut (25) moves downward, compressing the mainspring (27), and the sear (30), under action of the long leaf of the sear spring (31), engages its nose in the notch on the hammer (23).

In order that the pistol may be fired the following conditions must exist: The grip safety (35) must be pressed in, leaving the trigger (34) free to move; the slide (3) must be in its forward position, properly interlocked with the

barrel (2), so that the disconnecter (33) is held in the recess on the underside of the slide (3) under the action of the sear spring (31), transmitting in this position any motion of the trigger (34) to the sear (30); the safety lock (36) must be down, in the unlocked position, so that the sear (30) will be unblocked and free to release the hammer (23) and the slide will be free to move back.

On pulling the trigger (34), the sear (30) is moved and the released hammer (23) strikes the firing pin (20) which transmits the blow to the primer of the cartridge. The pressure of the gases generated in the barrel (2), by the explosion of the powder in the cartridge, is exerted in a forward direction against the bullet, driving it through the bore, and in a rearward direction against the face of the slide (3), driving the latter and the barrel (2) to the rear together. The downward swinging movement of the barrel (2) unlocks it from the slide (3), and the barrel (2) is then stopped in its lowest position. The slide (3) continues to move to the rear, opening the breech, cocking the hammer (23), extracting and ejecting the empty shell and compressing the recoil spring (14), until it—the slide (3)—reaches its rearmost position when another cartridge is raised in front of it and forced into the chamber of the barrel (2) by the return movement of the slide (3) under pressure of the recoil spring (14).

The weight and consequently the inertia of the slide (3), augmented by those of the barrel (2), are so many times greater than the weight and inertia of the bullet that the latter has been given its maximum velocity and has been driven from the muzzle of the barrel (2) before the slide (3) and barrel (2) have recoiled to the point where the barrel (2) commences its unlocking movement. This construction, therefore, delays the opening of the breech of the barrel (2) until after the bullet has left the muzzle and therefore practically prevents the escape of any of the powder gases to the rear after the breech has been opened.

This factor of safety is further increased by the tension of the recoil spring (14) and mainspring (27), both of which oppose the rearward movement of the slide (3).

While the comparatively great weight of the slide (3) of this pistol insures safety against premature opening of the breech, it also insures operation of the pistol, because at the point of the rearward opening movement where the barrel (2) is unlocked and stopped, the heavy slide (3) has attained a momentum which is sufficient to carry it through its complete opening movement and makes the pistol ready for another shot.

When the magazine has been emptied, the pawl-shaped slide stop (8) will be raised by the magazine follower (47) under action of the magazine spring (46) into the front recess on the lower left side of the slide (3), thereby locking the slide (3) in the open position, and serving as an indicator to remind the shooter that the empty magazine must be replaced by a charged one before the firing can be continued.

Pressure upon the magazine catch (48) quickly releases the empty magazine from the handle and permits the insertion of a loaded magazine.

To release the slide (3) from the open position, it is only necessary to press upon the thumb piece of the slide stop (8) when the slide (3) will go forward to its closed position, carrying a cartridge from the previously inserted magazine into the barrel (2) and making the pistol ready for firing again.

PARTS ISSUED FOR REPAIRS.

For making repairs to these pistols in the hands of troops in field and garrison the following spare parts will be issued. The number opposite each part is the maximum for 100 pistols for ordinary repairs per year:

| Name of component part. | Number. | Name of component part. | Number. |
|---------------------------|---------|--------------------------|---------|
| Disconnecter..... | 5 | Mainspring-cap pin..... | 5 |
| Extractor..... | 10 | Plug..... | 5 |
| Firing pin..... | 10 | Plunger spring..... | 10 |
| Firing-pin spring..... | 10 | Recoil spring..... | 10 |
| Firing-pin stop..... | 5 | Recoil-spring guide..... | 5 |
| Hammer pin..... | 10 | Safety-lock plunger..... | 10 |
| Hammer strut..... | 10 | Sear..... | 10 |
| Hammer-strut pin..... | 10 | Sear pin..... | 5 |
| Housing pin..... | 10 | Sear spring..... | 10 |
| Housing-pin retainer..... | 5 | Slide stop..... | 5 |
| Link..... | 10 | Slide-stop plunger..... | 10 |
| Link pin..... | 10 | Stock, left..... | 5 |
| Mainspring..... | 5 | Stock, right..... | 5 |
| Mainspring cap..... | 5 | Stock screw..... | 10 |

IMPORTANT POINTS.

1. Never place the trigger finger within the trigger guard until it is intended to fire and the pistol is pointed toward the target.

2. Do not carry the pistol in the holster with the hammer cocked and safety lock on, except in an emergency.

If the pistol is so carried in the holster, cocked and safety lock on, the butt of the pistol should be rotated away from the body when withdrawing the pistol from the holster, in order to avoid displacing the safety lock.

3. The trigger should be pulled with the forefinger. If the trigger is pulled with the second finger, the forefinger extending along the side of the receiver is apt to press against the projecting pin of the slide stop and cause a jam when the slide recoils.

4. Care must be exercised in inserting the magazine to insure its engaging with the magazine catch.

5. Pressure must be entirely relieved from the trigger after each shot in order that the trigger may reengage with the sear.

6. To remove cartridges not fired, disengage the magazine slightly and then extract the cartridge in the barrel by drawing back the slide.

7. The pistol must be kept clean, free from rust, and properly oiled. Excessive oil left in the mechanism will cause the parts to gum and work stiffly.

8. Care must be exercised to insure that the disconnecter is properly assembled to the sear.

9. The hammer should not be snapped when the pistol is partially disassembled.

10. The stocks need never be removed, as the pistol can be dismantled and assembled without removing them.

11. Use no hammer either in assembling or dismantling the pistol.

12. Magazine: Reasonable care should be taken to see that the magazine is not dented or otherwise damaged.

Never insert the magazine and strike it smartly with the hand to force it home, as this may spring the base or the inturning lips at the top. It should be inserted by a quick continuous movement.

CLEANING KIT.

For cleaning, dismantling, and assembling the pistol a kit is issued consisting of a metal box containing the following articles:

- 10 screw drivers.
- 10 cleaning rods, brass (made so that either a cloth wiper or bristle brush can be used).
- 10 thong brushes.
- 1 oil can.
- 1 grease pot for cosmic.

The above articles, with the exception of the oil can and grease pot for cosmic, are also supplied as part of the contents of the arm repair chest, model of 1910, when this chest is issued to organizations equipped with the pistol. The cleaning kit will therefore be issued only to organizations equipped with the pistol and not provided with an arm repair chest.

MISCELLANEOUS DATA CONCERNING PISTOL.

- Weight, 2 pounds 7 ounces.
- Trigger pull, 6 to 7½ pounds.
- Total length, 8.593 inches.
- Barrel:
 - Length, 5.025 inches.
 - Diameter of bore, 0.445 inch.
- Rifling:
 - Grooves—
 - Number, 6.
 - Width, 0.1522 inch.
 - Depth, 0.003 inch.
 - Lands, width, 0.072 inch.
 - Twist, one turn in 16 inches, left-handed.
- Front sight above axis of bore, 0.5597 inch.

EXTERIOR BALLISTICS.

1. RAPIDITY OF FIRE.

(a) This pistol has been fired 21 times in 12 seconds, beginning with pistol empty and loaded magazines on a table at side of operator.

(b) Firing at 25 yards distance at a target 6 feet by 2 feet under the same conditions as in (a) 21 shots were fired in 28 seconds, making 21 hits, with a mean radius of 5.85 inches.

(c) Firing 10 shots, using a muzzle rest at 25 yards distance, at a target 6 feet by 2 feet, a mean radius of dispersion of 0.855 inch has been obtained.

2. ACCURACY WITH MUZZLE REST.

| Range. | Mean Radius. | Mean vertical deviation. |
|---------------|----------------|--------------------------|
| <i>Yards.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 25 | 0.855 | 0.619 |
| 50 | 1.356 | .910 |
| 75 | 2.244 | 1.422 |

The above figures represent the mean variations for several targets.

3. DRIFT.

The drift or deviation due to the rifling is, in this pistol, to the left, but is more than neutralized by the pull of the trigger when the pistol is fired from the right hand. The drift is slight at short ranges and that for long ranges is immaterial, inasmuch as the pistol is a short-range weapon.

4. VELOCITY WITH STRIKING ENERGY.

| Range. | Velocity. | Energy. |
|---------------|-------------------------|---------------------|
| <i>Yards.</i> | <i>Feet per second.</i> | <i>Foot-pounds.</i> |
| 0 | 802 | 329 |
| 25 | 788 | 317 |
| 50 | 773 | 305 |
| 75 | 758 | 294 |
| 100 | 744 | 283 |
| 125 | 730 | 272 |
| 150 | 717 | 262 |
| 175 | 704 | 253 |
| 200 | 691 | 244 |
| 225 | 678 | 235 |
| 250 | 666 | 226 |

5. PENETRATION IN WHITE PINE.

A penetration of 1 inch in white pine corresponds to a dangerous wound.

The penetration in moist loam at 25 yards is 9.95 inches.

The penetration in dry sand at 25 yards is 7.8 inches.

| Range. | Depth. |
|---------------|----------------|
| <i>Yards.</i> | <i>Inches.</i> |
| 25 | 6.0 |
| 50 | 5.8 |
| 75 | 5.6 |
| 100 | 5.5 |
| 150 | 5.2 |
| 200 | 4.6 |
| 250 | 4.0 |

6. TRAJECTORY.

Plate VI shows the trajectory with ammunition model of 1911 up to 250 yards. The maximum ordinate for this range is 4.29 feet at 126 yards from the muzzle. The trajectory is very flat up to 75 yards, at which range the pistol is accurate. The angle of departure is 1°-13'-37".

With the angle of departure equal to 45°, the range is approximately 1,955 yards, the maximum ordinate of the trajectory being 2,219 feet.

AMMUNITION FOR AUTOMATIC PISTOL, CALIBER .45, MODEL OF 1911—BALL CARTRIDGE.

(Plate VI.)

The components of the ball cartridge consist of cartridge case, primer, powder, and bullet.

CARTRIDGE CASE.

The cartridge case is cylindrical and is made of brass. It is provided with a cannellure to prevent the bullet being forced down on the powder.

PRIMER.

The primer consists of a cup which contains the primer composition, a paper disk, and an anvil which resists the blow of the firing pin. The anvil is provided with two vents by which the flame is communicated to the charge.

Ignition is produced by crushing the composition between the cup and anvil by a blow of the firing pin.

POWDER.

The powder is a smokeless powder. The charge varies with the kind and lot, but it is generally about 5 grains.

BULLET.

The body of the bullet is a cylinder. The bullet has a core of lead and tin composition inclosed in a jacket of gilding metal or cupro-nickel. It weighs 230 ± 2 grains.

| | Inches. |
|---|---------|
| Length of bullet..... | 0.662 |
| Diameter of cylindrical part of bullet..... | .45015 |
| Total length of cartridge | 1.261 |

To render the cartridge waterproof the inside of the neck of the case and the outside of the primer are shellacked.

PACKING.

The cartridges are packed in pasteboard boxes containing 20 cartridges each. One hundred pasteboard boxes, or 2,000 cartridges, are packed in one zinc case, hermetically sealed, with handle for tearing open. The whole is inclosed in a wooden box, the cover of which is fastened with screw hooks and thumb nuts and sealed.

| | Pounds. |
|---|---------|
| Weight of 100 cartridges..... | 4.6 |
| Weight of 2,000 cartridges, packed..... | 110 |

War Department,

Office of the Chief of Ordnance,

Washington, February 14, 1914.

13092-2873.

April 1, 1912.

Revised, February 14, 1914.

INSTRUCTIONS
FOR THE CARE AND REPAIR OF
SMALL ARMS AND ORDNANCE EQUIPMENT
PERTAINING TO INFANTRY

The following extracts are taken from the manual published by the Chief of Ordnance, July 12, 1915, entitled "Instructions for the Care and Repair of Small Arms and Ordnance Equipment."

INSTRUCTIONS FOR THE CARE AND REPAIR OF SMALL ARMS AND ORDNANCE EQUIPMENT

CARE OF EQUIPMENT.

1. The general subject of the care of equipment is entitled to greater consideration than it has received in the past. It should be made the subject of instruction as well as administration, and could properly be included in the various school courses. Officers or noncommissioned officers should make themselves thoroughly familiar with the problems involved, and the cleaning particularly of leather equipments should be done habitually under the supervision of a commissioned officer. Cordial coöperation of all in intelligently enforcing the recognized rules governing the care of equipment, will do much to prolong its life and reduce the cost of maintenance.

GENERAL INSTRUCTIONS FOR CARE OF CLOTH EQUIPMENT.

2. All cloth equipment should be well brushed, frequently with a stiff bristle brush. A dry scrub brush may be used. It should be washed only under the direction and supervision of a commissioned officer. During ordinary garrison duty it should rarely be necessary to wash the equipment. When the equipment becomes soiled a light local washing will frequently be sufficient, but when dirty it should unhesitatingly be given a good thorough washing, otherwise it may be expected that it will become insanitary and rot. During field service it is to be expected that the equipment will become soiled much more rapidly. Always on return to garrison from such service and as opportunity offers in the field, equipment should be thoroughly washed.

3. Instructions for Washing Cloth Equipment. (a) Preparation of soap solution: H. & H. soap or a substitute is issued by the Ordnance Department for washing the cloth equipment. The most economical use of this soap is to make a solution by dissolving one cake of soap in nine cups of hot water. One cup of the solution is sufficient to clean approximately two square yards of equipment or the entire cloth and web equipment of one man. A cake per squad is a liberal allowance.

(b) Brushing. Brush the equipment thoroughly to remove all dust and mud before washing.

(c) Washing. Spread the belt, haversack, etc., on a clean board or rock and apply the soap solution with a scrub brush. When a good lather appears, wash off with clear water. In the case of a bad grease spot the direct application of soap to the brush will ordinarily be sufficient to remove it.

(d) Drying: Always Dry Washed Equipment in the Shade. The bleaching

action of the sun on all damp fabric is marked. Likewise, on the return from a march in the rain dry the equipment in the shade if practicable.

4. At the arsenals the equipment is cleaned by immersion in gasoline. This is very satisfactory, but it is impracticable to issue gasoline to troops. The soap issued by the Ordnance Department (H. & H.) is a neutral naphtha soap, prepared especially for washing cloth fabrics liable to fade. If for any cause this is not obtainable, a good laundry soap (Ivory or equal) may be used, but in no case should the yellow soap issued by the Quartermaster Corps be used. This latter soap contains a large percentage of free alkali.

5. The specifications of the Ordnance Department in regard to fading, under which its cloth and web equipments are purchased, are as rigid as it is practicable to make them. Each year sees an improvement in the degree of permanency obtained. The alternate exposure of equipment to sun and rain, which is a necessary feature of service, renders fading inevitable. No dyed fabric will hold its color under these conditions, but with the exercise of care in following the instructions outlined much less fading may be expected than has occurred in the past.

GENERAL INSTRUCTIONS FOR THE CARE OF LEATHER EQUIPMENT.

6. Because of the value of the equipment involved and its rapid deterioration under neglect, the proper care of leather is most important.

MATERIALS.

7. Two agents are essential to the proper care of leather equipment—a cleaning agent and an oiling agent. The cleaning agent issued by the Ordnance Department is castile soap; the oiling agents are neat's-foot oil and harness soap.

8. The castile soap is a commercial article containing about 3 per cent of sodium carbonate (lye), which is necessary to give it the required cleaning power. Its action, however, is merely to free the leather from the dirt, sweat, and other matter which normally accumulates on it in the surface pores of the leather.

9. The neat's-foot oil, which has been found by long experience to be the most satisfactory for this purpose, penetrates the pores and saturates the fibers, making them pliable and elastic. Dry leather is brittle; leather oiled excessively will soil the clothing and accumulate dirt. The condition to be desired is leather saturated with sufficient oil to be soft and pliable, without excess sufficient to cause it to exude.

10. In washing with any alkaline soap, it is impossible to prevent the removal of the surface oil. This leaves the surface hard and dry and liable to crack. It is difficult to replace this surface oil by a direct application without applying an excess. This has led to the development of various saddle soaps with a view of obtaining a soft, pleasing finish. Most of these contain more or less neutral oil, which replaces the surface oil removed in washing. Only those which do are of permanent value. On the other hand, a mere combination of soap and oil may easily be objectionable, and in such combinations the percentage of oil content is usually excessive.

11. Propert's soap, containing about $4\frac{1}{2}$ per cent of neutral oil, was found to be very satisfactory, but its issue to the service has been discontinued, because it is of foreign manufacture, and the supply could not be depended upon in time of war. It is believed that a substitute of equal merit has been found which will be issued to the service in the near future.

CLEANING.

12. Daily, or as often as used, the equipment should be wiped off with a cloth slightly dampened in water, merely to remove mud, dust, or other foreign substances. It should never be cleaned by immersing it in water or holding it under a hydrant. This daily care will do much to maintain the appearance of the equipment, but is, however, insufficient of itself to properly preserve it. At intervals of from one to four weeks, depending upon circumstances, it is essential that the equipment be thoroughly cleaned, in accordance with the following general instructions:

GENERAL INSTRUCTIONS FOR CLEANING LEATHER EQUIPMENT.

13. (a) Separate all parts, unbuckle straps, remove all buckles, loops, etc., where possible.

(b) Wipe off all surface dust and mud with a damp (not wet) sponge. After rinsing out the sponge, a lather is made by moistening the sponge in clear water, squeezing it out until nearly dry, and rubbing it vigorously upon castile soap. When a thick, creamy lather is obtained, thoroughly clean each piece of the equipment without neglecting any portion. Each strap should be drawn its entire length through the lathered sponge so as to actually remove the salt, sweat, and dirt from each leather piece.

(c) After again rinsing the sponge make a thick lather as described above with the saddle soap. Go over each separate piece, thoroughly working the lather well into every part of the equipment, remembering that its action is that of a dressing.

(d) After the leather has been allowed to become partially dry, it should be rubbed vigorously with a soft cloth to give it the neat, healthy appearance that is desired.

14. If the foregoing instructions have been carefully followed, the appearance should now be perfect, and if the leather is soft and pliable nothing further is required. It will be found, however, that it will be necessary from time to time to apply a little oil. It is not practicable, owing to different conditions of climate and service, to prescribe definitely the frequency of oiling. It has been found that during the first few months of use a set of new equipment should be given at least two applications of oil per month. Thereafter, it is entirely a matter of judgment, as indicated by the appearance and pliability of the leather. Frequent, light applications are of more value than infrequent, heavy applications.

15. Before using, perfectly new equipment should in all cases be given a light application of neat's-foot oil; soap is unnecessary because the equipment is clean. The application of oil is important because leather equipment frequently remains a considerable time in an arsenal or depot and in spite of periodical inspections and dubbing it is probably too dry for severe service.

16. The quantity of oil, also, can not be definitely prescribed, but it should rarely exceed a coverful of the individual soap box (1 ounce) for each set of horse equipment, or two (2) ounces for each set of artillery harness. In applying the oil the following general instructions should govern:

(a) The oil should be applied to the flesh side of the equipment where practicable when the leather is clean and still damp after washing (about half dry).

(b) The oil should be applied with an oiled rag or cotton waste by long, light, quick strokes—light strokes that the pressure applied may not squeeze out an excess of oil, quick strokes that the leather may not absorb an undue amount of oil. The endeavor should be to obtain a light, even distribution.

(c) After applying the oil the leather equipment should be allowed to stand for 24 hours, if practicable, in a warm, dry place. It should then be rubbed with a dry cloth to remove any unabsorbed oil.

17. The principles prompting the instructions given in (a) above is that the oil penetrates more uniformly when applied from the flesh side, while if the leather is dry it will absorb the oil like blotting paper, preventing proper distribution. The presence of moisture which tends to retard the penetration of the oil makes it desirable to oil the leather while still moist from washing. The more moist the leather when oiled the lighter the application that can be given; any equipment should be moistened, as in washing, before oiling.

18. An additional reason for consistent washing and oiling lies in the fact that practically all leather contains at least one-tenth of 1 per cent of sulphuric acid acquired as a normal product of tannage. This acid, which, if excessive, will in time rot the leather, is neutralized by the alkali of the castile soap and to a less degree by the oil. In some commercial leathers the sulphuric acid runs as high as 3 per cent as the result of the tanner's efforts to hasten the tannage and bleach the leather. Such leather is not purchased knowingly by the Ordnance Department, but it is impracticable to eliminate its purchase entirely. Its presence in the service accounts for the isolated cases of deteriorated leather reported, but more rigid tests have insured that little trouble from this cause may be expected in the future.

19. It may be well to summarize certain particular facts with a view to emphasizing them.

CAUTIONS.

- (a) Keep leather clean.
- (b) Keep leather pliable by frequent light applications of oil.
- (c) Use only materials furnished by the Ordnance Department. Shoe polishes, etc., are almost invariably injurious.
- (d) Dry all leather wet from whatever cause in the shade. Never in the sun or close to a steam radiator, furnace, or boiler.
- (e) Leather should habitually be stored in a cool, dry place without artificial heat.

20. Under the conditions of service when the equipment is constantly exposed to varying conditions of weather, constant, conscientious care is essential to the long life of the leather equipment.

SPECIAL INSTRUCTIONS FOR REGIMENTAL AND POST ORDNANCE OFFICERS.

21. Leather in storage, unlike leather in service which receives constant attention, is subjected to the danger of becoming molded or too dry. It is of the utmost importance that it be stored in a cool, dry place without artificial heat.

22. To guard against these two conditions which would render the leather in storage unserviceable, it should be inspected at regular intervals. In temperate northern stations leather in sides should be inspected once during the winter and twice during the summer months (February, July, and September), equipment at least once a year. The frequency of examination should be increased for semitropical and tropical stations, until in the Philippines during the rainy season once a month is not too often to go over and examine the leather in sides, while the equipments should be inspected with corresponding

greater frequency. Also, when leather or leather equipment is received, it should be unpacked at once and examined for mold and dampness, for it may have become wet in transit or while standing on wharves or platforms.

23. If mold is promptly discovered and removed, little harm is done, but if allowed to remain it will very shortly attack the leather and render it unserviceable. When, therefore, mold or dampness is discovered, the surface should be immediately cleaned and exposed to the air to dry before returning to storage.

24. Leather equipment in storage should not contain as much oil as equipment in use, for the tendency to mold is increased thereby, but in no case should it be allowed to dry out entirely. Should examination indicate that it is very dry, a light application of oil should be given in accordance with the general instructions for oiling leather.

25. Leather in sides has been dubbed before issue and usually does not require redubbing for many months. Should examination show that it is becoming very dry, it should be redubbed as hereinafter described.

INSTRUCTIONS FOR DUBBING LEATHER IN SIDES. PREPARATION.

26. The dressing or dubbing for leather in sides should be made of equal parts by weight of pure beef tallow (never mutton) and Newfoundland cod-liver oil. Melt the beef tallow over a gentle heat, add the cod-liver oil, and stir until thoroughly mixed. The preparation will be of the consistency of a jelly, and when cool is ready for use. Never use while hot. One pound of the dressing is sufficient to cover 260 square feet of surface. Backs of leather will average 13 square feet, and sides 21 square feet. Tallow and cod-liver oil may be obtained on requisition.

APPLICATION.

27. Lay the leather on a smooth, flat table and moisten the entire flesh side with a sponge. Then lay the leather aside on a smooth, flat surface, following it by other sides similarly treated, placing grain to grain and flesh to flesh. Let the sides lie for about two hours. This is done to allow the moisture to penetrate evenly through the leather, for the better absorption of the dubbing which will follow.

28. When the moisture has penetrated sufficiently lay the leather out on a table as before and spread the dressing very lightly with a soft cloth on the flesh side. Great care should be taken to spread the dressing evenly and lightly with quick light strokes as in oiling equipment and for the same reasons. As the operation proceeds place the leather grain to grain and flesh to flesh and let lay for a period of 12 hours. Then take a soft cloth or a piece of woolen flannel—a clean piece of old saddle blanket, for example—and remove any dressing that may remain on the surface. The leather then should be loosely rolled, stood on its edge for a few hours until it is thoroughly aired, and it should then be returned to storage. Under no circumstances should the work on the leather above described be done in the sun or near artificial heat. To wet and properly dress 100 sides requires about eight hours' labor of one man; to remove the surplus dressing from 100 sides requires about five hours' labor of one man. If any leather shows a tendency to crack on the grain side apply a very light coat of dubbing on the grain side in the manner proposed for the flesh side. (For further information consult Ordnance Order No. 7, 1912.)

CARE OF LEATHER IN THE FIELD.

29. In active campaign or on the march little protection can be given equipment. But at all times advantage should be taken of such opportunities as the situation affords, to first get the equipment out of the mud and then protect it from rain, dust, and heat. Racks can be improvised with forked sticks and crossbar or advantage taken of a neighboring fence. A piece of canvas or manta affords a great deal of protection.

30. In recent years much of the service of the Army has been along the southern border and in the semipermanent camps. When shelters are provided for animals and fodder, provision should also be made for the horse equipment. The normal troop stable is approximately 22 feet wide, with a height of $7\frac{1}{2}$ feet at the eaves. An excellent saddle room for a troop of 72 saddles can be made in a 36-foot section of such stables by use of wooden racks 4 feet above the ground and approximately 4 feet apart, nine saddles to a rack. The entrance may be from the side, covered by drop curtains or old canvas, or entrance can be had at the ends and space left at the end of the racks for passage. This arrangement has the advantage of enabling the saddles to be cleaned under cover. Many other excellent arrangements have been developed. By use of double rows an economy of space may be effected, but such arrangements have the disadvantage that the saddles can not be cleaned under cover.

CARE OF ARMS.

31. The greatest care should be given to arms. Of all the equipment, none require such constant attention, none depreciates more rapidly from neglect. Instructions for their proper care should be thorough, and responsibility for intentional acts of abuse should be rigidly enforced.

THE SERVICE RIFLE.

32. Experiments at arsenals have shown that with the present ammunition an accuracy life of from 8,000 to 13,000 rounds may be expected of the Springfield rifle barrel. It may be considered that a rifle will be fired 400 rounds in a season, so that rifle with reasonable care should be accurate for at least 10 years or for over 4,000 rounds. From reports received from the arsenals, it is evident that the instructions heretofore issued have been ineffective in doing away with the abuse of rifles by improper methods of cleaning. The cause of this lies largely in the mistaken idea obtained at inspections where men are praised for securing a polished appearance of the bore rather than for maintaining their pieces in serviceable condition.

33. The most marked effect of improper cleaning is to enlarge the muzzle, which is the most effective way to destroy the accuracy of the piece. The erosion at the muzzle from firing is slight, but in 10 minutes by cleaning from the muzzle with an abrasive, such as is unfortunately sometimes the practice, the rifle may be rendered more inaccurate than by thousands of rounds.

34. In order that the expense of replacing unserviceable barrels may be placed upon those responsible for their condition, it is recommended that commanding officers of organizations equipped with rifles cause a test to be made to determine their present condition. This may be made by using gauges regularly furnished by the Ordnance Department to regimental and post ordnance officers and by inserting a service bullet, point foremost, into the muzzle of the piece and noting the amount of the bullet showing between the muzzle of the piece and the cartridge case. In a new rifle approximately one-

quarter of an inch of the bullet will be exposed. A record of these tests should be kept for each rifle, on a form similar to the following:

| RECORD OF RIFLE. | | | |
|------------------|----------------------------------|------------------------------|-----|
| No. | | Arsenal. | |
| | | Recd. | |
| Name. | Condition when issued. | Period. | |
| | | From— | To— |
| | | | |
| | | | |
| | | | |
| Date. | Appxmt rds. fired to date. | Measurements and remarks. | |
| | | | |
| | | | |
| | | | |

Advantages may be taken of this record to note the proper sight settings at the more important ranges.

35. A gradual enlargement of the muzzle extending throughout a period of years is to be expected, but should any test show a noticeable enlargement, it may be considered an indication of abuse unless satisfactory explanation is known. Such records should be considered by surveying officers in determining the responsibility for the condition of rifles when found inaccurate, and unless satisfactory explanation is given, taking into consideration the normal life of the rifle under service conditions, the cost of replacing such barrels may justly be charged to the enlisted men concerned. This whole subject is under investigation, but the evidence available is not sufficient to fix a limit to the rate of wear which may be considered legitimate.

36. While it is generally recognized that rifles are rendered unserviceable through inaccuracy by lack of care rather than by firing, it is believed that this lack of care has been largely due to a lack of appreciation and understanding of the problems involved, and that if careful instruction and adequate supervision were given by organization commanders, the number of rifles condemned annually for inaccuracy would be reduced by more than half.

CARE OF THE BORE.

37. The proper care of the bore requires conscientious, careful work, but it pays well in reduced labor of cleaning and in prolonged accuracy life of the barrel, and better results in target practice. Briefly stated, the care of the bore consists in removing the fouling resulting from firing to obtain a chemically clean surface, and coating this surface with a film of oil to prevent rusting. The fouling which results from firing is of two kinds—one, the products of combustion of the powder; the other, cupro-nickel scraped off (under the abrading action of irregularities or grit in the bore). Powder fouling, because

of its acid reaction, is highly corrosive; that is, it will induce rust and must be removed. Metal fouling itself is inactive, but may cover powder fouling and prevent the action of cleaning agents until removed, and when accumulated in noticeable quantities it reduces the accuracy of the rifle.

38. Powder fouling may be readily removed by scrubbing with hot soda solution, but this solution has no effect on the metal fouling of cupro-nickel. It is therefore necessary to remove all metal fouling before assurance can be had that all powder fouling has been removed and that the bore may be safely oiled. Normally, after firing a barrel in good condition the metal fouling is so slight as to be hardly perceptible. It is merely a smear of infinitesimal thickness, easily removed by solvents of cupro-nickel. However, due to pitting, the presence of dust, other abrasives, or to accumulation, metal fouling may occur in clearly visible flakes or patches of much greater thickness, much more difficult to remove.

39. In cleaning the bore after firing it is well to proceed as follows: Swab out the bore with soda solution to remove powder fouling. (See p. 647.) A convenient method is to insert the muzzle of the rifle into the can containing the soda solution and with the cleaning rod inserted from the breech, pump the barrel full a few times. Remove and dry with a couple of patches. Examine to see that no patches of metal fouling are in evidence, then swab out with the swabbing solution—a dilute metal-fouling solution. (See p. 647.) The amount of swabbing required with the swabbing solution can be determined only by experience assisted by the color of the patches. Normally a couple of minutes' work is sufficient. Dry thoroughly and oil.

40. The proper method of oiling a barrel is as follows: Wipe the cleaning rod dry; select a clean patch and thoroughly saturate it with sperm oil or warmed cosmic, being sure that the cosmic has penetrated the patch; scrub the bore with the patch, finally drawing the patch smoothly from the muzzle to the breech, allowing the cleaning rod to turn with the rifling. The bore will be found now to be smooth and bright so that any subsequent rust or sweating can be easily detected by inspection.

41. If patches of metal fouling are in evidence, the standard metal fouling solution prepared as given on page 647 must be used. After scrubbing out with the soda solution, plug the bore from the breech with a cork at the front end of the chamber or where the rifling begins. Slip one of the 2-inch sections of rubber hose over the muzzle down to the sight and fill with the standard solution to at least one-half inch above the muzzle of the barrel. Let it stand for 30 minutes, pour out the standard solution, remove hose and breech plug, and swab out thoroughly with soda solution to neutralize and remove all trace of ammonia and powder fouling. Wipe the barrel clean, dry, and oil. With few exceptions, one application is sufficient, but if all fouling is not removed, repeat as described above.

42. After properly cleaning with either the swabbing solution or the standard solution, as has just been described, the bore should be clean and safe to oil and put away, but as a measure of safety a patch should always be run through the bore on the next day and the bore examined to insure that cleaning has been properly done. The bore should then be oiled, as described hereinafter.

43. If the swabbing solution or the standard metal fouling solution is not available, the barrel should be scrubbed, as already described, with the soda solution, dried, and oiled with a light oil. At the end of 24 hours it should again be cleaned, when it will usually be found to have "sweated"; that is, rust having formed under the smear of metal fouling where powder fouling was present, the surface is puffed up. Usually a second cleaning is sufficient, but to insure safety it should be again examined at the end of a few days, before

final oiling. The swabbing solution should always be used, if available, for it must be remembered that each puff when the bore "sweats" is an incipient rust pit.

44. A clean dry surface having been obtained, to prevent rust it is necessary to coat every portion of this surface with a film of neutral oil. If the protection required is but temporary and the arm is to be cleaned or fired in a few days, sperm oil may be used. This is easily applied and easily removed, but has not sufficient body to hold its surface for more than a few days. If rifles are to be prepared for storage or shipment, a heavier oil, such as cosmic, must be used.

45. In preparing arms for storage or shipment they should be cleaned with particular care, using the metal-fouling solution as described above. Care should be taken, insured by careful inspection on succeeding day or days, that the cleaning is properly done and all traces of ammonia solution removed. The bore is then ready to be coated with cosmic. At ordinary temperatures cosmic is not fluid. In order, therefore, to insure that every part of the surface is coated with a film of oil the rifle and the cosmic should be warmed. Apply the cosmic first with a brush; then, with the breech plugged, fill the barrel to the muzzle, pour out the surplus, remove the breech-block, and allow to drain. The rifle should be warmed only in the presence of an officer or noncommissioned officer, and should not be warmer than can readily be held in the hand. It is believed that more rifles are ruined by improper preparation for storage than from any other cause. If the bore is not clean when oiled—that is, if powder fouling is present or rust has started—a half-inch of cosmic on the outside will not stop its action, and the barrel will be ruined. Remember that the surface must be perfectly cleaned before the heavy oil is applied. If the instructions as given above are carefully followed, arms may be stored for years without harm.

PREPARATION OF SOLUTIONS.

46. **Soda Solution.** This should be a saturated solution of sal soda (bicarbonate of soda). A strength of at least 20 per cent is necessary.

Sal soda—one-fourth pound, or 2 heaping teaspoonfuls.

Water—1 pint or cup, model of 1910, to upper rivets.

The sal soda will dissolve more readily in hot water.

47. **Swabbing Solution.** Ammonium persulphate—60 grains—one-half spoonful smoothed off.

Ammonia, 28 per cent—6 ounces, or three-eighths of a pint, or 12 spoonfuls.

Water—4 ounces, or one-fourth pint, or 8 spoonfuls.

Dissolve the ammonium persulphate in the water and add the ammonia. Keep in a tightly corked bottle; pour out only what is necessary at the time, and keep the bottle corked.

48. **Standard Metal Fouling Solution.** Ammonium persulphate—1 ounce or 2 medium heaping spoonfuls.

Ammonium carbonate—200 grains, or 1 heaping teaspoonful.

Ammonia, 28 per cent—6 ounces, or three-eighths pint, or 12 spoonfuls.

Water—4 ounces, or one-fourth pint, or 8 spoonfuls.

Powder the persulphate and carbonate together, dissolve in the water and add the ammonia; mix thoroughly and allow to stand for one hour before using. It should be kept in a strong bottle, tightly corked. The solution should not be used more than twice, and used solution should not be mixed with unused solution, but should be bottled separately. The solution, when mixed should be used within 30 days.

49. Neither of these ammonia solutions have any appreciable action on steel when not exposed to the air, but if allowed to evaporate on steel they attack

it rapidly. Care should, therefore, be taken that none spills on the mechanism and that the barrel is washed out promptly with soda solution. The first application of soda solution removes the greater portion of the powder fouling and permits a more effective and economical use of the ammonia solution. These ammonia solutions are expensive and should be used economically.

50. It is a fact recognized by all that a highly polished steel surface rusts much less easily than one which is roughened; also that a barrel which is pitted fouls much more rapidly than one which is smooth. Every effort, therefore, should be made to prevent the formation of pits, which are merely enlarged rust spots, and which not only affect the accuracy of the arm but increase the labor of cleaning.

51. The chambers of rifles are frequently neglected because they are not readily inspected. Care should be taken to see that they are cleaned as thoroughly as the bore. A roughened chamber delays greatly the rapidity of fire, and not infrequently causes shells to stick.

52. The principles as outlined above apply equally well for the care of the barrel of the automatic pistol. Special attention should be paid to cleaning the chamber of the pistol, using the soda solution. It has been found that the chamber pits readily if it is not carefully cleaned, with the result that the operation of the pistol is made less certain.

THE GALLERY PRACTICE RIFLE.

53. The care of the bore of the gallery practice rifle differs from that of the service rifle, in that instead of the fouling of hard cupro-nickel there is a similar fouling of lead. The greater proportion of primer in the .22-caliber cartridges, and the fact that either black or semismokeless powder is used, makes it even more desirable to swab out frequently with the soda solution. It has a further advantage of retarding deposit of lead.

54. A satisfactory arrangement has been found—to have two or four rifles issued to organizations on the firing line and two being cleaned; that is, the man when he finishes his score takes his rifle back to the soda can, pumps it full several times, and runs a couple of patches through. It is then examined by a noncommissioned officer for leading. If leading is in evidence it should be removed with a steel-wire brush furnished for this purpose. This brush should be used as little as possible, for it wears the rifling. It will be found that rifles which are kept in good condition and cleaned as outlined above will give little trouble from leading. At the end of the firing for the day these rifles should be immediately cleaned with greater care, oiled, and the next day cleaned again, as described for the service rifle. As a rule these rifles receive much less care than the service rifle, due, it is thought, to the fact that the responsibility for their condition is frequently not definitely assigned. It is thought desirable to make the quartermaster sergeant personally responsible.

55. One of the most frequent causes of inaccuracy of gallery practice rifles is the use of rusted or injured cartridge holders. It can be readily appreciated that these are, in fact, merely an extension of the bore made to simulate the service cartridge, and that any deformation of the mouth will tend to deform the bullet and cause inaccuracy. They must be kept clean and the mouth free from dents and burrs if good shooting is to be done with these rifles. They should be examined frequently and unserviceable holders replaced.

56. A practice which has been found satisfactory is to have the men as they finish their score pick up their holders and turn them over to a man who removes the empty shell and drops the holder into a can of kerosene. The man who loads from time to time takes the holders out of the can, roughly dries

and loads them. During the entire gallery practice the holders should be kept in kerosene when not in use. They will not rust as long as they are not exposed to the air. At the end of the season they should be disassembled, carefully cleaned, oiled, and reassembled.

CARE OF MECHANISM.

57. Only the general principles covering the care of the mechanism of firearms will be given. Such detailed instructions in regard to the dismounting, assembling, and special care as is necessary is given in the various descriptive pamphlets which can be obtained on application. When the arm is first received and before firing all working parts should be dismounted and carefully wiped with a dry cloth, paying special attention in automatic arms to the parts which come in contact with powder gases, and go over all metal parts with an oily rag. The above procedure should also be followed when the arm has been wet or exposed to unfavorable climatic conditions.

58. After firing it will be sufficient, ordinarily, to dismount merely those parts in and adjacent to the receiver which can readily be removed, wiping them and such other parts as can be reached, first with a clean cloth, then with an oily rag. All working parts should habitually be lightly oiled with a thin-bodied oil, such as sperm oil, before the arms are used.

59. If the arm is not to be used for some time, or is to be stored or shipped, it should be thoroughly cleaned and all metal parts given a thin coat of cosmic. To insure that every portion is coated with cosmic it is well to warm the parts until they feel warm in the hand and either dip them into the melted cosmic or apply the cosmic with a brush. Before firing, all cosmic should be removed and the working parts lightly oiled.

60. When hand arms have been wet throughout, the handles should be dismounted and all parts freed from rust and oiled. After assembling, oil the joints and sliding surfaces lightly with sperm oil. The blades should be kept clean and covered with a light coat of cosmic.

61. Telescopic sights and instruments should be handled with the utmost care and cleaned only as prescribed in the appropriate handbook.

CARE OF METAL PARTS.

62. All metal parts should be kept clean and free from rust. All materials for accomplishing this end are furnished by the Ordnance Department. Metal parts and components of equipment are of two general classes—corrosive metal, such as steel, cast iron, etc., and so-called noncorrosive metals, such as aluminum, German silver, brass, etc. All metals are corrosive under certain conditions. Corrosive metals are frequently coated with noncorrosive metals to combine the strength and cheapness of the first with the protective qualities of the latter.

63. In caring for corrosive metal parts, rust should be prevented from forming by coating the cleaned surface thinly with oil or cosmic. Should rust appear, it should be removed immediately by rubbing with oil and a soft cloth or stick. Corrosive metal parts that are protected by a surface finish, can not rust until the finish has worn through and the corrosive metal is exposed. In caring, therefore, for these parts, no more force should be used than is necessary to remove such dirt, etc., as may have collected, and which should first be softened by oil or water. In no case should emery or other abrasive be used.

64. Noncorrosive metal parts are easily kept clean, but it is necessary that they be kept clean, for noncorrosive metal is affected to a greater or less extent

by various agents encountered in ordinary service, such as salt water, fruit acids, etc. Except in the care of mess kits, the surface should be given a light coating of oil or cosmic. Should there be any evidence of corrosion, the surface should be immediately and thoroughly cleaned. Such articles as the canteen and components of the mess outfit should be kept thoroughly clean and water and food kept in them no longer than necessary.

65. Aluminum should be cleaned with soap and water, a neutral or slightly alkaline soap (H. & H.) being used. In the cleaning of canteens a little sand can be used to advantage. Particular care should be taken to insure that canteens are properly cleaned after they have been filled with coffee, milk, or any fluid containing organic matter. The white nodules which occasionally appear in canteens used with hard water are aluminum hydrate; the gelatinous film is alumina, and both are harmless. When not actually in use, canteens should habitually be emptied and the cap left off to dry.

PAINTING.

66. All parts to be painted should be free from dirt and grease. When rust appears on a painted surface or forms under the paint, the rust should be immediately and thoroughly removed from the rusted area, and the bright dry surface thus exposed primed with olive drab paint (second coat, if available). If it is desired to paint the whole surface after this priming coat has dried 24 hours or more, the whole surface should be rubbed down with No. 1½ sandpaper, and a coat of paint applied and allowed to dry thoroughly before use.

67. In painting wood, all that is roughened or decayed should be removed and a surface scraped down to good wood. Cracks should be filled or puttied. If the whole surface is in bad condition and needs painting, it should be sandpapered thoroughly with No. 1½ sandpaper or coarser, a coat of paint should then be laid, and after drying for at least 24 hours it should be rubbed down with No. 00 sandpaper and the finishing coat laid. It should be allowed to dry for at least 24 hours before using.

68. After repeated painting the paint may become so thick that it scales off and becomes unsightly. It may then be removed for repainting, as follows:

Dissolve 1 pint of concentrated lye in 6 pints of hot water and slake in enough lime to give the solution the consistence of paint. Use the solution freshly mixed and apply to the parts where paint is to be removed, with a brush or with waste tied to the end of a stick. When the solution begins to dry on the surface use a scraper to remove the old paint; then scrub clean with water. If one application is not sufficient to loosen the paint, apply a second coat.

69. Before painting any surface wash with soda water (one-half pound to 8 quarts of water), remove all dirt and grease, rinse with clean water, and dry. It is then ready for painting.

70. Paint is issued by the Ordnance Department in cans provided with friction tops. When not being used these cans should be tightly closed or the surface covered with linseed oil or water to prevent the paint becoming thick or "fatty." Paint that is too thick and fatty should be thinned by the addition of a little turpentine (not to exceed 2 per cent) worked well in.

CLEANING AND PRESERVING MATERIALS AND THEIR USES.

71. It may be well to review the uses of the various materials furnished by the Ordnance Department for cleaning and preserving the supplies furnished by it.

72. **Borax.** Issued for use as a flux in welding. Unit of issue, pound.

73. **Cosmic.** A heavy petroleum oil used as a rust preventive. Its heavy

body and high viscosity under ordinary temperatures make it admirably adapted for this purpose, but also difficult to apply. To insure protection against rust, the entire surface of the metal must be clean and free from every deposit and then coated thoroughly with cosmic. If cosmic is applied over lubricating oil, it will creep or run in hot weather and the surface will be exposed. To insure complete coating it is preferable that the parts to be oiled should be warm and the cosmic should be heated until liquid and then applied with a brush. Unit of issue, quart.

74. Lavaline. A metal polish issued to artillery, interchangeably with Gibson's soap polish. Unit of issue, 16-ounce cans.

75. Lye, Powdered. When dissolved in hot water 1 pound to 6 quarts, with sufficient lime to give a consistence of paint, is used to remove old and blistered paint. (See Artillery Handbooks.) Unit of issue, pound.

76. Metal fouling solution (standard solution) contains—

Ammonium persulphate, 1 ounce or 2 medium heaping spoonfuls.

Ammonium carbonate, 200 grains or 1 heaping spoonful.

Ammonia 28 per cent, 6 ounces, or three-eighths pint or 12 spoonfuls.

Water, 4 ounces or one-fourth pint or 8 spoonfuls.

Powder the persulphate and the carbonate together, dissolve in the water, and add the ammonia. Mix thoroughly, allow to stand one hour before using. Keep in a strong bottle, tightly corked. For instructions and use see page 647.

Unit of issue:

Ammonia persulphate15-ounce bottle.

Ammonium carbonate15-ounce bottle.

Ammonia 28 per cent30-ounce bottle.

77. Naphthalene. A moth preventive effective only when eggs and grubs already present are removed.

Unit of issue, pound.

78. Oil, Clock. A very light oil for use on spindles and bearings of sights, range quadrants, and other instruments in accordance with instructions published in the various manuals. In cases of emergency use as substitutes sperm oil and engine oil No. 1, in the order given.

Unit of issue, ounce.

79. Oil, Hydroline. Used only to fill the recoil cylinders of gun carriages, and not as a lubricant.

Unit of issue, gallon.

80. Oil, Linseed, Boiled. This oil has a limited use in thinning paint which has become too thick to be thinned successfully with turpentine. It has the effect of a drier and requires the addition of little or no turpentine; generally used for interior painting.

Unit of issue, pint.

81. Oil, Linseed, Raw. A vegetable oil used to preserve the wood of stocks, grips, etc. Applied with rag and rubbed in with the hand; also used for thinning paint for outside work; usually requires the addition of drier or turpentine.

Unit of issue, pint or gallon.

82. Oil, Lubricating (Engine No. 1). A light petroleum oil. The general lubricant of artillery, replacing synovial oil.

Unit of issue, gallon.

83. Oil, Neat's-foot. An animal oil used to soften and preserve leather. Applied with a moistened cloth to the flesh side of moistened leather.

Unit of issue, pint.

84. Oil, Slushing. A heavy petroleum oil similar to cosmic (issued to artillery). Used as a rust preventive. Essentially a mineral oil containing a small

per cent of rosin. Should be applied in a thin coat to the clean surface to be protected. In cold weather it should be applied by stippling—that is, by holding the brush perpendicular to the surface to be coated and tapping the surface with the point of the brush. Particular care should be taken to see that all lubricating oil is removed before applying slushing oil.

Unit of issue, gallon.

85. Oil, Sperm. A light oil used as a lubricant and temporary rust preventive. Its low viscosity and light body make it unsuitable for a rust preventive for more than a few days. Apply with a rag to the clean surface of the metal. The general lubricant of small arms and arms.

Unit of issue, pint.

86. Oil, Coal. Used for cleaning and in the field for lanterns. Coal oil for illuminating purposes is furnished by the Quartermaster Department.

Unit of issue, gallon.

87. Paint, rubberine. Used in connection with loading ammunition in accordance with instructions regarding the same.

Unit of issue, gallon.

88. Petrolatum (Vaseline). A heavy petroleum oil free from rosin. Used as a lubricant for gears and worms of sights and for packing ball bearings, etc.

Unit of issue, 5½-ounce cans.

89. Polish, Gibson's Soap. A metal polish issued to Artillery interchangeably with Lavaline.

Unit of issue, 16-ounce can.

90. Primer, Brown Enamel. A hard, quick-drying enamel used for painting parts of horse collars, draft springs, etc.

Unit of issue, quart.

91. Sal Soda (Carbonate of Soda). A saturate solution of soda and water makes an alkaline solution that will not rust. The solution must be saturated; that is, at least 20 per cent or one-fourth pound of soda to 1 pint of water (6 heaping spoonfuls to 1 cup of water). This solution is an effective solvent of powder fouling and should always be used after firing, whether metal fouling solution is to be used or not. It reduces the labor of cleaning with oil alone by more than half. Used also in weaker solution (one-half pound to 8 quarts of water) in washing surfaces to be painted to remove dirt and grease.

Unit of issue, pound.

92. Soap, Castile. An alkaline soap used in cleaning leather equipment. Applied as a lather on a moistened sponge.

Unit of issue, pound.

93. Soap, H. & H. A neutral naphtha soap used in washing web and cloth equipment. Applied in the form of a solution (1 cake to 9 cups of water) or directly on the brush. After washing, equipments should be always dried in the shade.

Unit of issue, cake.

94. Soap, Saddle. A soap used as a dressing for leather equipment. Apply with thick lather on a moistened sponge.

Unit of issue, pound.

95. Swabbing Solution. Contains—

Ammonium persulphate, 60 grains or one-half spoonful smoothed off.

Ammonia, 28 per cent, 6 ounces or three-eighths of a pint or 12 spoonfuls.

Water, 4 ounces or one-fourth pint or 8 spoonfuls.

Dissolve the ammonium persulphate in the water and add the ammonia. Keep in a tightly corked bottle. Pour out only what is necessary at a time and keep the bottle corked.

Unit of issue:

Ammonium persulphate 15-ounce bottle.

Ammonia, 28 per cent 30-ounce bottle.

96. Turpentine. Used as a thinner and drier for thick or fatty paint. Should not be used in quantities greater than 2 per cent of the paint thinned.

Unit of issue, pint.

97. Convenient measures:

The cup, model of 1910, holds..... 1½ pints.

To the top of the upper hinge rivets is approximately..... 1 pint.

The spoon, model of 1910, holds approximately 1 ounce.

One heaping spoonful of sal soda..... 1 liquid ounce.

One heaping spoonful of ammonium persulphate..... 240 grains.

One spoonful smoothed off of ammonium persulphate..... 120 grains.

One heaping spoonful ammonium carbonate..... 200 grains.

One spoonful smoothed off of ammonium carbonate..... 100 grains.

REPAIR OF EQUIPMENT.

98. A general knowledge of the repair of equipment should be had by all officers and enlisted men. In active service when problems of supply are difficult, the replacing of equipment is difficult and uncertain, and the repair thereof may be of vital importance. Improvised or first-aid repair may be the means of maintaining the efficiency of the organization which would otherwise be sadly hampered. In time of peace it is the means of prolonging the life of the equipment and greatly reducing the cost of maintenance of the organization.

99. In general, the majority of repairs within the organization consists in replacing the worn or unserviceable part and requires little more than average common sense and a small amount of mechanical ability. In the case of horse equipment and artillery matériel, some special knowledge is required. To meet this need the School for Saddlers and Battery Mechanics was established at Rock Island Arsenal. This offers the opportunity to mounted organizations of obtaining a thoroughly trained man. But aside from these men trained at Rock Island Arsenal, almost every organization has some man or men who in civil life have received more or less training as saddler or mechanic or by association with men so trained are qualified to make such repairs as may be required.

100. Equipment should be frequently examined and all necessary repairs noted and promptly made. In the repair of equipment it is literally true that "a stitch in time saves nine," or the entire article. In the following instructions much that is obvious to experienced soldiers has been included, but it must be remembered that experienced soldiers will be relatively few in time of war, when, if these instructions are required at all, they will be most needed. The nomenclature used in these instructions is that of the various ordnance pamphlets.

GENERAL INSTRUCTIONS FOR REPAIR OF CLOTH EQUIPMENT.

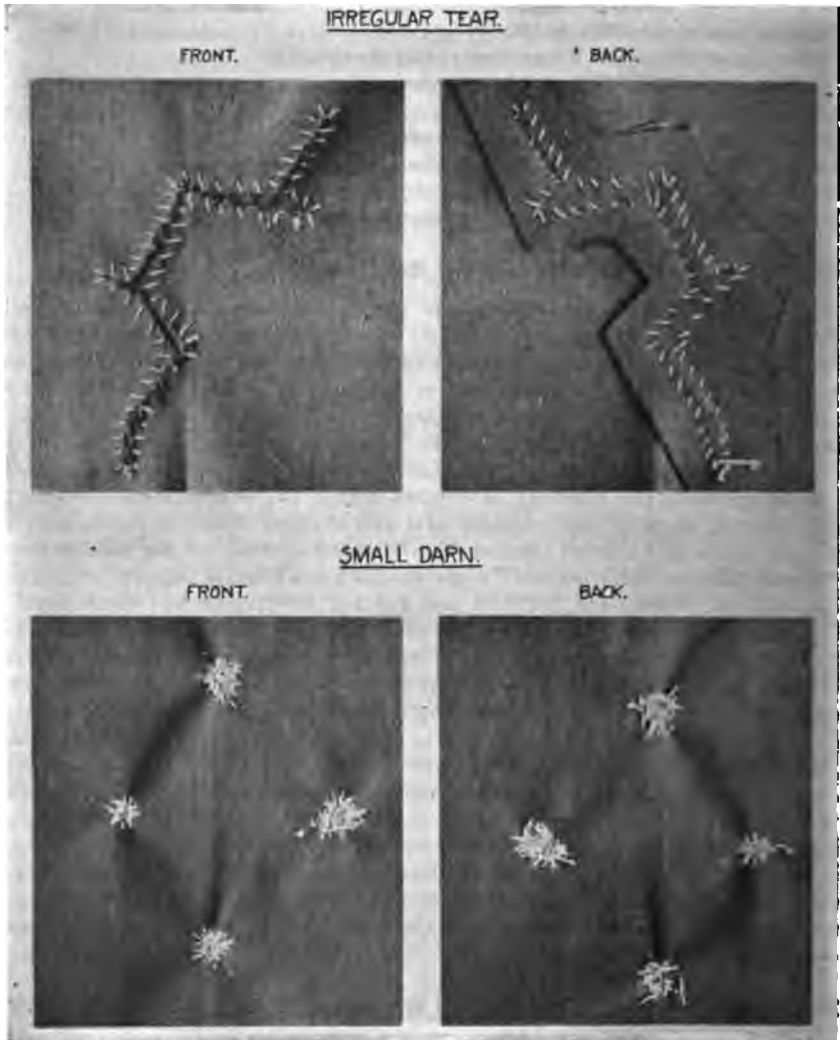
101. Webbing. When any of the olive-drab cotton webbing straps that form part of the equipment become worn or torn, the entire strap should be replaced by a piece of olive-drab webbing of the proper width. If the strap has a free end, it should be provided with an end clip.

102. If it becomes necessary to repair web straps because webbing of the proper size for replacements is not on hand, as may often happen in active service, at maneuvers, etc., the following instructions should be carefully followed:

(a) If the strap is not put through a buckle, the ends should be lapped about 1 inch and sewed with any good, strong thread.

(b) If the strap is run through a buckle, or if the shortening incident to lapping would interfere with its proper functioning, the broken ends should be squared, placed abutting against each other, and stitched with heavy thread with a baseball stitch or overcast.

PLATE I.



(c) Upon returning to garrison or upon receipt of the proper size webbing, the repaired strap should always be replaced by an entire new strap.

(d) All worn or torn parts should be patched, darned, or sewed, and all frayed edges overcast, as explained in direction for repairing cotton duck.

103. Olive-drab Cotton Duck. When the olive-drab cotton duck of the haversack, pack carrier, etc., is worn or torn, it should be repaired in one of the following ways:

(a) The two sides of the tear can be brought together so as to lie flat without a ridge and stitched with a baseball stitch.

(b) The two sides of the tear can be brought together and overcast on the under side.

(c) In case a small hole is worn in the duck, it should be darned as a sock is darned.

PLATE II.

BASE-BALL STITCH.

FRONT.



BACK.

OVERCAST SEAM.

FRONT.



BACK.

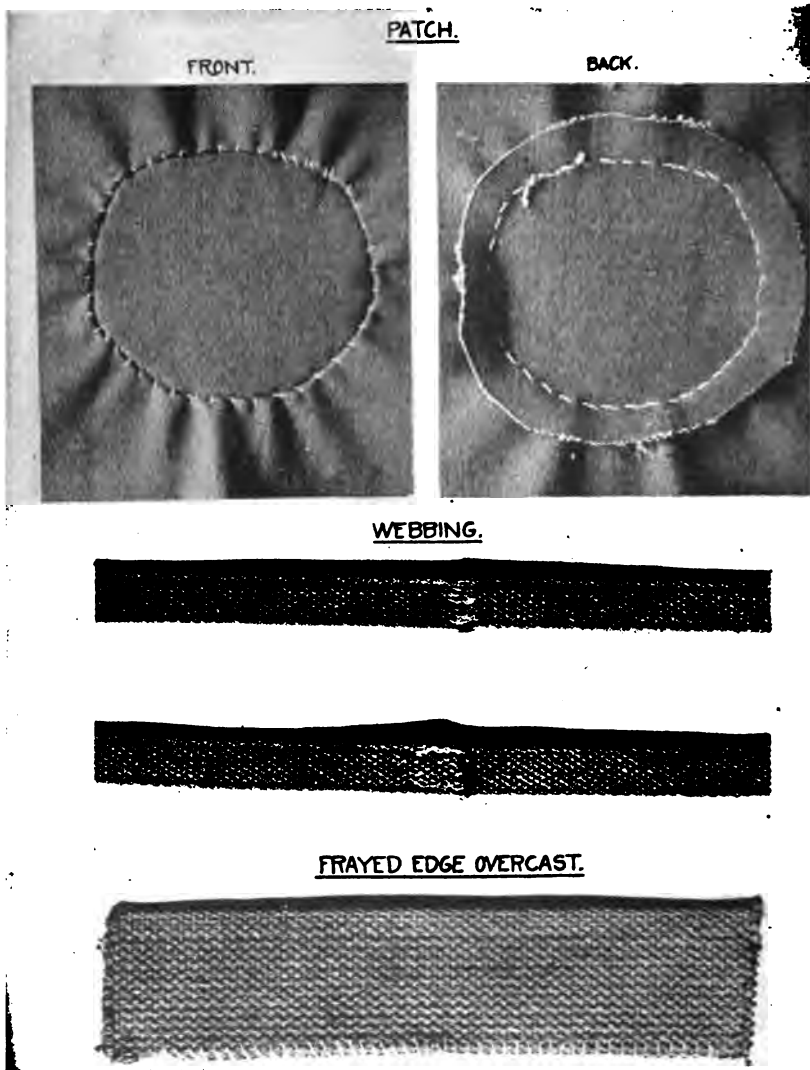


(d) In case the hole is large, it should be cut back to good, strong material, and a patch of such a size as to give a half-inch lap all around should be set under the hole and sewed to the original piece by being overcast. A neater job is made by turning under the edges of the hole, but this is not necessary. Plates I to III show all of the above methods. White thread has been used and the stitches widely spaced so as to show enough of a contrast to make the

stitches readily distinguishable. These plates should be carefully studied and the proper method selected for each case in hand.

104. Eyelets and Washers. If eyelets pull out of cloth or webbing, the holes should be darned before they are replaced. Sometimes it is practicable to shift the position of the eyelet to whole, strong cloth, darning the old hole to keep it from enlarging.

PLATE III.



105. Metal Parts. Any metal parts, such as buckles, double hooks, slides, or special hardware, that may be bent out of shape may be rebent to their original shape by using the wire cutter, the pliers in the arm repair chest, or the vise. Small pieces of cloth or some such material should be interposed between the jaws and the piece gripped to prevent marring the surface finish.

In some cases it will be easier to use a block of wood and a wooden or copper hammer. Never strike the metal parts of equipment with a steel hammer, as this will bruise the surface finish and may leave hammer marks or burrs that might cut the webbing or duck.

106. Rivets and Screws. Keep rivets and screws tight. Loose rivets should be tightened by holding a piece of iron under the head and riveting over until tight. If threads in screw holes become so worn that they will not stay set up, the holes should be plugged with wooden plugs and the screws set up.

SPECIAL INSTRUCTIONS FOR COMPONENTS OF THE INFANTRY EQUIPMENT, MODEL OF 1910.

107. Arm Repair Chest. The body and the lid of the chest are made of wood (poplar), strengthened by corner irons and hinge bands. It is strongly built and should last indefinitely, but this fact does not warrant unnecessary hard usage. The body and lid are most likely to be broken by dropping the chest on some projecting corner or rock, or by dropping some other heavy article upon the chest. The chest should not be thrown about, but should be carried or lifted by the handle provided. The organization artificer should repair any ordinary damage that might be done to the chest except the breakage of metal parts.

108. The lid of the chest is liable to warp if wet. It should then be dried slowly. If the lid does warp, one or more of the strips should be removed, the hinge bands straightened and sufficient planed off the edge of the strips to allow for swelling. When this is done it will probably be necessary to plug the old rivet and screw holes and make them anew.

109. All rivets and screws should be kept tight and the chest itself well painted. All tools and spare parts composing the contents of the chest should be kept covered with a light film of sperm oil or cosmic to prevent rust. All the contents of the chest should occasionally be removed and examined and any sign of rust should be promptly removed.

110. Bacon and Condiment Chest. These chests are now obsolete. Those in the hands of the organization will be used until unserviceable, and will be replaced until present supply is exhausted. Organizations should be able to make repairs to these chests as described for the arm repair chest.

111. Bayonet and Bolo Scabbards. These scabbards are of similar construction. The scabbard body is of wood and should be kept as dry as possible. If permitted to become very wet, the swelling of the wood and its contraction due to the tension of the rawhide covering may cause the bayonet or bolo to be gripped and the scabbard thus rendered temporarily unserviceable.

112. If the cover becomes worn and if the wooden and metal parts are in good condition, it should be replaced after removing the drain eyelet in bottom of scabbard. If the wooden body breaks, duck covers should be removed and if unserviceable may be held for future repair. The mouthpiece should be separated from the broken body and turned into an arsenal with surplus hardware. Imperfect functioning of the locking lug on the mouthpiece may be corrected by the organization artificer by filing or bending the lug.

113. Can, Bacon, Model of 1910. These cans will be held by organizations until no longer serviceable. No attempt at repair will be made.

114. Can, Bacon, Model of 1913. The interior of this can should always be kept clean and free from hardened grease or dirt by frequent washings with soap and water. If this can is used properly, it should last until the tin coating of the interior or the exterior is practically worn through. If the cover becomes loose on the body of the can, the upper half of the body may be bent

out until the cover is again tight. If the cover is too tight, a slight amount of peening with the hammer on the edge of the cover, resting on a wooden block, will usually extend the cover sufficiently.

115. Can, Condiment, Model of 1910. These cans are made from sheet tin. The threaded ends are only partially rust proof. The contents should be removed when not in use. Many cans have been ruined by neglecting this. The can should be disassembled at all inspections so that the inspecting officer may see that no rust is present. If any part becomes unserviceable, it should be replaced by requisition on the proper supply officer.

116. Canteen, Old Model. Corks and chains that are lost or broken may be replaced. Covers that are torn or worn should be repaired if possible in accordance with the general instructions for the repair of cloth equipments; otherwise they should be replaced.

Canteen, Model of 1910. The most frequent cause for repair of canteens, model of 1910, is the breaking of the chain. If this occurs at the cap rivet, it will be necessary to remove the gasket, punch out the rivet and remove the broken link. Spread the next link slightly and insert the rivet through the link and hole in cap, then with head of rivet resting on something solid, rivet over carefully on the inside until secure, being careful not to rivet so tightly that the chain will not swivel. If repair rivets are available, they should be used. In the field it may be necessary to use the old rivet, in which case it should be removed with greater care. If in removing the rivet, or if for any other cause the hole is made so large that the rivet will not have a drive fit, the hole is made smaller by peening on the inside of the cap, and reaming or scraping out to fit the rivet. By peening is meant striking light blows with a hammer, having a hemispherical head, around the edge of the hole so as to cause the metal to flow toward the center. Should the chain break in the middle, the shackle may be opened and the links composing the detached portion of the chain can be threaded to the portion remaining attached and the free end of the repaired chain again attached to the shackle.

117. Should the sliding ring bind on the seat of the canteen it can be readily loosened by a blow on the end of the loop. Should it be too loose, it can be tightened by squeezing the sides of the end of the loop together.

118. Worn threads on cap or neck can not be repaired within the organization. If a new cap will not correct the fault, the canteen should be surveyed and replaced. To be serviceable, it is merely necessary that the cap can be screwed down tightly on the cork gasket and hold. Many canteens with very loose threads are still serviceable. This defect is confined to the spun canteens of first issue which have a neck with rolled threads.

119. When the cork gasket is badly worn, it may be replaced. Its life can be greatly prolonged by reversing.

120. A canteen in which holes have accidentally been punched or in which holes have corroded through should be surveyed, replaced and turned into an arsenal for repair.

121. The canteen is made of aluminum and is easily dented. Care must be taken to prevent this. Should the canteen become badly dented it should be taken to the post or regimental supply officer, who has been provided with a special tool for removing dents as described hereinafter. If the canteen is mashed flat as when run over by a wagon, it can only be surveyed, replaced, and turned in as scrap aluminum. Any additional damage done by an enlisted man to render his canteen irreparable for the purpose of obtaining a new one should be punished by charging him with its value.

122. The following special instructions are given for the use of the tool for removing dents:

Clamp the goose-neck tool in a vise as shown in Plate IV. The handle end of the rod is square to enable it to be securely held in the vise. The rod should be held horizontal with the goose-neck up, so that, in pressing dents out of a canteen, the pressure is downward. The rod being clamped in a vise, the bent end is inserted in the neck by moving the canteen in such a way as to get the bent portion of the rod entirely within the canteen. The canteen is now moved about till the top surface of the goose-neck is under the dent (which

PLATE IV.



will be a depression inside the canteen) and the canteen, held firmly in both hands, is pressed down with sufficient force to push out the dent. A little practice will enable the operator to determine when the goose-neck is in the proper position.

If a dent is pushed out too far, it should be hammered back to the proper position by light blows with a flat stick if on the convex half of the canteen, or a round stick if on the concave half. The rod is so shaped that dents on

the shoulder of the canteen may be removed by pressing them out against the convex surface at the back of the goose-neck. Great care should be exercised at all times to prevent bringing strain on the neck of the canteen. This is to be especially guarded against, in removing dents in or near the shoulders. In no case should canteens having aluminum threads formed on the neck be repaired with this tool, as it would be certain to cause leaky closures. These canteens should be surveyed and turned into an arsenal for repair when so badly dented as to become unserviceable.

123. Canteen Covers. The cloth cover will be cared for and repaired in accordance with the general instructions governing cloth equipment. The chape of webbing which holds the double hook is particularly subject to wear, but is easily replaced. Covers first issued were provided with double hooks of steel with brass rollers. These should be replaced with the all brass double hook now provided as soon as the chapes become badly worn.

124. These covers are provided with the Carr fastener. These fasteners are designed to open only in one direction in prolongation of the longer axis of the socket, so that in replacing sockets, due to defect or to too tight fit, they should be replaced so that this axis is in the direction of natural pull. An application of this principle would leave the front socket as it hangs on the belt in its present position, but would change the rear socket to a position approximately vertical.

125. Much difficulty has been had with the snap fasteners of these covers, due largely to the fact that sufficient allowance had not been left for the unusual shrinkage of this article, which brings an excessive strain on the fasteners. Wherever fasteners are defective or the cover is too tight the sockets should be raised approximately one-half inch. Snap fasteners sometimes stick, due to mud or dirt getting in behind and wedging the spring. Almost invariably such fasteners can be opened by grasping the socket section in one hand and the stud section in the other and twisting and pulling at the same time. If this fails it may be pried open, using the tack puller in the tool handle of the arm repair chest. On being opened, if uninjured, the socket should be freed from dirt by moving the spring from side to side and blowing. A drop of sperm oil will assist. An improvised spreading tool similar to that furnished for belt fasteners may be made by grinding down a broken firing pin.

126. The following are general instructions for replacing injured Carr fasteners:

(a) To Remove Defective Sockets. Pry up teeth of socket and remove washer on inside of cover; pull socket free from the outside.

(b) To Replace the Socket on the Canteen Cover. Locate the place for the socket by punching the cover with the canteen socket punch, using a piece of wood on the inside of the cover. Place the socket on the cover to engage the punching, taking care that the junction of the spring in the socket will be toward the top. Engage the washer with the socket from the inside and crimp the teeth of the socket.

(c) To Replace the Cap and Stud on the Canteen Cover Flaps. Place the cap on the flap and lay the flap over the anvil so that the Carr fastener cap will rest in the recessed cap of the anvil. Place the Carr fastener stud on the projection of the cap and resting the canteen stud set on the stud, deliver one or more smart blows with a hammer. If Carr fasteners are not available, repair snap fasteners as described under cartridge belts may be used. (For illustration of tools see Plate VI.)

127. If snap hooks break on mounted canteen covers, remove hook and chape and replace with double hook and chape. It has been prescribed that the canteen, model of 1910, issued mounted men, should be carried in the saddlebag.

The double hook is better adapted to dismantled work than the snap hook.

128. Cartridge Belts, Caliber .30. These belts should be repaired in accordance with the general instructions for the repair of cloth and web equipment. The greatest wear has occurred on the pocket flaps. Provision has been made to supply these pocket flaps separately and such changes have been made in recent designs of the belt as to permit the pocket flap to be readily replaced within the organization. The rear pockets when worn with the full pack also wear badly. Repair pockets are now issued to replace these worn pockets and obviate the necessity for replacing the entire pocket section.

129. To replace a worn flap, it is merely necessary to remove the three eyelets, if present, and rip open the seam. A new flap can then be inserted, and the seam resewed. To replace a worn pocket, cut off the worn pocket and overcast the ragged edges. The top of the repair pocket should be stitched securely to the top of the belt, but the bottom may be merely whipped in place to keep it from flapping.

130. Excessive wear is caused by the practice of inserting both clips with bullet end down and the failure to use the retaining strap. The retaining strap, if pushed down into the bottom of the pocket, tends to shorten the pocket and cause the flap to stretch tightly over the clips. The insertion of both clips with bullets down tends to stretch the top of the pockets. The tightly stretched webbing wears at every projection.

131. The webbing over the rear billet of the pocket sections has also been found to wear. This will largely be reduced by a change in design, but for belts now in service which have begun to wear at this point a protecting strip of cloth extending across the width of the belt may be added with advantage.

132. Snap Fasteners. Considerable trouble has been experienced, particularly along the southern border, from snap fasteners sticking, due to an accumulation of dirt caked behind the spring. It occurs mostly with fasteners that have remained closed for weeks or in fasteners which, having stuck, were deformed in opening. When a fastener sticks it should not be forced open, but grasp the pocket in one hand and the flap in the other and by twisting and pulling at the same time work it open. This will almost invariably be successful. But if this fails pry the fastener open, using the tack puller of the tool handle of the arm repair chest.

133. To ease the spring of fasteners that stick a tool has been provided which spreads the spring to the limit of the hole in the socket. See Plate V.



This spreading tool forms part of the set furnished post or regimental ordnance officers, but an equally efficient tool may be improvised by rounding off the end of broken firing pins. At least one such improvised spreading tool should be provided for each squad and the men encouraged to use it on every occasion when a socket starts to cause trouble. This should practically eliminate all trouble from this cause in the future. From time to time all snap fasteners should be opened and closed to see that they function properly. It may well be made a feature of the regular weekly inspection. A convenient way to spread and oil the spring at the same time is to dip the end of the spreading tool in sperm oil and force it a few times into the socket.

134. Difficulty has also been experienced in infrequent cases by studs pulling out. Both of these difficulties have been largely overcome, it is

believed, by improvements in the design of the fastener. Should a snap fastener not function satisfactorily or be insecure, it should be immediately replaced. For such repairs a special repair fastener has been provided and a set of tools furnished each post or regimental ordnance officer. See Plates V and VI.

135. The following general instructions are given for the replacement of defective snap fasteners:

(a) To Remove a Defective Socket. Place the cap in the five-eighths-inch hole of the anvil and drive out with the cap punch, taking care not to puncture the cap with too heavy a blow. (Until new anvils with holes and cap punches are issued, use a piece of wood with a five-eighths-inch hole and a 10-penny wire nail, squared off.)

(b) To Replace a Cap and Socket on a Cartridge Pocket Flap. Place the cap over the hole in the flap and lay the flap on the anvil so that the cap will rest in the recessed cap on the anvil. Place the socket over the projection of the cap with the axis of the spring parallel to the axis of the pocket. Insert the socket set into the socket and deliver one or more smart blows with a hammer. Great care should be taken to hold the socket set in line of the socket and cap.

(c) To Remove a Defective Stud. It is not easy to remove a defective stud. Fortunately there will be little occasion to remove a stud except when it is pulling out. Grip the head of the stud on the arm repair vise and with pliers and screw driver work the part off.

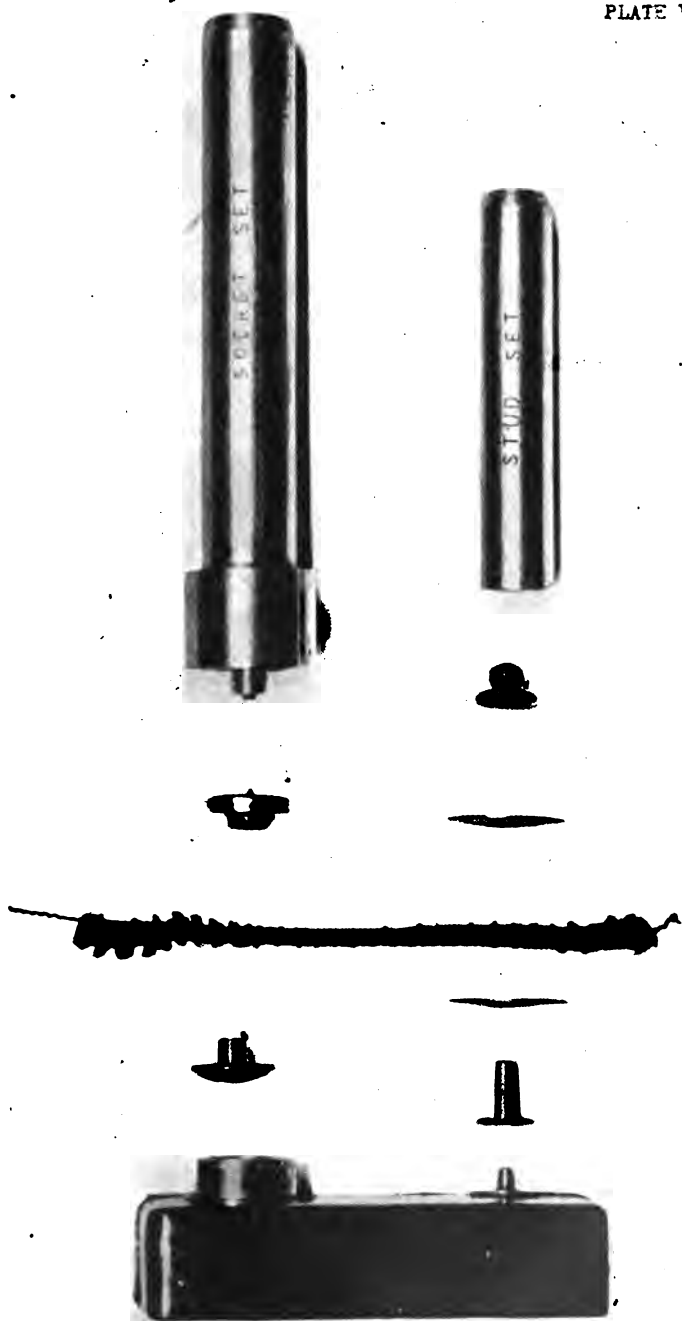
(d) To Replace a Stud on a Cartridge Pocket. Place a washer on a post, crimped edge up, and insert the post from the inside into the hole in the pocket. Place a washer on the post, crimped edge down, and the stud over this. Insert the anvil into the pocket and rest the snap fastener post on the post of the anvil. Rest the cartridge pocket with the anvil on a solid body, observing at the same time that the end of the interior retaining strap will not be caught under the anvil. Now place the stud set over the stud and deliver one or more smart blows with a hammer.

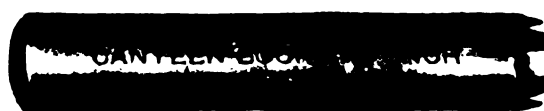
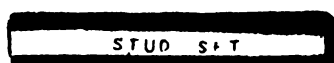
136. **Cleaning Rods, Models of 1910 and 1913.** Before using see that the sockets are cleaned out thoroughly and, in assembling, that the shoulders of the several joints are tight together. In using this rod, great care should be exercised to see that the rod is not bent. This is avoided by guiding the rod near the breech with the hand not used in forcing the rod through the bore. As parts become unserviceable they should be replaced by requisition on the proper supply officer.

137. **Cups, Model of 1910.** The general instructions in regard to the care of aluminum applies, but it should be remembered also that excessive heat will damage aluminum. In using the cups for cooking never allow contents to evaporate entirely.

138. The most frequent damage encountered is the pulling out of the hinge rivets. Much of this trouble can be overcome by keeping the rivets tight. If they pull out they should be replaced, using the repair rivet provided. The rivet should be driven home from the inside, and, with the head supported on a rivet block or piece of iron, the end is riveted over by light blows until a dome-shaped head is made. This head should then be formed and the rivet tightened, with the set furnished for the purpose. The sliding lock can be readily replaced with the wire cutter. If the hinge wire rusts out, the broken ends should be punched out and a new hinge pin put in and the ends riveted over. In cups of first issue, the wire was of steel; in cups of later issue, with a noncorrosive wire hinge, little trouble may be expected. If no hinge wire is available, a finishing nail of proper size may be used.

PLATE V.





139. Fork, Model of 1910. The fork is made of noncorrosive metal, and as a sanitary measure should be kept clean by washing with hot water and soap. The tines of the fork should never be used to pry open tops of cans, to extract corks, etc. Never permit knife, fork, or spoon to remain in vinegar or other foodstuffs for a long period, as verdigris will form. This corrodes the metal and is poisonous.

140. Haversack, and Pack Carrier. The haversack has been modified considerably with a view to increasing its serviceability. The principal changes are the substitution of a 2-inch webbing for the cloth portion of the suspenders, and the substitution of an over and under buckle for the sliding buckle as the adjustment feature of the front, pack, and rear suspenders. This gives nearly double the adjustment and facilitates repair should a snap hook break. A snap hook with replaceable spring has also been substituted for the snap hook with fixed spring and the wire hook of first issue. The meat-can pouch has also been made larger and the method of attaching has been improved. If no haversacks of later issue, as described above, are in the post or regiment, one may be obtained as a model on special requisition. When repairs are made involving replacement of parts they should follow as nearly as practicable the later issue.

141. To keep the number of items to be supplied as low as possible, whenever practicable repair materials are furnished in quantity by the yard and will be so requisitioned for by organizations. The quantities required may be readily determined by referring to the articles to be replaced as they appear on the drawing. For convenience the following table is given of the length and width of webbing required by the principal straps and suspenders:

Suspender, cotton webbing, heavy, 2 inches wide, 17 inches.

Front belt suspender, cotton webbing, heavy, 1 inch wide, 20.5 inches.

Rear belt suspender, cotton webbing, heavy, 1 inch wide, 14 inches.

Pack suspender, cotton webbing, heavy, 1 inch wide, 18 inches.

Haversack binding strap, cotton webbing, heavy, 0.625 inch wide, 11.5 inches.

Buckle chape, cotton webbing, heavy, 0.625 inch wide, 4 inches.

Carrier binding strap, cotton webbing, heavy, 0.625 inch wide, 32 inches.

It is not contemplated that requisitions shall be submitted in inches or fraction of inches, but rather yards and the larger fractions of yards.

142. The portion of the suspender which passes through the loop of the hook is particularly subject to wear. If the adjustment is shifted from time to time—say a quarter or a half an inch—it will do much to distribute the wear. The wire hooks and the snap hooks with fixed springs, as the supply of these on hand is exhausted, will be replaced by the new snap hook with replaceable spring. In some cases it may be necessary to use the wire cutter as pliers to force the spring into its seat. Broken coupling straps should be replaced with leather strap, if available, otherwise with three-quarter inch olive-drab webbing, until leather straps are obtainable.

143. Hand Ax, Model of 1910. Handles may be replaced by requisition on the proper supply officer. In the field split handles should be wrapped with cord.

144. Hand Ax Carrier, Model of 1910. General rules for the repair of web and cloth equipment apply. Hanger chape for double hook requires $6\frac{1}{2}$ inches 2-inch cotton webbing.

145. Knife, Model of 1910. The knife blade is of tempered steel, and when put away for long periods should be covered with a light film of oil to prevent rust. The knife should be kept clean. Do not use the blade of the knife as a pry. If only the point be broken the blade can be ground down to a new point. If a greater portion of the blade is broken off the knife should be replaced.

146. Magazines, Pistol. To remove a broken or defective spring force the magazine follower down until a nail or piece of wire may be slipped through one of the holes in the side of the magazine just under the follower. The follower may then be shaken out and the spring replaced.

147. Meat Can, Model of 1910. The meat can is made of sheet aluminum. This metal is attacked by an alkali, such as the concentrated solution resulting from partially evaporated hard water, or such as is used in the curing of ham, bacon, etc., and by fatty acids in general. The carrying of meat of any kind or other greasy substance in the meat can for a long period will result in the corrosion of the aluminum.

148. If the rim of the meat can becomes deformed, it should be straightened out before further use in such a manner as to permit the cover to lock in the body tightly. If the rivets securing the hinge to meat can become loose, a few blows of the hammer on the outside ends of rivets, the heads of the rivets being backed up on a piece of metal, will tighten them. If the hinge pin becomes loose, a nail can be used to replace it, the nail being cut with a service wire cutter and the ends of the nail headed over slightly with a few blows of a hammer. The meat can should be used until it becomes perforated or permanently unserviceable.

149. Pick Mattocks, Model of 1910. If the blade of the mattock is deformed it should be straightened in a vise. Broken handles should be replaced by requisition on the organization ordnance officer. In the field cracked handles should be wrapped with cord.

150. Shovel, Model of 1910. Do not use the side edges of the shovel blade as a mattock, as such treatment will deform the blade. If the blade becomes bent it should be straightened with a hammer on a block of wood. In the field split handles should be wrapped with cord.

151. Spoon, Model of 1910. The spoon is also made of noncorrosive metal and is cared for as described for the fork.

152. Wire Cutter, Model of 1910. Do not drop the wire cutter or otherwise subject the insulation to injury. It is brittle and may easily be chipped. If the soft rubber tips become loose or lost, they should be cemented on with rubber cement, care being taken that the surfaces to which the cement is applied are perfectly dry. If practicable, the surfaces should be cleaned with benzine or gasoline and sandpapered.

Paragraphs 153-221 have been omitted because they have no application to Infantry.

REPAIR OF ARMS, SIGHTS, AND RANGE FINDERS.

222. Repair of arms is limited primarily to the replacement of unserviceable parts. In this manner they may be continued in a serviceable condition indefinitely, but for the purposes of accounting and issue the identity of the arm is considered to rest in the numbered part—in hand arms, the blade; in firearms, the receiver. With the exception of the cavalry saber, old model, which can not be repaired within the organization, the necessary tools and parts are issued for replacement so that complete repairs may be made within the organization.

223. Automatic Machine Rifle, Caliber .30, Model of 1909. The automatic machine rifle is literally a machine, a gas engine, and as such requires unusual care, and it is subjected to unusual wear and strain. That it may be handled efficiently, the principles of its operation and its individual peculiarities must be thoroughly understood. Because of the technical considerations which arise in connection with their maintenance, automatic machine rifles and guns are placed under armament officers, and problems of repair or replacement not covered directly in the manuals or other general instructions should be referred

promptly to them in accordance with the general orders published on that subject. The disposition of parts not expendable rests with the armament officer. (A. R., par. 1538.)

References: Ordnance Department Pamphlet No. 1926, dated March 19, 1912, "Cleaning and care of rifle," pages 33-36; Ordnance Department Pamphlet No. 1926A, dated December 30, 1913, "Dismounting the rifle," pages 11-14; "Assembling the rifle," pages 14-16; "Breakages," page 17; "Malfunctioning of parts," pages 19-23.

224. Automatic Pistol, Caliber .45, Model of 1911. This pistol, like the automatic rifle, is a gas-operated machine, semiautomatic in its operation. It has relatively few parts and requires but reasonable care. The working parts must be kept clean and lightly oiled to insure proper functioning. Unserviceable parts are easily replaced. Slides which require rebluing may be exchanged by organization commanders without the action of a surveying officer.

References: Ordnance Department Pamphlet No. 1866, revised February 14, 1914, "To dismount and assemble," pages 11-13; "Important points," pages 16-17.

225. Bayonet and Bolo. The only parts likely to require replacement are the bayonet-scabbard catch, bayonet-scabbard spring, and the bayonet catch. These are replaced by removing the grips which are secured by the bayonet screws and the bayonet nut. The bolo is similarly repaired.

226. Colt Double-Action Revolver, Caliber .45, Model of 1909. This arm, which was issued only to troops serving in the Philippine Islands, is now being withdrawn from the service. Repairs are infrequent. Revolvers which are unserviceable or irreparable within the organization will be surveyed and turned in.

References: Ordnance Department Pamphlet No. 1927, revised June 30, 1913, "To dismount and assemble," pages 7-8; "Important points," pages 9-10.

227. Cavalry Saber, Model of 1913. All parts can be disassembled by removing the two grip screws and the screw at the end of the pommel. The guard which is the most likely part to require replacement can readily be replaced.

Reference: Ordnance Department Pamphlet No. 1715, pages 18-19.

Paragraph 228 has been omitted because it has no application to Infantry.

229. Rifle, Caliber .30, Model of 1903. The regular service is thoroughly familiar with the repairs and replacements hitherto authorized. They are well described in the ordnance pamphlet.

References: Ordnance Department Pamphlet No. 1923, revised March 20, 1914, "Precautions," pages 32-35; "Care of the rifle," pages 37-39; "Repairs," pages 44-45.

230. Telescopic Sights and Range Finders. These are optical instruments of great accuracy and value and as such should be handled with great care. The instructions regarding their adjustment and care are given in detail in the appropriate pamphlets. These should be followed explicitly. When disassembling is authorized it should only be done by a competent person, preferably under the supervision of an officer.

231. Telescopic Musket Sight. These sights are fitted and adjusted to a special selected rifle. It is not intended that this sight should be permanently separated from the rifle to which it belongs. In other words, the rifle and its telescopic musket sight constitute a unit. Should the sight require repairs, except as noted hereafter, or should the barrel of the special selected rifle require replacing, the rifle and sight will be surveyed and turned over to the proper supply officer for immediate shipment to the designated arsenal.

232. The rubber eye cap must not be deformed in putting the sight into its pouch. Should it become so deformed as to be unserviceable it will be

replaced, a special requisition to be submitted for the necessary eye cap. If the eye cap is not wholly ruined it may be re-formed by boiling until plastic and re-forming over a wooden form similar in shape to the inner surface of a new rubber eye cap.

Reference: Ordnance Department Pamphlet No. 1957.

233. Range Finder, Self-contained (80-centimeter). These instruments, while identical in function, may be of different models. Very delicate adjustments are of necessity a feature of these instruments; and while they have been made surprisingly rigid they require reasonable care to insure the best results. They should be intrusted only to careful and responsible persons. When difficulties are encountered which are not provided for in the pamphlet, prompt and full report should be made to the department commander.

Reference: Ordnance Department Pamphlet No. 1909 (in course of preparation).

INACCURATE RIFLES.

234. Acceptance Test. The determination of unserviceability of rifle barrels on account of inaccuracy has been by actual test since July, 1913. This test, described in Bulletin 24, 1913, has been recently amended (Bulletins Nos. 15 and 31, War Dept., 1915) to eliminate from the actual test of firing by the use of suitable gauges those barrels which experience has shown, with but few exceptions, will be entirely serviceable or unquestionably inaccurate. This should do much to eliminate the labor of testing the rifles of a regiment.

It was also found that the conditions under which the accuracy test was usually fired introduced, of necessity, conditions tending to produce inaccuracy and that the standard actually attained approached closely to that required of new rifles, so that many barrels turned in as inaccurate were entirely serviceable. The mean radius has therefore been increased to 6.5" and 13" for 300 and 500 yards, respectively.

It will usually be found most convenient and it is much to be preferred that this test be made at the end of the target season. Such an arrangement has the advantages that—

(a) The range is in commission.

(b) The performance of the rifles of the command is a matter of immediate knowledge, which should exclude from the test many of the rifles merely thought to be inaccurate.

(c) The men who fire are in the best condition by reason of their recent practice.

(d) The weather conditions are usually most favorable.

In selecting men for testing rifles officers should be selected, if practicable, or men chosen because of their known integrity and ability at slow fire.

REPLACEMENT OF INACCURATE RIFLE BARRELS.

235. Heretofore, when rifle barrels were found inaccurate according to the prescribed accuracy test (Bulletin 24, W. D., 1913, as amended), the entire rifle was replaced. Hereafter when barrels are found inaccurate by test, the procedure will be as follows:

(a) The rifles submitted for accuracy test by organizations, having been tested by the officer designated to conduct test in accordance with instructions of Bulletin 24, War Department, 1913, as amended, his report on the same, in duplicate, having been approved by the commanding officer, is presented to the proper ordnance supply officer, who will immediately submit special requisition for the necessary number of barrels and receivers, assembled, to replace the number of unserviceable barrels shown on the report.

(b) Organization commanders on the completion of the test will submit to the action of a surveying officer such rifles of the organization as are found inaccurate. No articles other than inaccurate or unserviceable rifles will appear on the survey report, and for each rifle the following information will be given: Number of rifle, arsenal, number of target seasons fired (if exact number is unknown, then the maximum number known), the mean radius of dispersion at the ranges tested (as shown by the report of test), together with any other information which would enable the surveying officer to determine if the rifle was rendered unserviceable through fair wear and tear in the service.

(c) On receipt of the barrels and receivers, assembled, the ordnance supply officer will hold them for issue until such time as it will be practicable to make the adjustment of the front sight (movable stud), and on the direction of the post or regimental commander he will issue, on the approved survey reports referred to above to the various organizations the number required as shown thereon. The unserviceable barrels and receivers will be replaced by new barrels and receivers within the organizations in accordance with the instructions given in Ordnance Department Pamphlet No. 1923 (revised Mar. 20, 1914, pp. 36-37); the former will be turned over to the supply officer for shipment to an arsenal.

236. Due to the tendency of wood to change its shape under varying conditions of moisture, in assembling stocks to barrel and receivers, the following precautions should be taken:

(a) **See that the Upper Band Does Not Bind.** If the upper band binds tightly, scrape the stock until it slips on easily. If it is difficult to insert the upper band screw, ream out the hole in the stock until the screw slips readily into place.

(b) **See that the Receiver Bears on the Stock in Rear of the Recoil Lug.** With the rear guard screw tight, loosen and tighten the front guard screw. If there is an appreciable amount of space between the receiver and the stock, shim up with paper or thin cardboard on the flat surface in rear of the recoil lug until good bearing is obtained. It would be well to inspect rifles that have been long in storage for similar defects.

237. The Adjustment of the Front-sight Movable Stud. When it becomes opportune to make this adjustment for the rifles found inaccurate during the year, an officer should be especially selected, by reason of his interest in and knowledge of shooting, to supervise this work. The necessary number of selected riflemen and pitmen should be detailed to assist in the work, together with such artificers or mechanics as are required.

238. A range of 100 or 200 yards is required—a 200-yard range is preferred. Targets should be prepared by painting on the back of standard targets black crosses with vertical and horizontal arms approximately 20 inches long. If the targets are to be used on a 100-yard range, the width of the vertical and horizontal arms should be 2 inches; if on a 200-yard range, these arms should be 4 inches wide. These widths at their respective ranges correspond to one-half point windage. Starting with the movable stud centrally located, it should be adjusted until four out of five shots lie within the vertical lines. This should give a mean error of probably less than one-fourth point of windage. The firing should be done under favorable weather conditions and everything done to insure accuracy of firing. This adjustment of the front sight is not difficult and should seldom require more than 10 shots per rifle. If it is remembered that a movement of the movable stud corresponding to one-half point of windage moves the center of impact the width of the vertical line at the target, the proper amount to move the front sight can readily be determined and verified by firing a string of shots.

239. The movable stud having been properly adjusted, its position should be immediately marked by a pencil mark across the joint. This marking should, as soon as it is practicable, be made permanent by nicking with the five-sixteenths-inch cold chisel, furnished in the kit of tools for securing the front sight. The movable stud is issued undrilled. To secure it in place it is necessary to drill a hole for the front-sight screw. For this purpose the kit of tools is issued each post or other supply officer.

240. **Securing the Movable Stud.** To secure the movable stud proceed as follows:

(a) With the vise of the arms repair chest secured to a bench or box and its jaws protected by cloth or copper vise clamps, support the butt of the rifle on the bench and grasp the muzzle at the fixed stud in the vise.

(b) See that the movable stud has not been moved, as shown by the chisel mark, and, with one of the small drills securely clamped in the chuck of the breast drill, drill a hole in the movable stud approximately three-sixteenths inch deep, using the hole already drilled in the fixed stud as a jig or guide.

CAUTION. Be careful not to burr the thread in the fixed stud. Keep the drill well oiled. Put little pressure on the drill until it has been well started or the drill may be broken or the stud moved.

(c) Change the drill for a reamer and ream out the hole already drilled.

Caution. Feed the reamer in very slowly or it may wedge and break.

(d) On the possibility that the threads in the fixed stud have been injured in drilling, the thread should be cleaned out with one of the taps, using the tool handle of the arms repair chest as a handle.

(e) Screw the front-sight screw well home.

241. The ammunition required for adjusting front sight will be furnished by the organization to whom the rifles belong.

War Department,

Office of the Chief of Ordnance,

Washington, July 12, 1915.

**DESCRIPTION AND RULES
FOR THE MANAGEMENT OF THE
UNITED STATES RIFLE
CALIBER .30, MODEL OF
1903**

**War Department,
Office of the Chief of Ordnance,
Washington, January 22, 1917.**

**This manual is published for the information and government of the Regular
Army and National Guard of the United States.**

By order of the Secretary of War:

**WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.**

DESCRIPTION AND RULES FOR THE MANAGEMENT OF THE UNITED STATES RIFLE

COMPONENT PARTS OF RIFLE.

(Ninety-three in number.)

| | |
|--------------------------|---------------------------|
| Barrel: | Firing Pin Sleeve. |
| Barrel. | Floor Plate. |
| Base Pin. | Floor Plate Catch. |
| Base Spline. | Floor Plate Pin. |
| Fixed Base. | Floor Plate Spring. |
| Fixed Stud. | Follower. |
| Stud Pin. | Front Sight: |
| Bolt: | Front Sight. |
| Bolt. | Front Sight Pin. |
| Extractor Collar. | Front Sight Screw. |
| Bolt Stop: | Movable Stud. |
| Bolt Stop Pin. | Guard. |
| Bolt Stop Spring. | Guard Screw Bushing. |
| Butt Plate: | Guard Screw, Front. |
| Butt Plate. | Guard Screw, Rear. |
| Butt Plate Cap. | Hand Guard. |
| Butt Plate Pin. | Hand Guard Clips (2). |
| Butt Plate Screw, Large. | Lower Band. |
| Butt Plate Screw, Small. | Lower Band Screw. |
| Butt Plate Spring. | Lower Band Spring. |
| Butt Plate Spring Screw. | Lower Band Swivel. |
| Butt Swivel: | Magazine Spring. |
| Butt Swivel. | Mainspring. |
| Butt Swivel Pin. | Rear Sight: |
| Butt Swivel Plate. | Base Spring. |
| Butt Swivel Screws (2). | Drift Slide, .05 Peep. |
| Cut-off: | Drift Slide Pin. |
| Cut-off. | Joint Pin. |
| Cut-off Plunger. | Leaf. |
| Cut-off Screw. | Movable Base. |
| Cut-off Spindle. | Slide. |
| Cut-off Spring. | Slide Binding Screw. |
| Ejector. | Slide Cap. |
| Ejector Pin. | Slide Cap Pin. |
| Extractor. | Slide Cap Screw. |
| Firing Pin: | Windage Screw. |
| Cocking Piece. | Windage Screw Collar. |
| Firing Pin Rod. | Windage Screw Knob. |

Rear Sight—Continued.
 Windage Screw Pin.
 Windage Screw Spring.
 Receiver.
 Safety Lock:
 Safety Lock Plunger.
 Safety Lock Spindle.
 Safety Lock Spring.
 Safety Lock Thumb Piece.
 Sear.
 Sear Pin.
 Sear Spring.
 Sleeve:
 Sleeve.

Sleeve—Continued.
 Sleeve Lock.
 Sleeve Lock Pin.
 Sleeve Lock Spring.
 Stacking Swivel.
 Stacking Swivel Screw.
 Stock.
 Stock Screw.
 Stock Screw Nut.
 Striker.
 Trigger.
 Trigger Pin.
 Upper Band.
 Upper Band Screw.

APPENDAGES.

Drift Slide No. 4.
 Drift Slide No. 6.
 Front Sight Cover.
 Oiler and Thong Case:
 Oil Dropper.
 Oiler Cap Washer.
 Oiler Collar.
 Thong Case Body.
 Thong Case Cap.

Oiler and Thong Case—Continued.
 Thong Case Pad.
 Thong Case Partition.
 Thong:
 Thong Cord.
 Thong Tip.
 Thong Weight.
 Thong Brush.
 Spare Part Container.

ACCESSORIES.

Cleaning Rod, Barrack; Model of 1916.
 Collar.
 Knob.
 Rod.
 Sleeve.
 Cleaning Rod, Model of 1916:
 Brush Section.
 Handle Section.
 Knob.
 Collar.

Cleaning Rod, Model of 1916—Con.
 Sleeve.
 Second Section.
 Third Section.
 Cleaning Rod Case.
 Screw-Driver:
 Screw-Driver Blade, Large.
 Screw-Driver Blade, Small.
 Screw-Driver Pin.
 Screw-Driver Rivet.

COMPONENT PARTS OF BAYONET, MODEL OF 1905.

(Twelve in number.)

Bayonet Blade.
 Bayonet Catch.
 Bayonet Grip, Left.
 Bayonet Grip, Right.
 Bayonet Guard.
 Bayonet Nut.

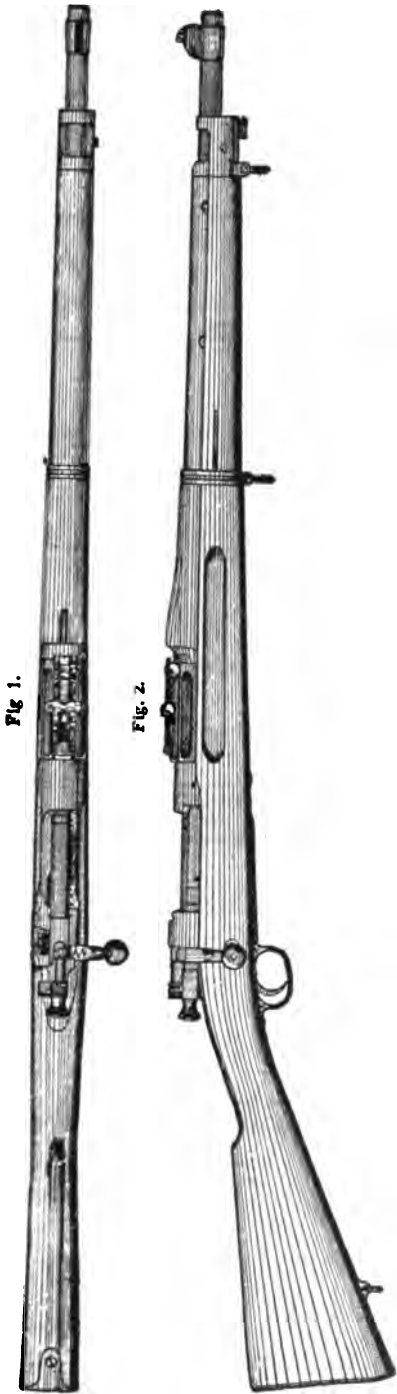
Bayonet Rivets (2).
 Bayonet Scabbard Catch.
 Bayonet Screw.
 Bayonet Spring.
 Bayonet Washer.

DESCRIPTION AND NOMENCLATURE OF RIFLE.

The Rifle is shown in Figs. 1 and 2.

The Barrel, with the Fixed Stud and Fixed Base attached, is shown in Fig. 3. It is 24.006 inches in length, and the rifling consists of four plain grooves, 0.004 inch deep. The grooves are three times the width of the lands. The twist is uniform, one turn in 10 inches.

The muzzle is rounded to protect the rifling, and the tenon at the rear is threaded for the purpose of securing the receiver to the barrel.



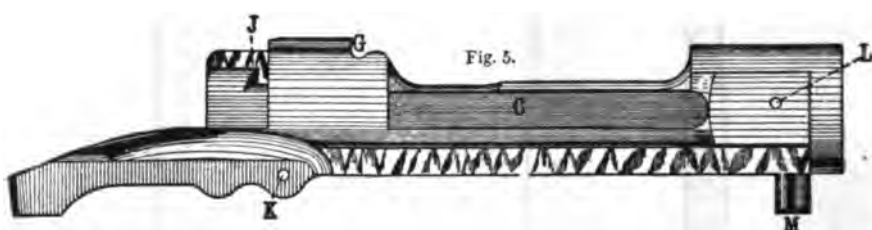
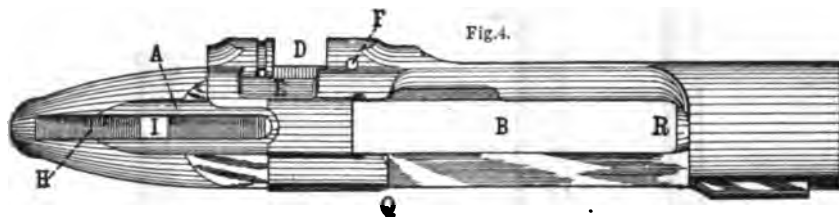
United States Rifle, Caliber .30, Model of 1903.

Fig. 3.

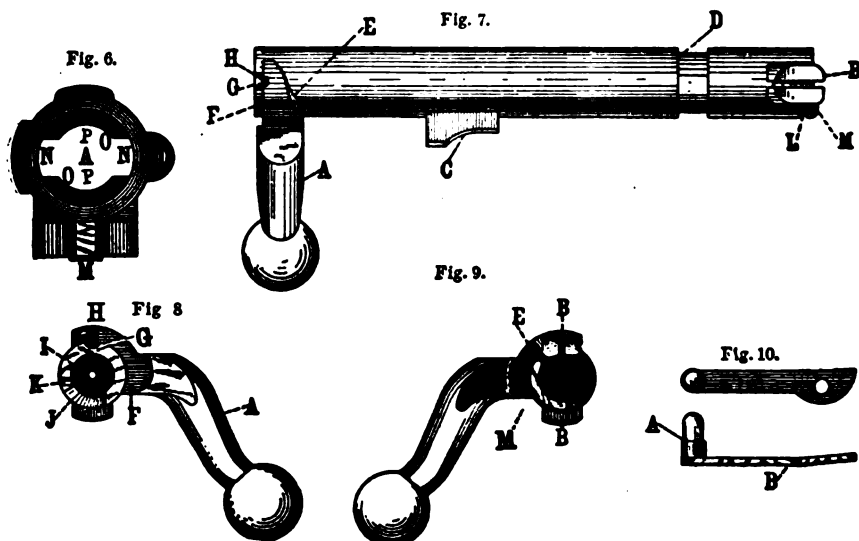


On the top in rear of the fixed stud is stamped the Ordnance escutcheon, the initials of the place of manufacture, and the month and year. Those manufactured prior to 1906 are stamped "05" without the month.

The removal from the barrel of the fixed stud, fixed base, or receiver should never be attempted except by competent workmen, in armories fully equipped with the necessary tools and appliances.



The Receiver, Fig. 4, top view, Fig. 5, right side view, and Fig. 6, front end view, has the hole A, called the well, which receives the bolt; the magazine opening B; the channel C, for the top locking lug; the cut-off seat D; the cut-off thumb piece recess E; ejector pin hole F; clip slots G; cocking piece

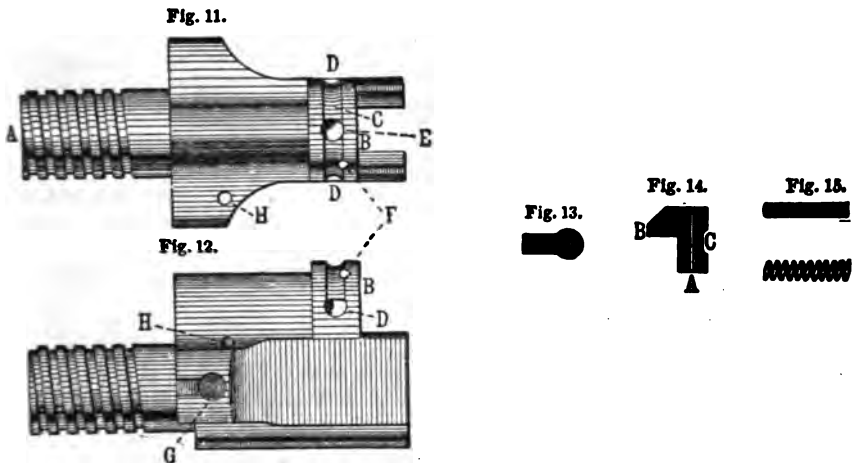


groove H; sear nose slot I; extracting cam J; sear pin hole K; gas escape hole L; recoil lug M, in which is the hole for the front guard screw; the recesses for the bolt locking lugs N N; the locking cams O O; the locking shoulders P P; the safety shoulder Q; and the cartridge ramp R.

On the upper surface of the front end is stamped the serial number of the rifle and the place of manufacture.

The Bolt, Fig. 7, top view, Fig. 8, rear view, and Fig. 9, front view, has the handle A; the locking lugs B B, which sustain the shock of the discharge, the one on top being slotted to allow the passage of the point of the ejector; the safety lug C, which comes into play only in the event of the locking lugs yielding under powder pressure; the extractor collar groove D; extracting cam E; sleeve clearance F; safety lock spindle notch G; sleeve lock notch H; firing pin hole I; cocking cam J; cock notch K; extractor tongue groove L; gas escape hole, not shown in cut, between the locking lugs; the rim M; and two small circular notches, not shown in cut, on the left side of the slotted locking lug; this side of the lug rotates 90° when the bolt is drawn back for loading, and one of the notches engages with the bolt stop pin A, Fig. 10, in either single or magazine loading, retaining the bolt in place in the open position.

The Bolt Stop, Fig. 10, consists of the pin A and the flat spring B, riveted together in manufacture. The pin projects through its hole in the receiver just in front of the cut-off opening, and is held in place and operated by the spring which fits into a slot in the receiver in the rear of the magazine.



The Sleeve, Fig. 11, top view, and Fig. 12, left side view, has the barrel A, which is threaded for the purpose of securing the sleeve to the bolt; the safety lock seat B; the safety lock plunger groove C; the recesses D, for retaining the safety lock when turned to the right or left; the recess E, for retaining safety lock in dismounting bolt mechanism; the bevel F, for dismounting the safety lock from the sleeve; the sleeve lock recess G; and the sleeve lock pin hole H. There are also the safety lock spindle and firing pin holes, the cocking piece groove and the undercut for the rear end of the bolt. None of the last four is shown in the cut.

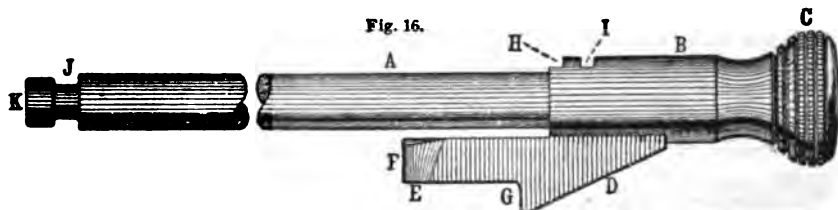
The Sleeve Lock, Fig. 13, left end view, and Fig. 14, under side view, has the spindle A, which is bored out to receive the sleeve lock spring; the latch B, and the sleeve lock pin groove C. It is designed to prevent accidental turning of the sleeve when the bolt is drawn back.

The Sleeve Lock Spring and Pin are shown in Fig. 15.

The Firing Pin, Fig. 16, consists of the firing pin rod A and the cocking piece B, which are made separately, the former being screwed into the latter and riveted in assembling; the length of the rod is so adjusted that when the front end of the cocking piece bears against the interior shoulder of the sleeve

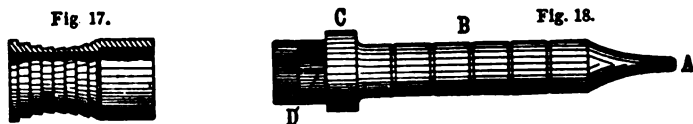
the striker point will project the proper distance beyond the face of the bolt. Other parts are the knob C, lug D, cocking cam E, nose F, sear notch G, locking shoulder H, locking groove I, neck J, and head K.

The Firing Pin Sleeve, Fig. 17, sectional view, fits over the front end of the firing pin and the rear end of the striker, covering the joint hole, and prevent-



ing accidental separation of the firing pin and striker; its rear end forms the front bearing for the mainspring.

The Striker, Fig. 18, has the point A, the body B, the shoulder C, and the joint hole D, by which it is secured to the firing pin. The annular grooves on



the striker retain the lubricating oil and prevent the accumulation of rust thereon.

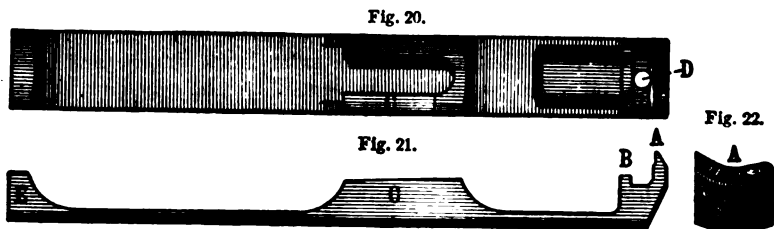
The Mainspring is shown in Fig. 19.

The Extractor, Fig. 20, inside view, Fig. 21, top view, and Fig. 22, front end

Fig 19.



view, has the hook A, by which the cartridge case is extracted from the chamber; the tongue B, which rides in its groove at the front end of the bolt; the lug C C, which is undercut to receive the ears on the lugs of the extractor collar; the gas escape hole D, and the back rest E, which is curved to fit the circle of the bolt.

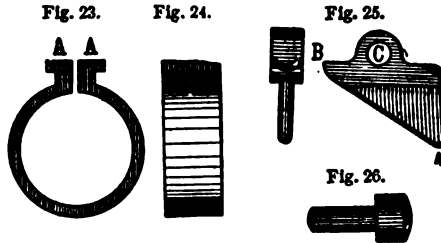


The Extractor Collar, Fig. 23, end view, and Fig. 24, side view, has the ears A A, which fit in the undercuts on the inside of the extractor, by which means and with the assistance of the extractor tongue and groove the extractor is held in place. The collar is bent into position on the bolt in manufacture, and should not be removed unless proper tools are at hand to replace it.

The Ejector, Fig. 25, has the point A, the heel B, and the ejector pin hole C. It is hinged on the ejector pin in its recess in the left side of the receiver, ejection being accomplished by the slotted lug on the bolt coming in contact with the heel when the bolt is drawn to the rear.

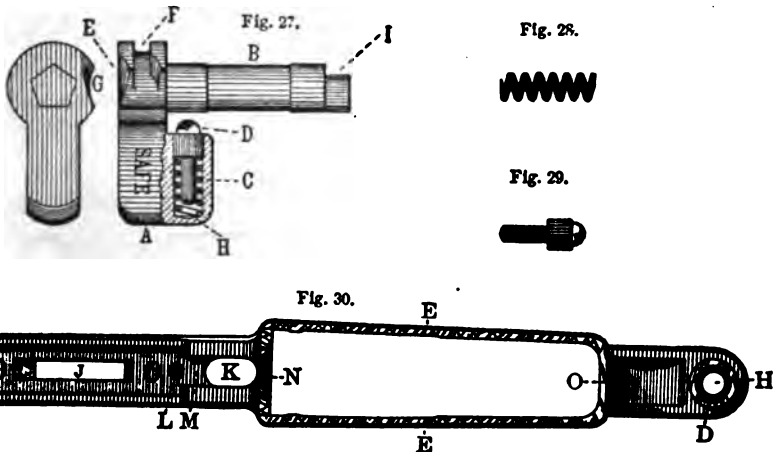
The head of the Ejector Pin, Fig. 26, is slotted for the purpose of providing sufficient tension to hold the pin in its place during the process of assembling.

The Safety Lock, Fig. 27, rear and side views, consists of thumb piece A, the spindle B, spring C, and plunger D, assembled in manufacture. It has the cam E, the locking groove F, the cocking piece groove G, the plunger hole H,



and the bolt clearance I. The spring and plunger are shown in Figs. 28 and 29, respectively; the latter, projecting into its groove in the sleeve, under the action of the spring, prevents any movements of the safety lock to the rear; and when in the recesses in the groove retains the safety lock turned either to the right or left or in the vertical position for dismounting bolt mechanism. The words "Safe" and "Ready" impressed on opposite sides of the thumb piece indicate that the firing mechanism is locked or ready for firing.

The Guard, of which the body of the magazine forms a part, is shown in Fig. 30, top view, and Fig. 31, right side view. Its parts are: guard bow A,

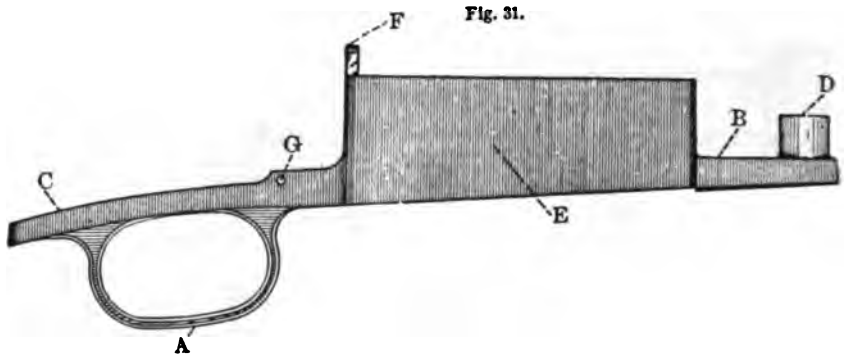


front tang B, rear tang C, front guard screw stud D, magazine walls E, rear end of magazine F, floor plate pin hole G, front guard screw hole H, rear guard screw hole I, trigger slot J, floor plate lug slot K, floor plate spring hole L, floor plate catch slot M, ramp N, and the lightening cut O.

The Guard Screw Bushing, Fig. 32, fits tightly into the stock between the receiver and the rear tang of guard, and serves as a stop for the screw, preventing its being screwed down tight enough to bend the guard.

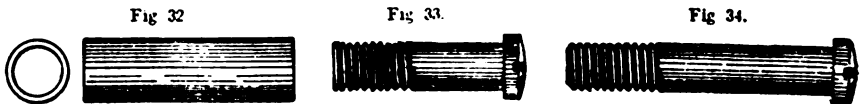
The Guard Screws, front and rear, Figs. 33 and 34, secure the guard to the receiver.

The Floor Plate, Fig. 35, inside view, and Fig. 36, sectional view, has the tenon A, which fits into a groove at the front end of the magazine and with the assistance of the floor plate catch retains the floor plate securely in its place at the bottom of the magazine; the lug B, which is slotted to receive the floor plate catch and has a tenon on its front end which fits into a slot in the



magazine; the cavity C, through which the floor plate catch is released by means of the end of a bullet; the magazine spring recess D, and the magazine spring seat E.

The Floor Plate Catch, Fig. 37, hinges on the Floor Plate Pin, Fig. 38, and



is operated by the Floor Plate Spring, Fig. 39. Its function is to retain the floor plate in its seat.

The Magazine Spring is shown in Fig. 40; the smaller end slides into the undercuts on the follower, and the larger end fits in the same way into the undercuts in the floor plate.

Fig. 35.

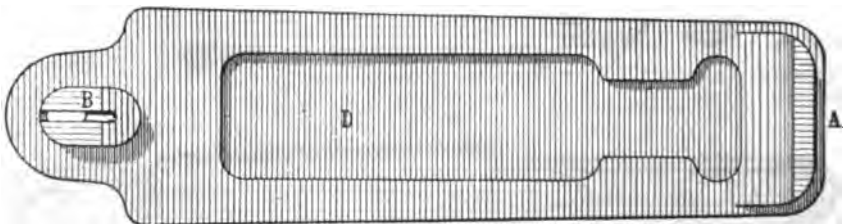
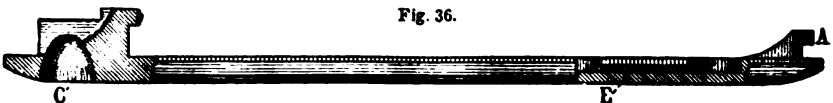
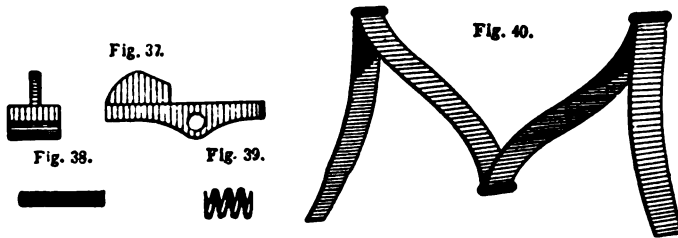


Fig. 36.



The Follower, Fig. 41, top view, and Fig. 42, right side view, has the rib A, which serves to locate the cartridges in the magazine and guides the last cartridge into the chamber; the front stop for the magazine spring B; the rear stop for magazine spring C; and the lugs D, in which are the undercuts for the magazine spring.

The Cut-off, Fig. 43, side view, Fig. 44, rear view, and Fig. 45, outer edge, has the thumb piece A, body B, magazine fire groove C, dismounting groove D, cut-off spindle hole E, cut-off plunger hole F, cut-off screw hole G, and the serrature H. The words on opposite sides of the thumb piece indicate to the



firer whether the magazine is "on" or "off." When the cut-off thumb piece is turned down, indicating "off," and the bolt is drawn to the rear, the rear end

Fig. 41.

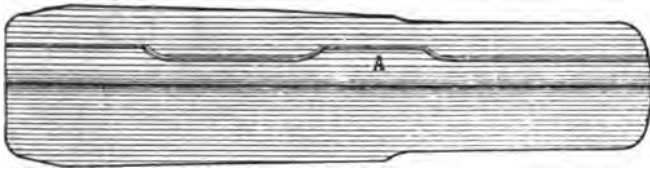
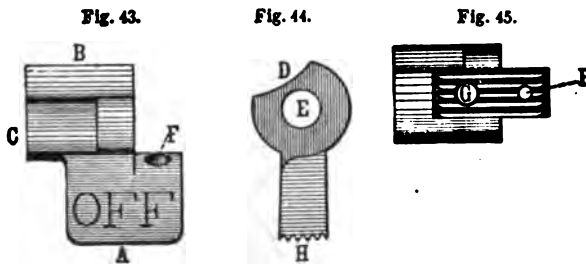


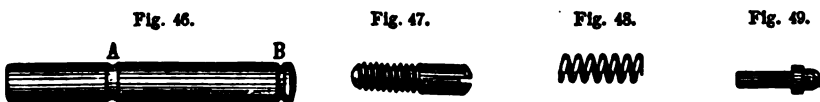
Fig. 42.



of the slotted locking lug stops against the projecting front end of the cut-off body. The piece is then ready for single loading. When the cut-off thumb



piece is turned up, indicating "on," and the bolt is drawn to the rear, the rear end of the slotted locking lug stops against the shoulder at the rear end of



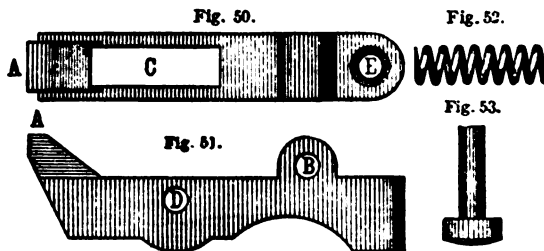
the magazine fire groove. The piece is then ready for loading from the magazine. When the cut-off thumb piece is in the intermediate position, the dismounting groove D permits the bolt to be drawn entirely out of the receiver.

The Cut-off Spindle, Fig. 46, has the cut-off screw groove A and the dismounting groove B.

The Cut-off Screw, Fig. 47, goes through the cut-off from the outer edge of the thumb piece, its end fitting into the groove in the cut-off spindle.

The Cut-off Spring, Fig. 48, and the Plunger, Fig. 49, retain the cut-off in its seat in the receiver with the thumb piece turned up for loading from the magazine, down for single loading, or in the intermediate position for permitting the removal of the bolt. The spindle head works in a groove in left side of receiver, having three small notches corresponding to the above positions of the cut-off.

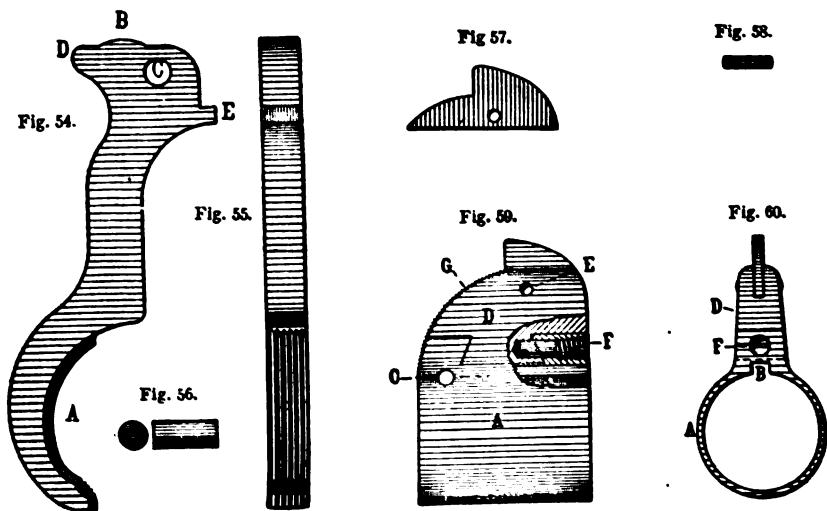
The Sear, Fig. 50, top view, and Fig. 51, right side view, has the sear nose A,



pin hole B, trigger slot C, trigger pin hole D, and sear spring seat E, which is occupied by the Sear Spring, Fig. 52, its upper end bearing against the receiver.

The Sear Pin, Fig. 53, hinges the sear in the receiver.

The Trigger, Fig. 54, right side view, and Fig. 55, front view, is hinged in its slot in the sear by the Trigger Pin, Fig. 56. It has the finger piece A, which is knurled to prevent slipping of finger; the bearing B; trigger pin hole C; heel D; and the stop E.



The Front Sight, Fig. 57, is secured in its slot in the movable stud by the Front Sight Pin, Fig. 58; the pin is tapering, and its small end is driven in from the right and the ends upset to prevent accidental removal.

The Fixed Stud and Movable Stud, with Front Sight in place, are shown assembled, Fig. 59, right side view, and Fig. 60, front view. The Fixed Stud A has a slot B, which, bearing on a lug on the upper side of the barrel, prevents

lateral displacement of the stud; and hole C, for the Stud Pin, which prevents longitudinal displacement of the stud. The Movable Stud D has the front sight pin hole E. It is held by the undercut slot in the fixed stud and secured from lateral displacement by the Front Sight Screw F. The recess for this screw is not drilled in the movable stud until the correct position of the movable stud has been determined. The rear face G, of both the fixed stud and movable stud, is serrated to prevent any reflection of light from this surface interfering with the aiming.

Fig. 61.

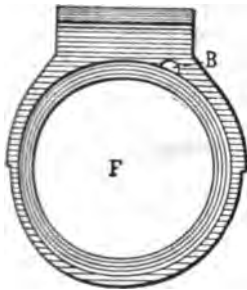
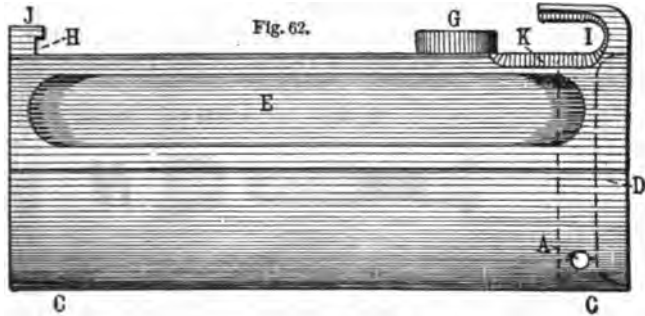


Fig. 62.



The Fixed Base, Fig. 61, rear end view, and Fig. 62, right side view, has the holes A and B, for the base pin and base spline, respectively, by which it is firmly secured to the barrel and lateral and longitudinal movement prevented; the undercut D, for the tenon of the hand guard; the lightening cuts E; the barrel hole F; the pivot lug G, for the movable base; the undercut H, for the lip on the rear end of the movable base; the undercut I, for the windage screw and the lip on the front end of the movable base; the lug J, on the top

Fig. 63.

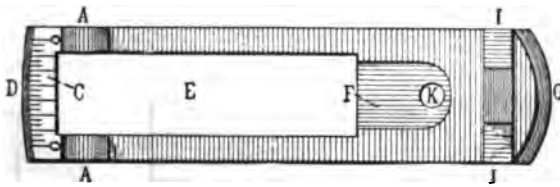


Fig. 64.



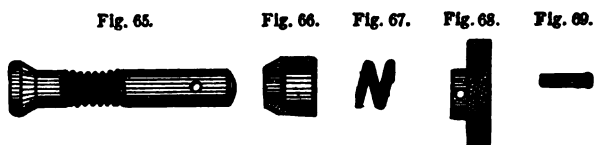
of which are two zero marks for the wind gauge graduations, and the chamfer K, the seat for the windage screw collar. This chamfer is carried to the rear to permit of the assembling of the fixed base and the windage screw. On the left side of the front lug the chamfer corresponding to K is merely a conical recess for the head of the windage screw.

The Base Spline locates and prevents the base from turning on the barrel.

The Base Pin, similar to the base spline, prevents longitudinal movement of the base on the barrel.

The Movable Base, Fig. 63, top view, and Fig. 64, right side view, has the ears A, in which are the holes B, for the joint pin, which serves as a hinge for the leaf; the wind gauge graduations C, each point of which corresponds to a lateral deviation of 4 inches for each 100 yards; the lip D, which fits in the undercut in the rear end of the fixed base; the spring opening E; the spring seat F, which is undercut to admit the lip on the front end of the base spring; the lip G, in which is a worm gear for the engagement of the windage screw; the pivot hole H, for the pivot lug on the fixed base, and the shoulders I, on which the front end of the leaf rests when down. The hole K is made for convenience in manufacture.

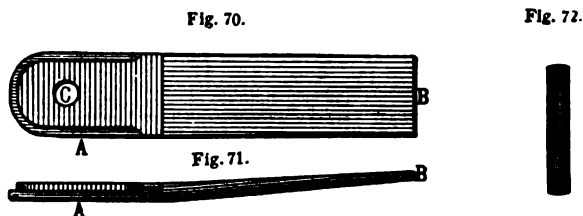
The Windage Screw consists of the screw, collar, spring, knob, and pin, Figs. 65, 66, 67, 68, and 69, respectively. The taper head of the screw fits into



the conical recess in the left side, and the taper of the collar into the chamfer in the right side of the fixed base; the thread on the screw engages the worm gear in the lip of the movable base. Under the action of the spring, lost motion due to wear is prevented between the windage screw and the movable base and between the windage screw and the front lug of the fixed base.

The Base Spring, Fig. 70, top view, and Fig. 71, side view, has the lip A, which fits in the undercut in its seat in the movable base; the free end B, and the hole C, by which, with the aid of a drift made for the purpose, the spring is assembled or dismounted by driving it into or out of its seat in the movable base.

The Joint Pin, on which the leaf hinges, is shown in Fig. 72. It is cylindrical, with rounded ends, and fits tightly in the ears of the base.



The Leaf, Fig. 73, top view (when down), and Fig. 74, right side view, has the joint A, in which is the joint pin hole; the rib B; the undercut C, for the drift slide, and the sighting notch D. The free end of the base spring bears against the lower end of the leaf and maintains it in either its lowered or raised position. The leaf is graduated from 100 to 2,850 yards. The lines extending across one or both branches of the leaf are 100-yard divisions, the longer of the short lines are 50-yard and the shorter lines 25-yard divisions.

The Drift Slide, .05 Peep, Fig. 75, top view (leaf down), has the peephole A, 0.05 inch in diameter; the field view B; the drift slide pin C, riveted to the slide in manufacture, and the notches D. The lines on either side of the peephole and lower notch enable the drift slide to be accurately set at any desired graduation on the leaf.

As the slide is moved up or down on the leaf the drift slide moves with it and at the same time has a lateral movement in the undercut between the branches of the leaf, thus automatically correcting for drift. This movement corrects for all drift up to 600 yards, but for only part of the drift beyond that range.

Fig. 73.

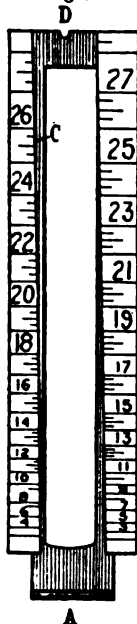


Fig. 74.



Fig. 75.



With the leaf up, ranges from 100 to 2,350 yards can be obtained through the peephole; from 100 to 2,450 yards through the lower notch at the bottom of field view; and from 1,400 to 2,750 yards through the upper notch in the upper edge of the drift slide.

Fig. 76.



Fig. 77.



Fig. 78.



The 2,850-yard range is obtained through the sighting notch in the upper end of the leaf.

With the leaf down and using the battle sight notch in slide cap the sights are set for 547 yards or battle line firing for the down position of the slide.

Fig. 79.



Fig. 80.



Fig. 81.



Fig. 82.



Fig. 83.

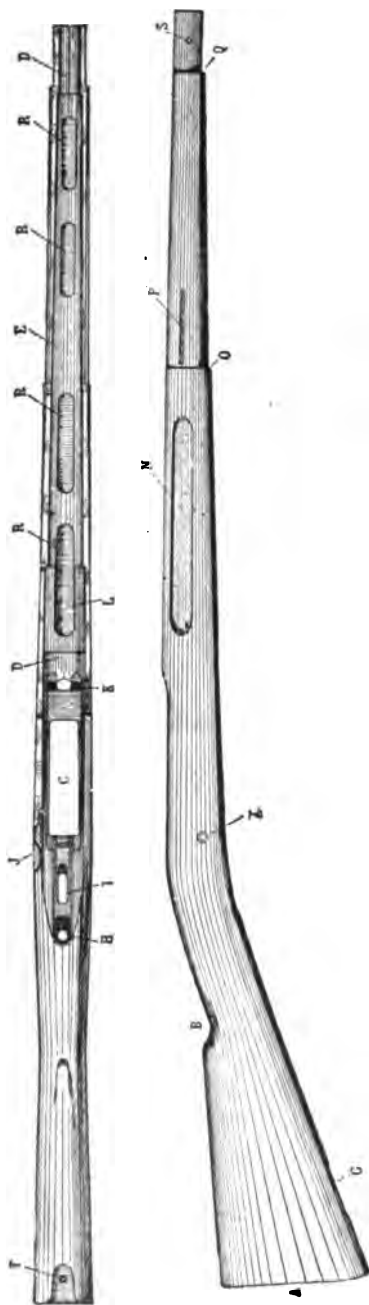


The Slide, Fig. 76, top view (leaf down), Fig. 77, front view (leaf down), and Fig. 78, right end view, has the leaf slot A; the clearance B, for the open notch in the drift slide; the slide cap screw hole C; slide binding screw hole D; slide cap pin hole E, and the dovetailed groove F, for the slide cap.

The Slide Cap, Fig. 79, top view (leaf down), and Fig. 80, cross section,

Fig. 84.

Fig. 85.



has the battle sight notch A, slide cap screw hole B, slide cap pin hole C, the groove D, for the drift slide pin; and the clearance E, for the upper notch in the drift slide.

The cap is attached to the slide by entering the dovetailed groove at the right and by the slide cap screw at the left, thus securing the slide to the leaf. The Slide Cap Screw is shown in Fig. 81.

The Slide Cap Pin, Fig. 82, is inserted in the pin hole E, in the slide, Fig. 76,

Fig. 86.



Fig. 87.



Fig. 88.



and fitting into a groove in the Slide Binding Screw, Fig. 83, prevents the accidental removal of the latter.

The Stock is shown in Fig. 84, top view, and Fig. 85, right side view. The parts are the butt A; small B; magazine well C; barrel bed D; air chamber E, which reduces the charring effect of a heated barrel on the stock; hole for

Fig. 89.

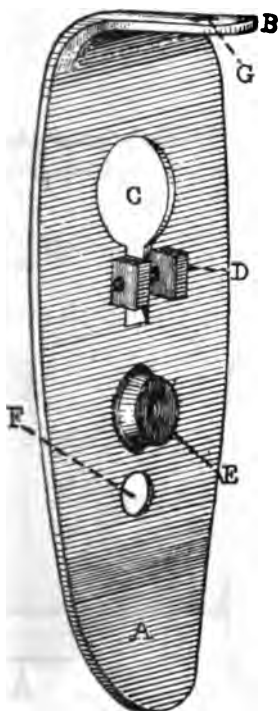


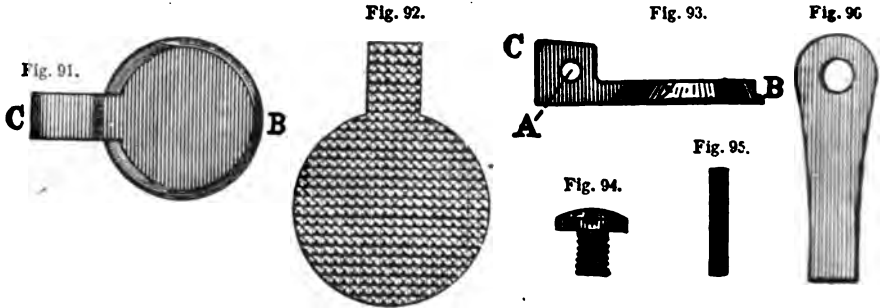
Fig. 90.



butt plate screw, small, and seat for the butt plate tang F; butt swivel plate seat G; mortise for receiver tang lug and hole for rear guard screw H; mortise for sear and slot for trigger I; cut-off thumb piece recess J; mortise for recoil lug on receiver K; bed for fixed base L; grasping grooves N; shoulder for lower band O; bed for lower band spring P; shoulder for upper band Q;

channels for decreasing weight R; upper band screw hole S; and the stock screw hole T. The large hole in the butt is for decreasing weight, and the smaller one is a pocket for the combination oiler and thong case or spare part container.

The initials of the inspector and the year of fabrication are stamped on the left side in the rear of the cut-off thumb piece recess.



The Hand Guard, Fig. 86, right side, and Fig. 87, bottom or inner surface, has the swell A, for the protection of the rear sight; the shoulder B, for the lower band; the shoulder C, for the upper band; the rear tenon D, which enters the undercut in the fixed base; the front tenon E, which enters the undercut in the upper band; the clearance F, for the windage screw knob; air

Fig. 97.

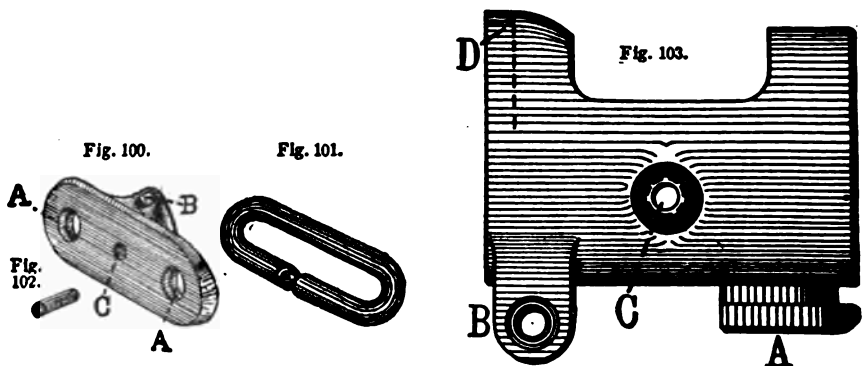
Fig. 98.

Fig. 99.



chamber H, and recess I, for the Hand Guard Clips which are shown in Fig. 88. The hole shown in the cut near the rear end of the inner surface is made for convenience in manufacture. At the swell A a groove is cut for sight clearance.

The Butt Plate is represented in Fig. 89 and Fig. 90. The parts are toe A;



tang B; cap hole C; cap ears D, through which are the pin holes; spring lug E; hole for butt plate screw, large, F; and hole for butt plate screw, small, G. A notch is cut into the edge of the cap hole to facilitate the opening of the cap. For this purpose the flange of the head of a cartridge case can be used. The butt plate is checked for the purpose of insuring a firm seat at the shoulder in firing.

The Butt Plate Cap, Fig. 91, Fig. 92, and Fig. 93, has the pin hole A and the thumb notch B. The cap is hinged between the ears of the butt plate on the butt plate pin and is retained either closed or open by the free end of the Butt Plate Spring, Fig. 96, which bears on the heel C. The cap is checked to match with the butt plate.

The Butt Plate Pin, Fig. 95, after being driven into the holes in the ears of the butt plate and cap, has its ends slightly upset.

Fig. 104.



Fig. 105.

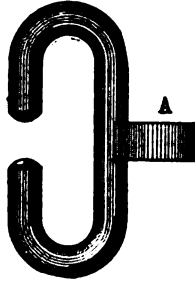
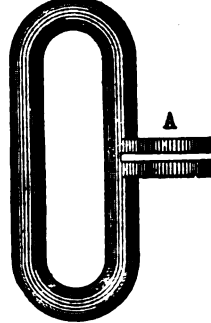


Fig. 106.



Fig. 107.



The Butt Plate Spring Screw, Fig. 94, secures the spring to the lug on the butt plate and is firmly screwed against the spring.

The Stock Screw and Nut, Fig. 97, are assembled transversely through the stock between the magazine well and slot for trigger. The thread end of stock screw is upset when in place.

The large and small Butt Plate Screws, Figs. 98 and 99, secure the butt plate to the stock.

The Butt Swivel includes the plate, swivel, and pin assembled.

Fig. 108.

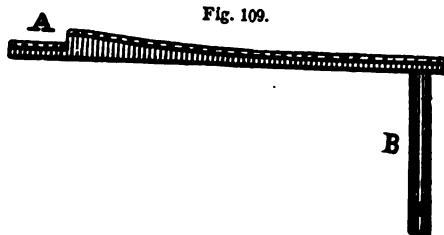
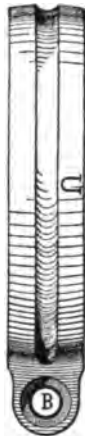
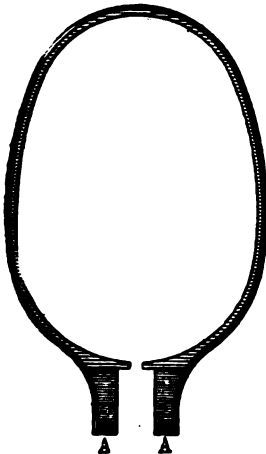


Fig. 109.

The Butt Swivel Plate, Fig. 100, has the holes A for the swivel screws; B for the swivel, and C for the swivel pin.

The Butt Swivel, Fig. 101, is retained in the plate by the Butt Swivel Pin, Fig. 102.

The Butt Swivel Screws are the same as the butt plate screw small (see Fig. 98).

The Upper Band, Fig. 103, has the bayonet lug A; the ears B, in which are the holes for the stacking swivel screw; the upper band screw hole C, and the undercut D, for the front tenon on the hand guard.

The Upper Band Screw, Fig. 104, secures the band to the stock, the thread under the head engaging the hole in right side of the band.

The Stacking Swivel, Fig. 105, is hinged by the lug A between the ears B, of the upper band, on the Stacking Swivel Screw, which is like the screw shown in Fig. 106, but slightly longer. The threaded end of the screw is upset, after assembling, to prevent its being lost.

The Lower Band Swivel, Fig. 107, is hinged by its lug A, between the ears of the lower band, on the Lower Band Screw, Fig. 106. The threaded end of the screw is upset when in place.

The Lower Band, Fig. 108, has the ears A and the screw holes B; the front or upper end is designated by the letter "U." The lower band and swivel are split between the ears in order to give better adjustment to the stock and hand guard and permit removal of the band without marring the stock.

The Lower Band Spring, Fig. 109, has the notch A, which holds the band in place, and the spindle B, which retains the spring in the stock.

THE BAYONET, MODEL OF 1905, AND BAYONET SCABBARD.

The Bayonet, Model of 1905, is shown in Fig. 110, right side view, with guard and tang, cross-sectioned, and right grip removed, and in Fig. 111, upper or back view, with blade cut off a short distance from the guard.

The blade A, the tang B, and the pommel C are forged in one piece; the front or lower edge is sharp along its entire length and the back for a distance of 5 inches from the point.

The blade is stamped on its left side with the ordnance escutcheon and the initials of the place and year of manufacture, and on the right side with the letters "U. S." and the serial number.

Immediately in the rear of the guard D the tang swells and is recessed to receive the scabbard catch E and the bayonet spring F. The swell in the tang also serves as a seat for the guard, which is riveted to the blade in manufacture.

The opening in the tang and pommel for the bayonet catch H connects with the recess in the swell of the tang and allows the front end of the bayonet catch to enter its seat in the bayonet scabbard catch. The undercut groove I receives the stud on the upper band when the bayonet is fixed, the bayonet being held in place by the bayonet catch projecting through the hole K.

The Bayonet Guard, Fig. 112, rear view, has the barrel hole A; the mortise B, for the blade; the cut C, for the bayonet scabbard catch and scabbard mouthpiece hook; and the clearance cut D, for the scabbard mouthpiece hook. There are also two holes for the bayonet rivets not shown in cut, by means of which the bayonet guard is riveted to the blade.

The Bayonet Scabbard Catch, Fig. 113, side view, has the thumb piece A; the hook B, which retains the bayonet in the scabbard by engaging the scabbard mouthpiece hook; and the hole C, which receives the point of the bayonet catch.

The Bayonet Spring is shown in Fig. 114.

The Bayonet Catch, Fig. 115, side view, has the point A; the hole B, which is a clearance for the bayonet screw; and the hook C, which, projecting from the hole K, in the pommel, engages the bayonet lug on the upper band and retains the bayonet in its place on the rifle.

The Bayonet Grip, Right, outside view, is shown in Fig. 118. The hole is counterbored to receive the Bayonet Washer, Fig. 119. A corresponding hole

Fig. 110.

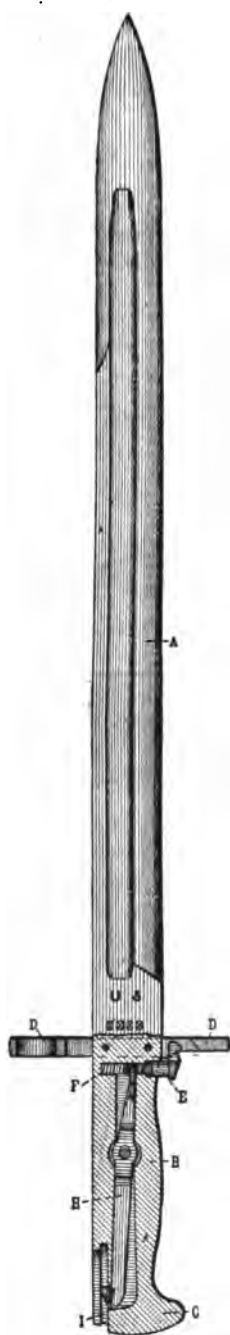
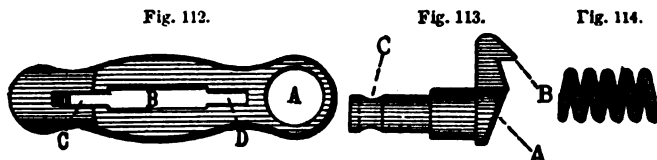


Fig. 111.

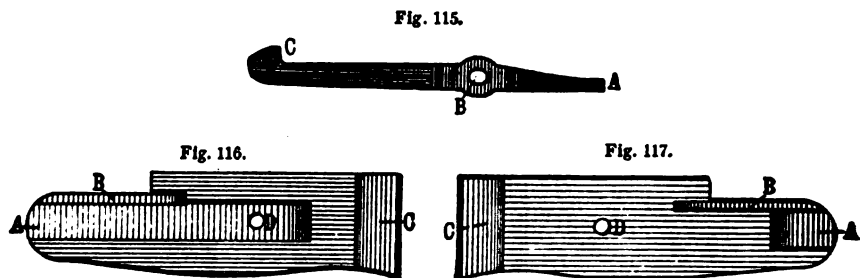


in the left grip is counterbored to receive the Bayonet Nut, Fig. 120. The washer the right grip receives the head, and the nut in the left grip receives the thread of the Bayonet Screw, Fig. 121, by means of which the grips are attached to the tang of the bayonet. The inner surfaces of the Bayonet Grips, Right and Left, are shown in Figs. 117 and 116, respectively; there are the

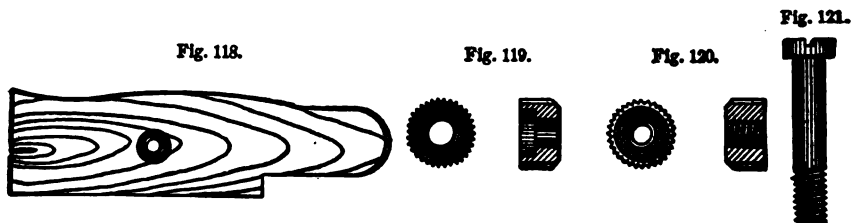


clearance cuts, A for the bayonet catch, B for the shoulder on the pommel, C for the swell of the tang, and the hole D for the bayonet screw.

The Bayonet Scabbard, Model of 1905, Fig. 122, side view and edge view, and Fig. 123, cross section of upper end, has the wooden body A, made in two pieces and glued together; the rawhide cover B, which increases the strength



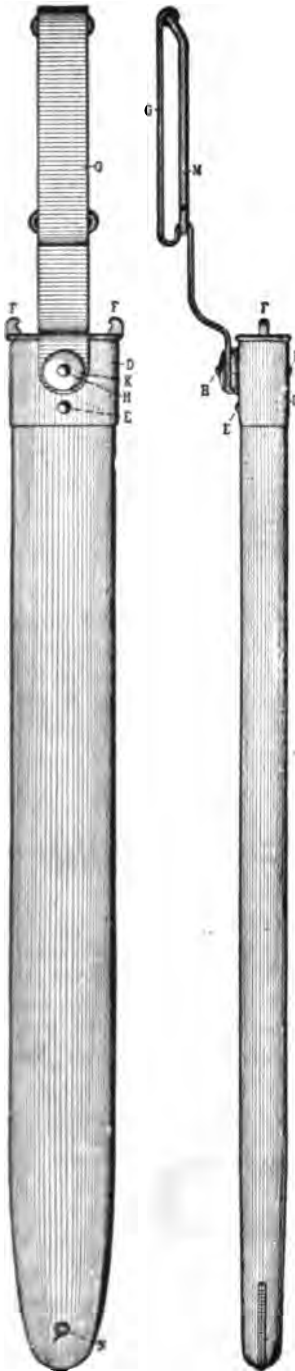
of the scabbard; the leather cover C; the mouthpiece bushing P; the mouthpiece top D; the mouthpiece body Q, riveted to the wooden body by the rivets E E; the mouthpiece hooks F F, either of which by its engagement with the hook of the bayonet scabbard catch on the bayonet retains the bayonet in its place in the scabbard; the scabbard hook G, attached to the body by



the hook rivet H, which passes through the inside and outside washers I and K, and the stop washer L; the fastener M, and the drain eyelet N. An offset on the lower end of the hook, traveling in its recess in the stop washer, limits the oscillation of the hook to 50 degrees on each side of the vertical.

Note: The cavalry is equipped with the United States rifle, caliber .30, model of 1903, but without the bayonet or bayonet scabbard.

Fig. 122.



Model of 1906.

Fig. 123.

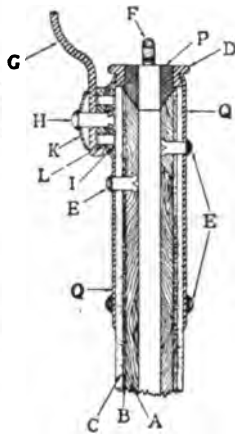


Fig. 124.



Fig. 125.



Model of 1910.

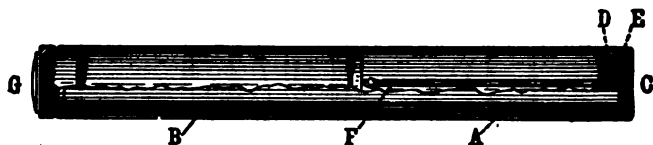
The Bayonet Scabbard, Model of 1910, Fig. 124 and Fig. 125, consists of a wooden body covered with rawhide, over which is sewed a duck cover, or is fitted a woven fabric cover, olive-drab in color. The bayonet is held fast in the scabbard by means of two mouthpiece hooks on opposite sides of the mouthpiece top. The scabbard is fastened to the belt or pack of the soldier by a double-hook which is attached to the scabbard by the duck hanger sewed to the cover.

APPENDAGES.

The Drift Slide No. 4 and Drift Slide No. 6 are furnished, two of each for every ten rifles. The two drift slides have peepholes respectively 0.04 inch and 0.06 inch in diameter; and have drift slide pins assembled to them.

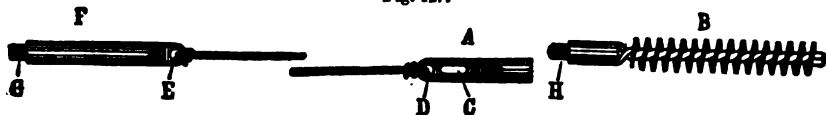
The Oiler and Thong Case, Fig. 126, furnished for every alternate rifle, is carried in the butt of the stock. It consists of a nickel-plated brass tube, about 6 inches long and $\frac{3}{4}$ inch in diameter, divided transversely, near the center, by a partition, with both ends fitted with screw caps. In one section

Fig. 126.



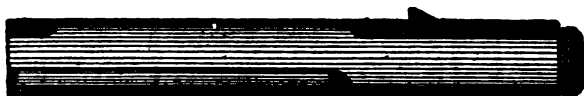
is carried a small supply of sperm oil, and in the other the thong and thong brush used for cleaning the bore of the rifle. The cap on the oil section is fitted with a wire, flattened at its point, which reaches to the bottom of the section and is used for applying oil, a drop or more at a time. The oil is only for the lubrication of working parts. The cap is also provided with a leather washer to prevent leakage. The cap on the thong section has a

Fig. 127.



leather pad on its outer surface, which prevents the noise that would result from the oiler striking the butt plate cap. The oiler should always be inserted in the stock so that the leather-tipped cap will be next to the butt plate cap. The parts as shown in cut are: Thong case body A and B; oiler collar D, into which the cap is screwed; oiler cap washer E; oil dropper C and F, and thong case cap G.

Fig. 128.



The Thong and Thong Brush are shown in Fig. 127. The thong tip A, into which the thong brush B is screwed, is provided with a rag slot C; the thong cord is knotted in the hole D in the tip, and also in the hole E in the weight. In cleaning the bore by means of the thong, the brush or rag should always be drawn from the muzzle toward the breech.

The Spare Part Container, Fig. 128, furnished for every alternate rifle, con-

sists of a cylindrical block of wood (hard maple), 5.8 inches long and 0.785 inch in diameter. Slots and recesses are cut for holding three spare parts—a striker, an extractor, and a firing pin. The container is carried in the butt of the stock.

The Front Sight Cover, Fig. 129, right side view, and Fig. 130, front view, is made of sheet steel and pressed into shape. It is then case-hardened, giving it sufficient spring to cause it to hug closely the barrel and front sight stud, thereby retaining its position on the barrel.

Fig. 129.

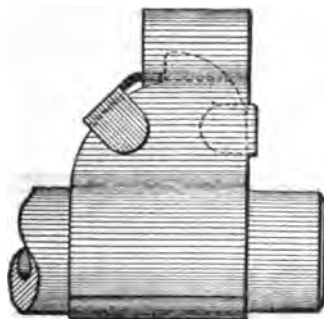
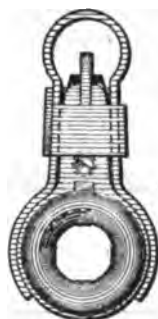


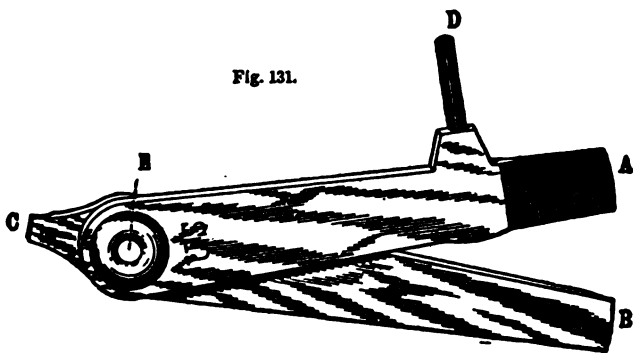
Fig. 130.



ACCESSORIES.

The Screw-driver, Fig. 131, has the large blade A, the small blade B, the spur C, the pin D, and the rivet E. The large blade should be used for the large butt plate screw, the butt plate spring screw, and the guard screws; the

Fig. 131.



small blade for all other screws, except the cut-off screw, for which the spur should be used. The pin serves as a drift in removing the butt plate cap, ejector, floor plate catch, sear and trigger pins, and the lower band spring.

Fig. 132.



The Barrack Cleaning Rod, model of 1916, Fig. 132, is made of brass rod, 0.25 inch in diameter, and of sufficient length so that the bore can be cleaned from the breech end. It has the knob A, the steel collar B, and a brass sleeve C riveted on the end of the rod. The knob swivels on the rod between

the collar and the sleeve. The other end has a socket for connection with the thong brush issued with the rifle. This rod is intended for use in garrison and camp service.

The Cleaning Rod, model of 1916, supersedes the cleaning rod, model of 1913, although the latter will be issued until the supply is exhausted. Unserviceable cleaning rods, model of 1913, are used partly in the manufacture of the model of 1916 rod and should be turned in to the Commanding Officer, Springfield Armory, by proper authority for this purpose.

The New Rod is a jointed brass rod, 0.25 inch in diameter and 36.187 ($36\frac{7}{32}$) inches long. It is made of four sections; the handle section with knob, Fig. 133; the second section, Fig. 134; the third section, Fig. 135; and the brush section, Fig. 136, to which is attached the thong brush issued with the rifle.

Fig. 133.



Fig. 134.



Fig. 135.



Fig. 136.



One cleaning rod with a cleaning rod case of olive-drab webbing is packed with each ten rifles, but issues are based on one cleaning rod case for every 8 rifles.

This rod and case are intended for use in field service only.

THE ASSEMBLED PARTS AND THEIR OPERATIONS.

Most of the operating parts may be included under the Bolt Mechanism and Magazine Mechanism.

The Bolt Mechanism consists of the bolt, sleeve, sleeve lock, extractor, extractor collar, safety lock, firing pin, firing pin sleeve, striker, and main-spring. It is shown, assembled, in Fig. 137. The parts shown in the cut are handle A, sleeve B, safety lock C, cocking piece D, safety lug E, extractor F, extractor collar G, locking lugs H, extractor tongue groove I, and gas escape hole J.

The bolt moves backward and forward and rotates in the well of the receiver; it carries a cartridge, either from the magazine, or one placed by hand in front of it, into the chamber and supports its head when fired.

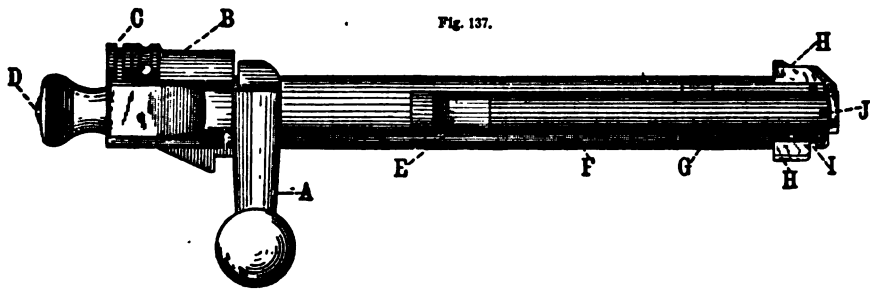
The sleeve unites the parts of the bolt mechanism, and its rotation with the bolt is prevented by the lugs on its sides coming in contact with the receiver.

The hook of the extractor engages in the groove of the cartridge case and retains the head of the latter in the countersink of the bolt until the case is ejected.

The safety lock, when turned to the left, is inoperative; when turned to the right—which can only be done when the piece is cocked—the point of the spindle enters its notch in the bolt and locks the bolt; at the same time its cam forces the cocking piece slightly to the rear, out of contact with the sear, and locks the firing pin.

The bolt mechanism operates as follows: To open the bolt, raise the handle until it comes in contact with the left side of the receiver and pull directly to the rear until the top locking lug strikes the cut-off.

Raising the handle rotates the bolt and separates the locking lugs from their locking shoulders in the receiver, with which they have been brought into close contact by the powder pressure. This rotation causes the cocking cam of the bolt to force the firing pin to the rear, drawing the point of the striker into the bolt, rotation of the firing pin being prevented by the lug on the cocking piece projecting, through the slot in the sleeve, into its groove in the receiver. As the sleeve remains longitudinally stationary with reference to the bolt, this rearward motion of the firing pin, and consequently of the striker, will start the compression of the mainspring, since the rear end of the latter bears against the front end of the barrel of the sleeve and its front end against the rear end of the firing pin sleeve.



When the bolt handle strikes the receiver, the locking lugs have been disengaged, the firing pin has been forced to the rear until the sear notch of the cocking piece has passed the sear nose, the cocking piece nose has entered the cock notch in the rear end of the bolt, the sleeve lock has engaged its notch in the bolt, and the mainspring has been almost entirely compressed.

During the rotation of the bolt a rear motion has been imparted to it by its extracting cam coming in contact with the extracting cam of the receiver, so that the cartridge case will be started from the chamber.

The bolt is then drawn directly to the rear, the parts being retained in position by the cocking piece nose remaining in the cock notch and locked by the sleeve lock engaging its notch in the bolt.

To close the bolt, push the handle forward until the extracting cam on the bolt bears against the extracting cam on the receiver, thereby unlocking the sleeve from the bolt, and turn the handle down. As the handle is turned down the cams of the locking lugs bear against the locking shoulders in the receiver, and the bolt is forced slightly forward into its closed position. As all movement of the firing pin is prevented by the sear nose engaging the sear notch of the cocking piece, this forward movement of the bolt completes the compression of the mainspring, seats the cartridge in the chamber, and, in single loading, forces the hook of the extractor into the groove of the cartridge case. In loading from the magazine the hook of the extractor, rounded at

its lower edge, engages in the groove of the top cartridge as it rises from the magazine under the action of the follower and magazine spring.

The position then occupied by the parts is shown in Fig. 138, and the piece is ready to fire.

To pull the trigger, the finger piece must be drawn to the rear until contact with the receiver is transferred from its bearing to the heel, which gives a creep to the trigger, and then until the sear nose is withdrawn from in front of the cocking piece.

Just before the bolt is drawn fully to the rear, the top locking lug strikes the heel of the ejector, throwing its point suddenly to the right in the lug slot. As the bolt moves fully to the rear, the rear face of the cartridge case strikes against the ejector point and the case is ejected, slightly upward and to the right, from the receiver.

Double loading from the magazine is prevented by the extractor engaging the cartridge case as soon as it rises from the magazine and holding its head against the face of the bolt until ejected.

It will be noted that in this system of bolt mechanism the compression of the mainspring, the seating of the cartridge in and the starting of the empty case from the chamber are entirely done by the action of cams.

The piece may be cocked either by raising the bolt handle until it strikes

Fig. 139.

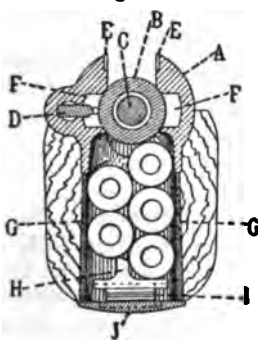
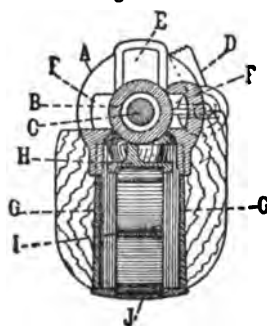


Fig. 140.



the left side of the receiver and then immediately turning it down or by pulling the cocking piece directly to the rear.

In firing, unless the bolt handle is turned fully down, the cam on the cocking piece will strike the cocking cam on the bolt, and the energy of the mainspring will be expended in closing the bolt, instead of on the primer; this prevents the possibility of a cartridge being fired until the bolt is fully closed.

The opening and closing of the bolt should each be done by one continuous motion.

The Magazine Mechanism includes the floor plate, follower, magazine spring, and cut-off.

Fig. 139 represents a cross section through the ejector with the magazine loaded. The parts shown are receiver A, bolt B, firing pin C, ejector D, clip slots E, bolt locking lug channels F, magazine G, follower H, magazine spring I, and floor plate J.

Fig. 140 shows a cross section through the magazine with the magazine empty, and with cut-off "on," shown in projection. The parts are receiver A,

bolt B, firing pin C, cut-off D, rear lug shot E, bolt locking lug channels F, magazine G, follower H, magazine spring I, and floor plate J.

To charge the magazine, see that the cut-off is turned up showing "on," draw the bolt fully to the rear, insert the cartridges from a clip, or from the hand, and close the bolt. To charge the magazine from a clip, place either end of a loaded clip in its seat in the receiver and, with the thumb of the right hand, press the cartridges down into the magazine until the top cartridge is caught by the right edge of the receiver. The manner in which the cartridges arrange themselves in the magazine and the position of the follower and compressed magazine spring are shown in Fig. 142. The cartridge ramp guides the bullet and cartridge case into the chamber. The magazine can be filled, if partly filled, by inserting cartridges one by one.

Pushing the bolt forward, after charging the magazine, ejects the clip.

When the cut-off is turned down, the magazine is "off." The bolt can not be drawn fully back, and its front end projecting over the rear end of the upper cartridge holds it down in the magazine below the action of the bolt. The magazine mechanism then remains inoperative, and the arm can be used as a single-loader, the cartridges in the magazine being held in reserve. The arm can readily be used as a single-loader with the magazine empty.

When the cut-off is turned up, the magazine is "on"; the bolt can be drawn fully to the rear, permitting the top cartridge to rise high enough to be caught by the bolt in its forward movement. As the bolt is closed this cartridge is pushed forward into the chamber, being held up during its passage by the pressure of those below. The last one in the magazine is held up by the follower, the rib on which directs it into the chamber.

In magazine fire, after the last cartridge has been fired and the bolt drawn fully to the rear, the follower rises and holds the bolt open to show that the magazine is empty.

PRECAUTIONS.

If it is desired to carry the piece cocked, with a cartridge in the chamber, the bolt mechanism should be secured by turning the safety lock to the right. Under no circumstances should the firing pin be let down by hand on a cartridge in the chamber.

To obtain positive ejection, and to insure the bolt catching the top cartridge in magazine, when loading from the magazine, the bolt must be drawn fully to the rear in opening it.

When the bolt is closed, or slightly forward, the cut-off may be turned up or down, as desired. When the bolt is in its rearmost position, to pass from loading from the magazine to single loading it is necessary to force the top cartridge or follower below the reach of the bolt, to push the bolt slightly forward and to turn the cut-off down, showing "off."

In case of a misfire it is unsafe to draw back the bolt immediately, as it may be a case of hang-fire. In such cases the piece should be cocked by drawing back the cocking piece.

It is essential for the proper working and preservation of all cams that they be kept lubricated.

DISMOUNTING AND ASSEMBLING BY SOLDIER.

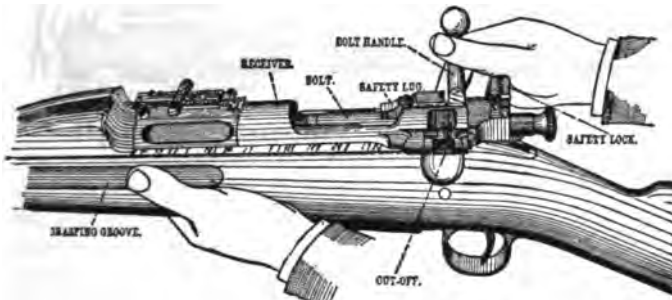
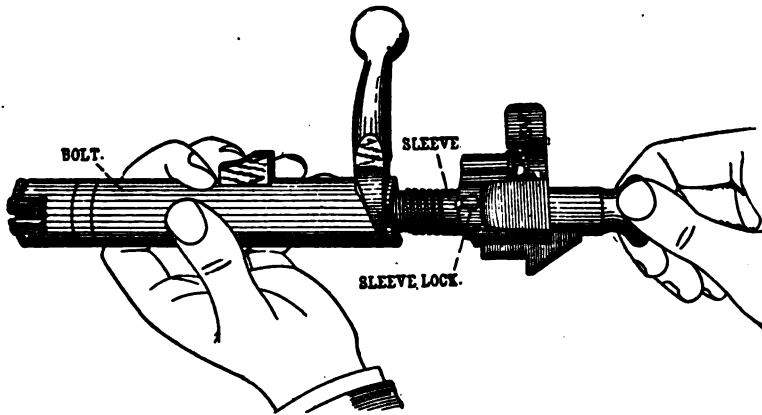
The bolt and magazine mechanism can be dismounted without removing the stock. The latter should never be done, except for making repairs, and then only by some selected and instructed man.

TO DISMOUNT BOLT MECHANISM.

Place the cut-off at the center notch; cock the arm and turn the safety lock to a vertical position, raise the bolt handle and draw out the bolt. (Fig. 141.)

Hold bolt in left hand, press sleeve lock in with thumb of right hand to unlock sleeve from bolt, and unscrew sleeve by turning to the left. (Fig. 142.)

Hold sleeve between forefinger and thumb of the left hand, draw cocking piece back with middle finger and thumb of right hand, turn safety lock down to the left with the forefinger of the right hand, in order to allow the cocking piece to move forward in sleeve, thus partially relieving the tension of mainspring; with the cocking piece against the breast, draw back the

Fig. 141.**Fig. 142.**

firing pin sleeve with the forefinger and thumb of right hand and hold it in this position (Fig. 143) while removing the striker with the left hand; remove firing pin sleeve and mainspring; pull firing pin out of sleeve; turn the extractor to the right, forcing its tongue out of its groove in the front of the bolt, and force the extractor forward (Fig. 144) and off the bolt.

TO ASSEMBLE BOLT MECHANISM.

Grasp with the left hand the rear of the bolt, handle up, and turn the extractor collar with the thumb and forefinger of the right hand until its lug is on a line with the safety lug on the bolt; take the extractor in the right hand and insert the lug on the collar in the undercuts in the extractor by pushing the extractor to the rear until its tongue comes in contact with the

rim on the face of the bolt (a slight pressure with the left thumb on the top of the rear part of the extractor assists in this operation); turn the extractor to the right until it is over the right lug; take the bolt in the right hand and press the hook of the extractor against the butt plate (Fig. 145) or some

Fig. 143.

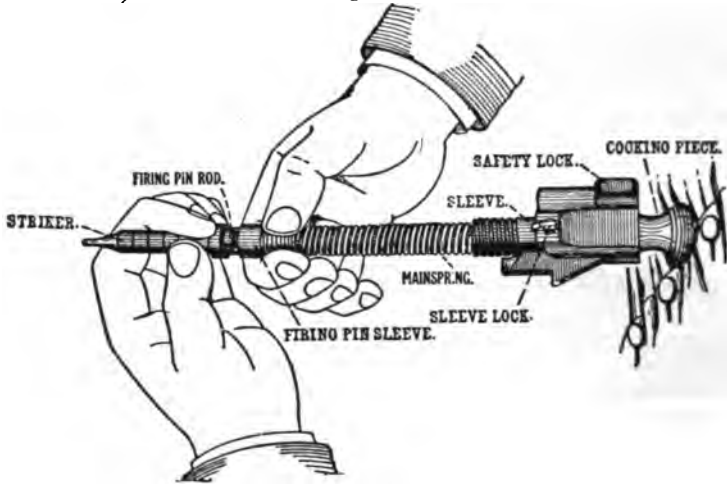


Fig. 144.

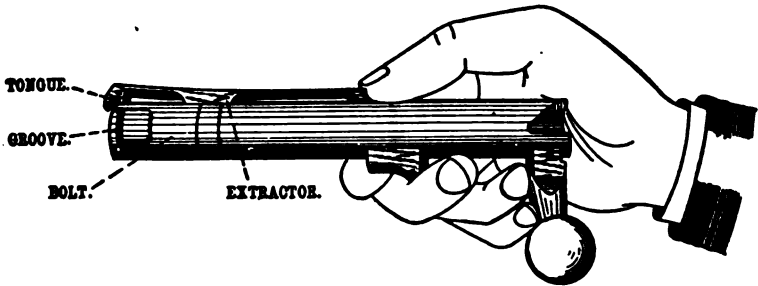
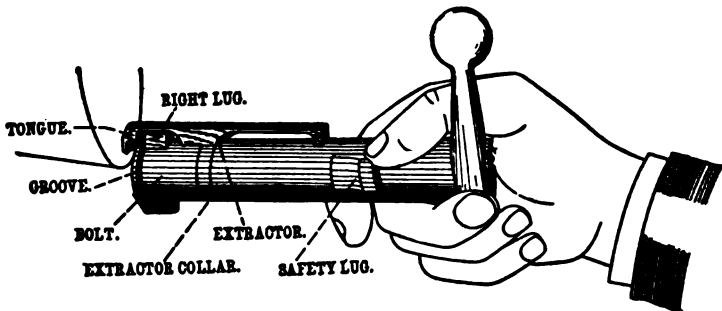


Fig. 145.



rigid object, until the tongue on the extractor enters its groove in the bolt.

With the safety lock turned down to the left to permit the firing pin to enter the sleeve as far as possible, assemble the sleeve and firing pin; place the cocking piece against the breast and put on mainspring, firing pin sleeve,

and striker (see Fig. 143). Hold the cocking piece between the thumb and forefinger of the left hand, and by pressing the striker point against some substance, not hard enough to injure it, force the cocking piece back until the safety lock can be turned to the vertical position with the right hand; insert the firing pin in the bolt and screw up the sleeve (by turning it to the right) until the sleeve lock enters its notch on the bolt.

See that the cut-off is at the center notch; hold the piece under floor plate in the fingers of the left hand, the thumb extending over the left side of the receiver; take bolt in right hand with safety lock in a vertical position and safety lug up; press rear end of follower down with left thumb and push bolt into the receiver; lower bolt handle; turn safety lock and cut-off down to the left with right hand.

TO DISMOUNT MAGAZINE MECHANISM.

With the bullet end of a cartridge press on the floor plate catch (through the hole in the floor plate), at the same time drawing the bullet to the rear; this releases the floor plate.

Raise the rear end of the first limb of the magazine spring high enough to clear the lug on the floor plate and draw it out of its mortise; proceed in the same manner to remove the follower.

To assemble magazine spring and follower to floor plate, reverse operation of dismounting.

Insert the follower and magazine spring in the magazine, place the tenon on the front end of the floor plate in its recess in the magazine, then place the lug on the rear end of the floor plate in its slot in the guard, and press the rear end of the floor plate forward and inward at the same time, forcing the floor plate into its seat in the guard.

TO COMPLETE DISMOUNTING.

(Not to be done by soldier.)

The bolt and magazine mechanism having been dismantled, proceed as follows:

1. Turn safety lock to dismantling bevel on sleeve and remove it by striking the thumb piece a light blow.
2. To dismount the sleeve lock, drive out sleeve lock pin from the top and remove lock and spring, being careful not to lose the spring.
3. Remove front sight pin (see directions for replacing broken parts, p. 709) and remove front sight.
4. Press in rear end of lower band spring and drive forward the lower band by a few sharp blows on the lug and then on top with a hardwood block.
5. Remove upper band screw and drive upper band forward, in the same manner prescribed for the lower band.
6. Move upper band forward on barrel until stopped by movable stud, and then remove lower band by slipping it over upper band and movable stud. To remove upper band entirely from barrel requires the removal of the front sight screw and the movable stud.
7. Draw hand guard forward until free from the fixed base and remove.
8. Remove guard screws and guard. It may be necessary to tap gently on the front and rear of the guard bow to loosen.

9. Remove barrel and receiver from stock.
 10. To remove the lower band spring, drive its spindle out of its hole in the stock from the left.
 11. Unscrew the butt swivel screws and remove the butt swivel plate from stock. The butt swivel, consisting of the plate, swivel, and pin, permanently assembled, is issued complete.
 12. Unscrew butt plate screws and remove butt plate from stock.
 13. Unscrew butt plate spring screw and remove the butt plate spring; drive out butt plate pin (see direction on p. 47) and remove butt plate cap.
 14. Remove cut-off by loosening the screw in the end of the thumb piece until it disengages the groove in the cut-off spindle; insert the blade of a screw-driver in the notch in the rear end of the spindle and force it out. Remove the spring and the plunger, being careful not to lose them.
 15. Remove the ejector by driving out the ejector pin from the upper side.
 16. Remove sear and trigger by driving out the sear pin from the right, being careful not to lose the sear spring.
 17. Remove trigger from sear by driving out the trigger pin from either side.
 18. Remove floor plate catch and spring by driving out the pin from either side.
 19. Remove bolt stop by inserting a small punch or end of striker in the hole in the left end and forcing it from its pocket.
- The leaf should never be removed from the movable base except for the purpose of making repairs.
- The fixed base and the fixed stud should never be removed from the barrel.
- The barrel should never be unscrewed from the receiver. The barrel and receiver may be assembled only at ordnance establishments properly equipped for this work, for which reason requisitions should always call for barrels and receivers assembled and not for barrels alone.

TO ASSEMBLE AFTER DISMOUNTING.

Reverse and follow in inverse order the operations of dismounting.

In assembling the sleeve lock to the sleeve, be careful to compress the lock and spring while driving in the pin from the bottom of the sleeve.

To assemble the safety lock and sleeve, insert the safety lock spindle in its hole in the sleeve as far as it will go; then, with the thumb piece vertical and pressed against some rigid object, introduce the point of the tool provided for this purpose between the safety lock spindle and the safety lock plunger, forcing the latter into the thumb piece until it slips over the edge of the sleeve. Further pressure on the safety lock thumb piece, together with the gradual withdrawal of the tool, will complete the assembling.

In assembling pins and screws, note directions for replacing broken parts on page 709.

The floor plate spring and the cut-off spring are alike, except in length. The latter being the longer, care should be taken not to substitute one for the other.

CLEANING THE RIFLE.

See instructions for repair and care of small arms and ordnance equipment (page 645).

PACKING OF RIFLE.

The rifles are issued in arm chests containing:

- 10 United States Rifles, Caliber .30, Model of 1903.
- 2 Drift Slides, No. 4.
- 2 Drift Slides, No. 6.
- 10 Front Sight Covers.
- 5 Oiler and Thong Cases.
- 5 Thongs and Thong Brushes.
- 5 Spare Part Containers, with contents.
- 1 Cleaning Rod, Model of 1913, and Cleaning Rod Case.
- 2 Screw Drivers.

1 Book, Description and Rules for the Management of the United States Rifle, Caliber .30, Model of 1903, Form 1923.

The interior of the arm chest is provided with wooden packing strips for the purpose of securely holding the rifles in place in transportation. The arrangement of this packing and of the rifles should be carefully observed when arms are received from an arsenal, in order that the same method may be used if for any reason the rifles should be shipped away from the post. Rifles should never be shipped in these chests unless all of the packing strips have been properly assembled with the rifles in the chests.

The ends of these chests are provided with narrow pockets for the reception of the front sight covers, screw drivers, extra drift slides, and descriptive pamphlet which are shipped with the rifles.

ARM LOCKER FOR UNITED STATES RIFLE, CALIBER .30, MODEL OF 1903.

This chest is issued at the rate of one per company or troop for use in the safe-keeping of the surplus rifles of a company or troop. It is provided with reinforcing angle irons which secure the bottom of the chest to the sides; and with blind strap hinges, hasps, and staples for securing the cover to the body of the chest. Two padlocks with chains and keys are also issued with each arm locker.

REPAIR OF RIFLE.

The following spare parts will be issued for repairs of arms in the hands of troops:

RIFLE.

| | | | |
|--------------------------|--------------|---------------------|--------------|
| Bolt: | | Butt Swivel: | |
| Bolt. | { Assembled. | Butt Swivel. | { Assembled. |
| Extractor Collar. | | Butt Swivel Pin. | |
| Bolt Stop: | | Butt Swivel Plate. | |
| Bolt Stop Pin. | { Assembled. | Butt Swivel Screw. | |
| Bolt Stop Spring. | | Cut-off. | |
| Butt Plate. | | Cut-off Plunger. | |
| Butt Plate Cap. | | Cut-off Screw. | |
| Butt Plate Pin. | | Cut-off Spindle. | |
| Butt Plate Screw, Large. | | Cut-off Spring. | |
| Butt Plate Screw, Small. | | Ejector. | |
| Butt Plate Spring. | | Ejector Pin. | |
| Butt Plate Spring Screw. | | Extractor. | |

Firing Pin:

Cocking Piece. } Assembled.
Firing Pin Rod. }

Firing Pin Sleeve.

Floor Plate.

Floor Plate Catch.

Floor Plate Pin.

Floor Plate Spring.

Follower.

Front Sight.

Front Sight Pin.

Guard.

Guard Screw Bushing.

Guard Screw, Front.

Guard Screw, Rear.

Hand Guard.

Hand Guard Clip.

Lower Band.

Lower Band Screw.

Lower Band Spring.

Lower Band Swivel.

Magazine Spring.

Mainspring.

Rear Sight:

Base Spring.

Drift Slide No. 5—

Drift Slide, .05 Peep. } Assembled.
Drift Slide Pin. }

Joint Pin.

Leaf.

Movable Base:

Slide—

Slide. } Assembled.
Slide Cap. }

Slide Binding Screw.

Slide Cap Pin.

Slide Cap Screw.

Rear sight—Continued.

Windage Screw—

Windage Screw.

Windage Screw

Collar.

Windage Screw

Knob.

Windage Screw

Pin.

Windage Screw

Spring.

Safety Lock:

Safety Lock Plunger.

Safety Lock Spindle.

Safety Lock Spring.

Safety Lock Thumb

Piece.

Sear.

Sear Pin.

Sear Spring.

Sleeve:

Sleeve.

Sleeve Lock.

Sleeve Lock Pin.

Sleeve Lock Spring.

Stacking Swivel.

Stacking Swivel Screw.

Stock:

Guard Screw Bushing.

Stock.

Stock Screw.

Stock Screw Nut.

Striker.

Trigger.

Trigger Pin.

Upper Band.

Upper Band Screw.

Assembled.

Assembled.

Assembled or separately.

Assembled.

APPENDAGES.

Drift Slide No. 4:

Drift Slide, .04 Peep. } Assembled.
Drift Slide Pin. }

Drift Slide No. 6:

Drift Slide, .06 Peep. } Assembled.
Drift Slide Pin. }

Front Sight Cover.

Oiler and Thong Case:

Oil Dropper.

Oiler Cap Washer.

Thong Case Body—

Oiler Collar. } Assembled.
Thong Case Body. }
Thong Case Partition. }

Oiler and Thong Case—Continued.

Thong Case Cap—

Thong Case Cap. } Assembled.
Thong Case Pad. }

Thong:

Thong Cord.

Thong Tip.

Thong Weight.

Thong Brush.

Spare Part Container (wood part).

ACCESSORIES.

Cleaning Rod, Model of 1916:

Handle Section—

Handle section.

Knob.

Collar.

Sleeve.

} Assembled.

Cleaning Rod—Continued.

Second Section.

Third section.

Brush section.

Cleaning Rod Case.

Screw Driver.

BAYONET, MODEL OF 1905.

Bayonet, complete.

Bayonet Catch.

Bayonet Grip, Left.

Bayonet Grip, Right.

Bayonet Nut.

Bayonet Scabbard Catch.

Bayonet Screw.

Bayonet Spring.

Bayonet Washer.

ARM REPAIR CHEST, MODEL OF 1910.

In place of the company repair kit formerly issued, the arm repair chest has been adopted for future issue. This chest will be issued to each organization armed with the rifle, and to each regimental or post ordnance officer for cleaning, repairing, and preserving arms and equipments. The chest contains the following tools, cleaning material, and spare parts:

TOOLS.

1 Anvil.

1 Bullet Jacket Extractor.

10 Drifts, for the following pins and springs—

No. 1. Assembling and dismounting base spring.

No. 2. Removing trigger and butt plate pins.

No. 3. Starting front sight and sleeve lock pins.

No. 4. Drawing out pins started with No. 3.

No. 5. Removing joint, sear, and ejector pins.

No. 6. Starting floor plate pin and removing bolt stop.

No. 7. Driving out floor plate pin and lower band spring.

No. 8. Starting windage screw pin and slide cap pin (2).

No. 9. Removing pins started with No. 8.

1 Eyelet Awl, for putting eyelets in belt.

1 Eyelet Set.

3 Files, 6-inch; flat, round, and three-square, with handles.

1 Hammer, steel.

1 Hammer, brass.

1 Handle, tool, containing 10 tools.

1 Oiler, with cap.

2 Pliers, flat and round nose.

1 Saw, crosscut, detachable handle.

2 Screw Drivers, fitting the following screws—

No. 1. Guard, large butt plate, and butt plate spring screws.

No. 2. Stacking swivel, lower band, butt swivel, small butt plate, upper band, and bayonet screws.

- 1 Set No. 1, for upsetting ends of the lower band and stacking swivel screws.
- 1 Tool, for assembling safety lock on sleeve.
- 1 Vise, 1.25-pound.

CLEANING MATERIAL.

- | | |
|-----------------------------------|----------------------------------|
| 2 Cosmic, pints. | 250 Cut Patches (Tampa flannel). |
| 250 Cut Patches (cotton flannel). | 3 Sperm Oil, pints. |

SPARE PARTS (RIFLE).

- | | |
|---|---|
| 2 Base Springs. | 5 Front-sight Pins. |
| 2 Bayonet Catches. | 2 Leaves. |
| 2 Bayonet Springs. | 2 Lower Band Screws. |
| 2 Bolts, with extractor collars, assembled. | 2 Mainsprings. |
| 15 Cocking Pieces and Firing Pin Rods, assembled. | 2 Movable Bases. |
| 5 Cut-off Plungers. | 3 Safety Locks, complete, each consisting of: |
| 5 Cut-off Springs. | 1 Safety Lock Thumb Piece. |
| 2 Cut-off Screws. | 1 Safety Lock Plunger. |
| 6 Drift Slides. | 1 Safety Lock Spindle. |
| 5 Ejector Pins. | 1 Safety Lock Spring. |
| 4 Extractors. | 5 Slide Binding Screws. |
| 5 Ejectors. | 10 Slide Cap Pins. |
| 2 Floor Plate Catches. | 5 Slide Cap Screws. |
| 2 Floor Plate Pins. | 6 Slides and Slide Caps, assembled. |
| 2 Floor Plate Springs. | 3 Sleeves, assembled. |
| 5 Front Sights. | 1 Stacking Swivel. |
| 10 Front-sight Covers (appendages to rifle). | 2 Stacking Swivel Screws. |
| | 15 Strikers. |
| | 2 Windage Screws, assembled. |

SPARE PARTS (BOLO).

- | | |
|--------------------|-----------------------|
| 2 Bolo Catches. | 4 Bolo Catch Springs. |
| 4 Bolo Catch Pins. | |

TOOLS FOR REPAIRING SADDLES, MODEL OF 1912.

- | | |
|--------------------------------|---------------------------------|
| 1 Screw Driver, Model of 1912. | 1 Socket Wrench, Model of 1912. |
|--------------------------------|---------------------------------|

Note: Issued to organizations equipped with saddles, model of 1912.

TOOLS FOR REPAIRING SNAP FASTENERS.

- | | |
|-------------------------|-------------------|
| 1 Anvil. | 1 Socket Set. |
| 1 Canteen Stud Set. | 1 Spreading Tool. |
| 1 Canteen Socket Punch. | 1 Stud Set. |
| 1 Cap Drift. | |

FOR SHOES.

- 2 Neat's-foot Oil, quarts.

FOR BELTS.

50 Eyelets.

| 50 Washers for Eyelets.

SPARE PARTS (PISTOL).

2 Extractors.

| 2 Recoil Springs.

2 Firing Pin Springs.

| 2 Sear Springs.

1 Mainspring.

| 2 Stock Screws.

TOOLS FOR CLEANING PISTOL.

10 Cleaning Rods.

| 10 Screw Drivers.

10 Thong Brushes.

The tools named above must be handled carefully and with skill to avoid injuring the heads and threads of screws and defacing other metallic parts.

PARTS WHICH ARE MOST LIABLE TO REQUIRE REPAIR.

Bolt Stop. Worn by continual contact with bolt.

Cocking Piece. Nose worn from neglect to keep it lubricated.

Lower Band Swivel and Screw. Screw, if not riveted in place, works loose and, with swivel, is lost.

Safety Lock. Thumb piece knocked off by blow.

Stacking Swivel and Screw. Screw, if not riveted, works loose and, with swivel, is lost.

Stock. Bruises, cuts, pieces chipped from different points, broken at small.

Striker. Point burned by defective cartridge, or broken at the joint hole by snapping with the chamber empty.

REPLACING BROKEN PARTS.

Butt Plate Pin. This pin has both ends upset; the burr on one end must be filed off and the pin driven out with a drift; when a new pin is put in, its ends must be upset with light blows of a hammer.

Front Sight. The burr on the left side must be filed off and the pin driven out from the left with a drift; when the new front sight is in place, a new pin is driven in from the right and its left end upset with light blows of a hammer.

Lower Band Screw. This screw, when in place, has its end upset and riveted over the band ear. It should never work loose, if properly assembled, and when it has to be removed to replace an injured swivel the burr on the end should be filed off and the screw taken out, the end being again upset when the screw has been returned to its place.

Stacking Swivel Screw. As the screw is made long and its end upset, it should be kept well screwed up at all times. It is removed to replace a broken swivel and replaced as explained in preceding paragraph, care being taken to upset the end only.

Trigger Pin. This is a straight pin and can be driven in or out from either side.

INJURIES WHICH DO NOT RENDER PARTS UNSERVICEABLE.

Bolt. The entire flange at front end may be broken off, except a small portion on the opposite side from the extractor hook, which is required to hold, in connection with the extractor hook, the empty case while it is being drawn to the rear for ejection.

If automatic ejection be not considered, the entire flange may be dispensed with.

Butt Plate. Bruises, cuts, or wearing.

Butt Swivel. Bent.

Cocking Piece. Moderate wearing of nose. The nose can wear until raising and lowering the bolt handle fails to cock the piece.

Extractor. Moderate wear or break of edge of hook.

Floor Plate. Bent or bruised.

Guard. Bent, bruised, or cut.

USING THE RIFLE WHEN CERTAIN PARTS OF THE BOLT AND MAGAZINE MECHANISM ARE WANTING.

The parts not essential, or only so to a degree, are the ejector, safety lock, cut-off, bolt stop, sleeve lock, floor plate, magazine spring, and follower.

In the absence of the ejector, the empty cases drawn to the rear by the extractor can be removed from the receiver by the finger.

The safety lock being merely a precautionary device, its absence does not affect the usefulness of the arm.

In the absence of the cut-off, the arm can be loaded from the magazine, but the magazine can not be held full in reserve; in single loading with the cut-off wanting and magazine empty, the soldier should be instructed to load directly into the magazine, as otherwise the forward motion of the bolt will be stopped by coming in contact with the follower. In this case, care should be taken in drawing the bolt back not to draw it from the receiver.

The absence of the bolt stop and sleeve lock does not affect the usefulness of the arm.

The absence of the floor plate, follower, and magazine spring only prevents the use of the magazine, but does not prohibit the use of the arm as a single-loader. The soldier should be taught to appreciate these facts.

REMARKS.

Complaints have not infrequently been received that a mainspring was too weak to perform its office, when the fault rested with the soldier, who in sighting inadvertently raised the bolt handle with his hand before pulling the trigger, and thus caused the force of the spring to be expended in closing the bolt, instead of in exploding the cartridge.

All cams and bearings should be kept slightly oiled to prevent wear.

When firing many successive rounds care must be taken that unburned grains of powder do not collect and pack in the locking lug recesses of the receiver, as this will interfere with the perfect closing of the bolt. Such accumulations can be blown out from time to time, or, when packed, removed by a knife or the screw driver.

Except when repairs are needed, the following parts will constantly be injured if allowed to be dismantled by the soldier for cleaning; and when

repairs are necessary, they should be removed only by a company artificer, or some one familiar with the handling of tools and delicate mechanisms, viz.: Bolt stop, cut-off, safety lock, sleeve lock, front sight, movable stud, lower band, upper band, and stacking swivel screws.

Unless the screw driver is handled carefully, and with some skill, the screws are sure to be injured either at the head or thread.

Fig. 146.



Fig. 147.



Fig. 148.



The Bullet Jacket Extractor is shown in Figs. 146, 147, and 148. This extractor consists of a steel cylindrical plug provided with lands and grooves on the sides. To use the extractor, it is inserted in the muzzle of the barrel hollow end (see Fig. 149) first. The extractor is then urged down the barrel by pressure applied with the cleaning rod until the jacket and extractor fall out into the chamber. (See arm repair chest, model of 1910, page 707.)

Fig. 149.



Fig. 150.



1. The Aiming Device, Fig. 149, in place on the rifle, and Fig. 150 in detail, is intended for use in aiming drill and is issued to infantry, cavalry, and engineers at the rate of four per company. With this device the instructor may give a visual demonstration and thereby convince the soldier of the errors made in aiming.

2. The device consists of yoke A, which by means of the spring clips B

embraces the small of the stock, the bracket C to which the collapsible arms D are held, and the eye E, which is closed by the shutter F. The eye is provided with a stop pin G to hold the shutter in an open position. Tension washers are furnished for the joints to lend stiffness to the mechanism.

3. To use the device it should be seated firmly on the rifle at the small of the stock. The rifle should then be placed on an improvised rest, or aiming stand. The instructor sights the rifle very accurately, bringing the point of aim, the front sight, rear sight, and the pin hole in the shutter F all into line. Then he throws back the shutter of the aiming device so as to expose the large aperture in the eye E. He requires the recruit to verify the sight setting.

4. Then the instructor may change the position of the rifle either slightly or considerably and require the recruit to explain how the line of sight lies with reference to the point of aim, or if very wide of the mark he may direct him to sight the piece and bring the line of sight back on the mark. The recruit uses only the large aperture, which is practically the same as if he did not have the aiming device at all. The instructor then drops the shutter and shows him conclusively that he has been looking along the right or left side of the front sight, or has failed to look through the middle of the rear sight notch, or has taken a full sight when he said he was taking a half sight, etc.

Tool Rolls have been issued to post and regimental supply officers and coast defense ordnance officers, containing a breast drill, with reamers, taps, and twist drills, a combination screw driver and wrench, a cold chisel and file, for the purpose of correctly locating the fixed stud, movable stud, and front sight on barrels of rifles in the case of repairs, replacements, etc. This tool roll also contains a rifle bore gage with its container and a defective cartridge extractor.

The use of the rifle Bore Gage is covered in Par. II, Bulletin No. 15, War Department, 1915, as amended to date.

The Defective Cartridge Extractor is used to remove defective shells from the chamber, the heads of which have been stripped off in firing. The extractor, having the extractor pin pushed to the rear, is inserted in the chamber as far as it will go. The extractor pin is then pushed forward, thus expanding the extractor and gripping the shell. Then the lever is pushed forward, withdrawing the extractor with the shell.

Telescopic Sight. To properly equip a special class of shots, who, in action, may be employed as sharpshooters, especially selected rifles are fitted and targeted with telescopic sights. The rifle should not be separated from its telescopic sight, as both are given the same serial number, are nicely fitted and accurately targeted together, and for manufacturing reasons are not interchangeable. Therefore, in case of repairs to either the sight or rifle, which can not be accomplished in the organization, both the sight and the rifle should be turned in to an arsenal.

AMMUNITION FOR UNITED STATES RIFLE, CALIBER .30, MODEL OF 1903.

BALL CARTRIDGE, MODEL OF 1906.

The Caliber .30 Ball Cartridge, Fig. 151, consists of the case, primer, charge of smokeless powder, and bullet. The case is of cartridge brass. It has a conical body joined to the neck by a sharper cone, called the shoulder. The neck is the seat of the bullet and is very nearly cylindrical. The front end of the case is called the mouth and the rear end the head. The mouth edge of the case is crimped on the bullet, when the cartridge is assembled, in order

to keep the bullet secure in the case. The head of case is grooved to provide for extraction of cartridge from the chamber of the rifle and is provided with a primer pocket and vent. The initials of the place of manufacture, the number of the month, and the year of its fabrication are stamped on the head of case.

The primer consists of the cup, percussion composition, disk of shellacked paper, and anvil. The cup is of gilding metal and contains 0.46 grain of nonfulminate composition composed of tersulphide of antimony, potassium chlorate, and sulphur. A disk of shellacked paper covers the composition to protect it from moisture and to prevent electrolytic action. The anvil is of brass and is assembled over the paper. After the primer is assembled to the case a drop of shellac is placed on the head of the primer to make the joint waterproof.

The charge is of pyrocellulose composition very similar to the powders used as propelling charges in field and sea coast guns. The grains are cylindrical, single, perforated, and graphited. The normal charge weighs from 47 to 50 grains, varying with the lot of powder used.

The bullet has a core of lead and tin composition inclosed in a jacket of

Fig. 151.



cupro-nickel. It weighs 150 grains, and the point is much sharper and offers less resistance to the air than that of any previous model in the United States service. The bullet is cannellured to receive the crimp of the case, and the base of the bullet is flat. The neck of the case is shellacked before loading, and a pressure of at least 75 pounds is required to seat the bullet in the case; this, with the addition of the above-mentioned crimp, makes the case waterproof.

The standard muzzle velocity of this ammunition in the rifle is 2,700 feet per second. The instrumental velocity measured at 78 feet from the muzzle is 2,640 feet per second, with an allowed mean variation of 20 feet per second on either side of the standard.

The cartridge complete weighs about 395.5 grains, its weight varying slightly with variation in the weight of the powder charge.

Five cartridges are packed in a clip.

The Clip, Fig. 152, consists of the body A and the spring B, both of brass. On the exterior of the sides of the body are the stop lugs C, which seat the clip in its slots in the receiver of the rifle. The top edges of the slides are folded inward, forming flanges, which, fitting into the grooves in the heads, hold the cartridges in place. The spring is secured to the bottom of the body by two sets of interlocking lips E. The spring is provided with narrow tongues D, which, when the clip is filled, are pressed into the grooves of the outside cartridges, holding the cartridges securely in the clip. The clip body can be used a number of times, but the springs only once.

The gallery practice and dummy clip is provided with a strong bronze spring without tongues.

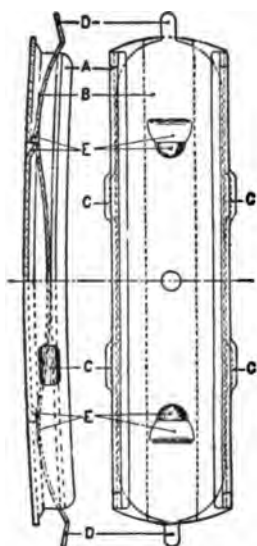
Sixty ball cartridges in 12 clips are packed in a bandoleer.

The bandoleer is made of olive-drab cloth and contains six pockets, each

holding two clips. The clips can be readily taken out by forcing back the fold of the pocket.

The bandoleer is provided with a shoulder strap of olive-drab webbing by which it is carried over the shoulder, and a safety pin is provided to afford an adjustment of its length to suit the convenience of the soldier. When packed, the bandoleer weighs about 3.88 pounds.

Fig. 152.



In each bandoleer is placed an identification card showing the number of cartridges, the caliber and model of ammunition and rifle, place and date of manufacture, kind and lot of powder, and muzzle velocity. The shop symbols of loaders, inspectors, and packers are also given. In case of defective ammunition this card should be returned with report.

Twelve hundred cartridges are packed in a terne-plate-lined packing box, hermetically sealed. Each box contains 20 bandoleers of 60 cartridges each. The packing box measures 34.5 by 9.5 by 8.25 inches and weighs about 100 pounds when filled.

The lid is held to the box by five brass bolts and can be easily removed without the use of tools. Two wire seals connect the cover with the sides of the box.

When the lid is removed, the lining may be torn open by means of a wire handle on the metal cover.

A metallic packing chest is also in use. It is made of tinned sheet iron painted olive drab. This chest holds 1,200 cartridges packed in 20 bandoleers of 60 cartridges each. It has a terneplate cover under the lid and is hermetically sealed.

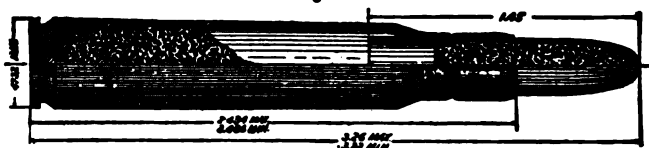
The chest measures 8 by 16¼ by 14 inches and weighs about 95 pounds when filled.

A tin seal locks the hasp to the lid. By opening and closing the fold of this seal several times it will break, thus permitting it to be easily withdrawn. When the lid is opened the cover can be torn off by means of an iron handle attached thereto.

BLANK CARTRIDGE, MODEL OF 1906.

The Blank Cartridge, model of 1906, Fig. 153, differs from the ball cartridge in the charge of powder and in the bullet and in the fact that the case is tinned. The bullet is of paper, hollow, and contains a charge of 6 grains of "E. C." smokeless powder, which insures the breaking up of the bullet on leaving the bore. This charge is retained in the bullet by a drop of shellac. A coating of paraffin on the outside of the bullet prevents the absorption of moisture by the paper. The propelling charge is 10 grains of "E. C." powder.

Fig. 153.



The cartridge is made 0.1 inch shorter than the ball cartridge. This is a measure of protection against the accidental assembling by the machine of a ball cartridge in a clip of blank ones.

THE BLANK CARTRIDGE, MODEL OF 1909.

In the manufacture of these blank cartridges, Fig. 154, cases are used which have been fired, or which have slight defects, rendering them unsuitable for use in ball cartridges. The charge is 12 grains of "E. C." powder.

The case is closed by means of a paper cup inserted in the mouth of the case and shellacked to render the ammunition waterproof.

Fig. 154.

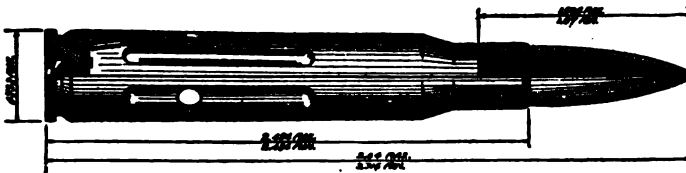


DUMMY CARTRIDGE.

The case of the Dummy Cartridge, Fig. 155, is tinned and provided with six longitudinal corrugations, also three circular holes in the corrugated portion.

The tinning, corrugations, and holes afford unmistakable means for distinguishing the dummy from the ball cartridge, both by sight and touch. The bullet is the same as in the ball cartridge. The dummy primer has cup and anvil, but no percussion composition.

Fig. 155.



GUARD CARTRIDGE.

This cartridge, Fig. 156, differs from the ball cartridge in the charge of powder and in the fact that second-class bullets having slight imperfections are used. Five cannellures encircle the body of the case at about the middle, affording means for distinguishing it from the ball cartridge by either sight or touch.

Fig. 156.



The charge, about 9.1 grains bull's-eye powder, or 16.7 grains Du Pont Rifle Smokeless No. 1, gives a muzzle velocity of 1,200 feet per second. This cartridge gives good results at 100 yards and has sufficient accuracy for use at 150 and 200 yards. The range of 100 yards requires a sight elevation of

DESCRIPTION OF COLORS AND MARKINGS.

ADOPTED FOR THE PASTEBOARD AND WOODEN BOXES; ALSO THE METALLIC PACKING CHEST IN WHICH THE DIFFERENT KINDS OF CALIBER .30 AMMUNITION FOR THE MODEL OF 1903 RIFLE ARE ISSUED.

| Kind of ammunition. | Label on pasteboard box. | | Wooden packing box. | | Metallic packing chest. | |
|--|--------------------------|-----------|--|---|--|--|
| | Color. | Markings. | Markings. | | Markings. | |
| Ball cartridges, model of 1906. ¹ | | | Red band, 4 inches wide, painted around middle of length and on full handles of box. | On both sides of box, the number, kind, model, caliber, kind of powder, and place of manufacture of cartridges; also the model of the rifle; on both ends, the caliber, model, and date; also the lot number, if manufactured under contract; on top, a hand grenade 5.625 by 2.6875 inches and "Small-arms ammunition," all in black ink in large figures and letters. | Red band 2 inches wide around middle of length and 3.5 inches length across middle of handle brackets. | On closed end of packing chest, the number, caliber, kind, model of cartridge, model of rifle, kind of powder, and place of manufacture; on lid, the caliber, model of cartridge, and a hand grenade, 5.625 by 2.6875 inches, all in black ink in large figures and letters. Lid marked with month, day, and year the cartridges were loaded, loading machine number, number of packer, kind of bullet, kind of bandoleer, primer composition, and "Small-arms ammunition" in 0.5-inch figures. Sealing strip with month, day, and year the cartridges were loaded, loading-machine number, number of packer, kind of bullet, kind of bandoleer, and primer composition, with 0.125-inch figures. If manufactured by a contractor, stamp name of contractor and lot number on closed end of packing chest. |

| | | | |
|--|---------|---|---|
| Blank cartridges, model of 1906. | Blue... | Blue band, 4 inches wide, painted around box near one end and half of each handle. | On both sides of box, the num- ber, caliber, kind, model, model of rifle, and place of manufacture of cartridges; on both ends of box, the caliber, kind, and model; on cover, a hand grenade, 5.625 by 2.687 (2½) inches, all in black ink, in large figures and letters; both ends of box marked with month, day, and year the car- tridges were loaded with 0.5- inch figures stamped with black ink. |
| Blank cartridges, model of 1909. | | Blue band, 4 inches wide, painted around one end of length and half the length of handles. | On both sides of box, the num- ber, caliber, kind, model of cartridge, model of rifle, kind of powder, and place of manu- facture; on ends, caliber, kind, and model; on cover, a hand grenade 5.625 by 2.687 (2½) inches and "Small-arms am- munition," all in black ink in large figures and letters; both ends marked with month, day, and year the cartridges were loaded with 0.5-inch figures. |
| Dummy car- tridges, model of 1906. | Green.. | Green band, 4 inches wide, around one end of box and half the length of the handles. | If manufactured by a contrac- tor, stamp name of contractor and lot number on both sides of box. On both sides of box, the num- ber, caliber, kind, model of cartridge, model of rifle, and place of manufacture; on ends, caliber and kind of cartridges; on cover, a hand grenade, 5.625 by 2.687 (2½) inches, all in black ink in large figures and letters; both ends marked with month, day, and year the cartridges were loaded with 0.5-inch figures. |

¹ The ball cartridges are packed in bandoleers.

DESCRIPTION OF COLORS AND MARKINGS—Continued.

| Kind of ammunition. | Label on pasteboard box. | | Wooden packing box. | | Metallic packing chest. |
|----------------------------------|--------------------------|---|--|---|-------------------------|
| | Color. | Markings. | | Markings. | |
| Dummy cartridges, model of 1906. | Green. | Number, kind, caliber, model, place of manufacture, cautions, and information are printed in black ink. | Green band, 4 inches wide, around one end of box and half the length of handles. | If manufactured by a contractor, stamp name of contractor and lot number on both sides of packing box. | |
| Guard cartridges, model of 1906. | Orange | | Orange band, 4 inches wide, painted around one end of length and half the length of handles. | On both sides of box, the number, caliber, kind, and model of cartridge, model of rifle, kind of powder, and place of manufacture; on ends, caliber, kind, and model of cartridge, on cover, a hand grenade 5.62; by 2.687 (2½) inches and "Small-arms ammunition," all in black ink in large letters and figures; both ends of box marked with the month, day, and year the cartridges were loaded with 0.5-inch figures. If manufactured by a contractor, stamp name of contractor and lot number on both sides of box. | |

450 yards, and ranges of 200 and 300 yards require elevations of 650 and 850 yards, respectively.

The guard cartridge, Fig. 157, as now issued, differs from the old issue, Fig. 156, in that six longitudinal corrugations 3-16 inch long start from the shoulder of the case. This affords means of distinguishing this cartridge from the ball cartridge. This cartridge has the same charge of powder, muzzle velocity, etc., as the old issue.

Fig. 157.



VARIATIONS AND CORRECTIONS.

The components of all machine-made ammunition must of necessity vary within certain practicable working limits, and every such variation, especially in the bullet and powder, has a corresponding effect upon the muzzle velocity. The service ammunition is loaded with a charge of powder which gives 2,700 feet per second muzzle velocity when fired from a standard rifle with selected bullets, the powder being at a temperature of 70° F.

The service ammunition will give a muzzle velocity of $2,700 \pm 20$ feet per second when fired on a normal day (70° F.). This velocity will vary directly with the temperature (T) 1.5 feet per second per degree. So that this ammunition fired on any but a normal day will give a muzzle velocity of $2,700 \pm 20 + (T - 70) 1.5$ feet per second. Besides the variations due to the ammunition and temperature there are slight variations caused by the rifle which are of no great importance.

Small variations in velocity have small corresponding vertical deviations on the target. For example, at 1,000 yards an extreme vertical deviation of about 20 inches will be due to variations in muzzle velocity and 20 inches more due to other causes. The mean vertical deviation at this range, however, is less than 10 inches.

Another factor entering the question of range is the density of the air. The density of the air varies with the barometer, thermometer, and hygrometer readings.

The appended tables, I, II, III, and IV, will enable a close approximation to be made to the correct sight elevation for a particular condition.

In Table I will be found the value of $\frac{\delta_1}{\delta}$ for different temperatures and pressures of atmosphere. With $\frac{\delta_1}{\delta}$ found in Table I the corresponding elevation for a given range can be found in Table II, which is calculated for different values of $\frac{\delta_1}{\delta}$. With this elevation the corresponding sight elevation can be obtained from Table IV, which gives the range on the sight corresponding to different angles of departure.

Should the temperatures of the day vary to any great extent from 70° F. the corresponding correction can be obtained from Table III. In using these tables, calculations will be sufficiently accurate if interpolations are made by taking the proportional part of the differences in the tables.

The following problem is given as an illustration of the use of these tables:
 Range 1,000 yards.
 Barometer reading 29 inches.
 Temperature 90° F.
 From Table I,

$$\frac{\delta_1}{\delta} = 1.096.$$

From Table II, by interpolating between $\frac{\delta_1}{\delta} = 1.05$ and $\frac{\delta_1}{\delta} = 1.10$, the elevation for $\frac{\delta_1}{\delta} = 1.096$ is found to be 44.690 minutes.

To correct for the muzzle velocity, we have 2,700 feet per second + (90 — 70) 1.5 = 2,730.

From Table III,

Interpolating between 2,700 and 2,800, the elevation is 48.198 — 1.093 minutes. Since 48.198 minutes is the elevation for 1,000 yards for 2,700 feet per second muzzle velocity, it is seen that the additional 30 feet per second decreases the elevation by 1.093 minutes. It was found above that the elevation for 2,700 feet per second on this day was 44.690 minutes, so that the elevation for the given conditions is 44.690 — 1.093 = 43.597 minutes, which from Table IV will be found to correspond to a sight elevation of 947 yards. This is subject to a further correction for each particular rifle. For example, if the rifle to which this correction is to be applied requires a sight setting of 1,010 yards under normal conditions, it will be necessary to add 10 yards to the result obtained above, so that the correct setting of this rifle would be 957 yards under the conditions given in the problem.

TABLE I.—VALUE OF $\frac{\delta_1}{\delta}$ FOR TEMPERATURE AND PRESSURE; OF ATMOSPHERE TWO-THIRDS SATURATED WITH MOISTURE.

| P. | 28 in. | 29 in. | 30 in. | 31 in. | P. | 28 in. | 29 in. | 30 in. | 31 in. |
|----|--------|--------|--------|--------|----|--------|--------|--------|--------|
| 0 | 0.945 | 0.912 | 0.882 | 0.853 | 27 | 1.002 | 0.967 | 0.935 | 0.905 |
| 1 | .947 | .914 | .884 | .855 | 28 | 1.004 | .969 | .937 | .907 |
| 2 | .949 | .916 | .886 | .857 | 29 | 1.006 | .971 | .939 | .909 |
| 3 | .951 | .918 | .888 | .859 | 30 | 1.008 | .973 | .941 | .911 |
| 4 | .953 | .920 | .890 | .861 | 31 | 1.010 | .975 | .943 | .912 |
| 5 | .955 | .922 | .892 | .863 | 32 | 1.012 | .977 | .945 | .914 |
| 6 | .957 | .924 | .893 | .865 | 33 | 1.014 | .979 | .947 | .916 |
| 7 | .959 | .926 | .895 | .867 | 34 | 1.016 | .981 | .949 | .918 |
| 8 | .962 | .928 | .897 | .869 | 35 | 1.018 | .983 | .951 | .920 |
| 9 | .964 | .930 | .899 | .870 | 36 | 1.021 | .986 | .953 | .922 |
| 10 | .966 | .932 | .901 | .872 | 37 | 1.023 | .988 | .955 | .924 |
| 11 | .968 | .935 | .903 | .874 | 38 | 1.025 | .990 | .957 | .926 |
| 12 | .970 | .937 | .905 | .876 | 39 | 1.027 | .992 | .958 | .928 |
| 13 | .972 | .939 | .907 | .878 | 40 | 1.029 | .994 | .960 | .930 |
| 14 | .974 | .941 | .909 | .880 | 41 | 1.031 | .996 | .962 | .932 |
| 15 | .976 | .943 | .911 | .882 | 42 | 1.033 | .998 | .964 | .933 |
| 16 | .978 | .945 | .913 | .884 | 43 | 1.035 | 1.000 | .966 | .935 |
| 17 | .981 | .947 | .915 | .886 | 44 | 1.037 | 1.002 | .968 | .937 |
| 18 | .983 | .949 | .917 | .888 | 45 | 1.040 | 1.004 | .970 | .939 |
| 19 | .985 | .951 | .919 | .890 | 46 | 1.042 | 1.006 | .972 | .941 |
| 20 | .987 | .953 | .921 | .891 | 47 | 1.044 | 1.008 | .974 | .943 |
| 21 | .989 | .955 | .923 | .893 | 48 | 1.046 | 1.010 | .976 | .945 |
| 22 | .991 | .957 | .925 | .895 | 49 | 1.048 | 1.012 | .978 | .947 |
| 23 | .993 | .959 | .927 | .897 | 50 | 1.050 | 1.014 | .980 | .949 |
| 24 | .995 | .961 | .929 | .899 | 51 | 1.052 | 1.016 | .982 | .951 |
| 25 | .997 | .963 | .931 | .901 | 52 | 1.054 | 1.018 | .984 | .953 |
| 26 | 1.000 | .965 | .933 | .903 | 53 | 1.056 | 1.020 | .986 | .954 |

TABLE I.—VALUE OF $\frac{\partial}{\partial}$ FOR TEMPERATURE AND PRESSURE; OF ATMOSPHERE TWO-THIRDS SATURATED WITH MOISTURE.—Continued.

| F. | 28 in. | 29 in. | 30 in. | 31 in. | F. | 28 in. | 29 in. | 30 in. | 31 in. |
|----|--------|--------|--------|--------|-----|--------|--------|--------|--------|
| 54 | 1.058 | 1.022 | 0.988 | 0.956 | 78 | 1.109 | 1.071 | 1.035 | 1.002 |
| 55 | 1.061 | 1.024 | .990 | .958 | 79 | 1.111 | 1.073 | 1.037 | 1.004 |
| 56 | 1.063 | 1.026 | .992 | .960 | 80 | 1.113 | 1.075 | 1.039 | 1.006 |
| 57 | 1.065 | 1.028 | .994 | .962 | 81 | 1.116 | 1.077 | 1.041 | 1.008 |
| 58 | 1.067 | 1.030 | .996 | .964 | 82 | 1.118 | 1.079 | 1.043 | 1.010 |
| 59 | 1.069 | 1.032 | .998 | .966 | 83 | 1.120 | 1.081 | 1.045 | 1.012 |
| 60 | 1.071 | 1.034 | 1.000 | .968 | 84 | 1.122 | 1.083 | 1.047 | 1.014 |
| 61 | 1.073 | 1.037 | 1.002 | .970 | 85 | 1.124 | 1.085 | 1.049 | 1.016 |
| 62 | 1.075 | 1.039 | 1.004 | .972 | 86 | 1.126 | 1.088 | 1.051 | 1.017 |
| 63 | 1.078 | 1.041 | 1.006 | .974 | 87 | 1.128 | 1.090 | 1.053 | 1.019 |
| 64 | 1.080 | 1.043 | 1.008 | .975 | 88 | 1.130 | 1.092 | 1.055 | 1.021 |
| 65 | 1.082 | 1.045 | 1.010 | .977 | 89 | 1.132 | 1.094 | 1.057 | 1.023 |
| 66 | 1.084 | 1.047 | 1.012 | .979 | 90 | 1.135 | 1.096 | 1.059 | 1.025 |
| 67 | 1.086 | 1.049 | 1.014 | .981 | 91 | 1.137 | 1.098 | 1.061 | 1.027 |
| 68 | 1.088 | 1.051 | 1.016 | .983 | 92 | 1.139 | 1.100 | 1.063 | 1.029 |
| 69 | 1.090 | 1.053 | 1.018 | .985 | 93 | 1.141 | 1.102 | 1.065 | 1.031 |
| 70 | 1.092 | 1.055 | 1.020 | .987 | 94 | 1.143 | 1.104 | 1.067 | 1.033 |
| 71 | 1.094 | 1.057 | 1.022 | .989 | 95 | 1.145 | 1.106 | 1.069 | 1.035 |
| 72 | 1.097 | 1.059 | 1.024 | .991 | 96 | 1.147 | 1.108 | 1.071 | 1.037 |
| 73 | 1.099 | 1.061 | 1.025 | .993 | 97 | 1.149 | 1.110 | 1.073 | 1.038 |
| 74 | 1.101 | 1.063 | 1.027 | .995 | 98 | 1.151 | 1.112 | 1.075 | 1.040 |
| 75 | 1.103 | 1.065 | 1.029 | .996 | 99 | 1.154 | 1.114 | 1.077 | 1.042 |
| 76 | 1.105 | 1.067 | 1.031 | .998 | 100 | 1.156 | 1.116 | 1.079 | 1.044 |
| 77 | 1.107 | 1.069 | 1.033 | 1.000 | | | | | |

TABLE II.

[Muzzle velocity, 2,700 feet per second.]

| Range. | Angle of departures when $\frac{\delta_1}{\delta}$ | | | | | | |
|--------|--|-----------|-----------|-----------|-----------|-----------|-----------|
| | =0.85. | =0.90. | =0.95. | =1. | =1.05. | =1.10. | =1.15. |
| Yards. | Deg. Min. | Deg. Min. | Deg. Min. | Deg. Min. | Deg. Min. | Deg. Min. | Deg. Min. |
| 100 | 0 2.447 | 0 2.439 | 0 2.4315 | 0 2.424 | 0 2.416 | 0 2.410 | 0 2.403 |
| 200 | 0 5.277 | 0 5.229 | 0 5.173 | 0 5.152 | 0 5.121 | 0 5.090 | 0 5.064 |
| 300 | 0 8.585 | 0 8.466 | 0 8.365 | 0 8.275 | 0 8.192 | 0 8.118 | 0 8.051 |
| 400 | 0 12.458 | 0 12.216 | 0 12.012 | 0 11.831 | 0 11.673 | 0 11.530 | 0 11.483 |
| 500 | 0 17.048 | 0 16.612 | 0 16.240 | 0 15.918 | 0 15.638 | 0 15.380 | 0 15.163 |
| 600 | 0 22.483 | 0 21.766 | 0 21.170 | 0 20.650 | 0 20.186 | 0 19.775 | 0 19.420 |
| 700 | 0 28.965 | 0 27.854 | 0 26.913 | 0 26.104 | 0 25.400 | 0 24.795 | 0 24.259 |
| 800 | 0 36.645 | 0 35.026 | 0 33.637 | 0 32.441 | 0 31.413 | 0 30.51 | 0 29.735 |
| 900 | 0 45.617 | 0 43.378 | 0 41.447 | 0 39.785 | 0 38.334 | 0 37.069 | 0 35.961 |
| 1,000 | 0 55.904 | 0 52.970 | 0 50.422 | 0 48.198 | 0 46.256 | 0 44.554 | 0 43.054 |
| 1,100 | 1 7.488 | 1 3.798 | 1 1.838 | 0 57.728 | 0 55.228 | 0 53.020 | 0 51.066 |
| 1,200 | 1 20.369 | 1 15.856 | 1 11.881 | 1 8.379 | 1 5.265 | 1 2.497 | 1 0.040 |
| 1,300 | 1 34.554 | 1 29.077 | 1 24.358 | 1 20.131 | 1 16.364 | 1 13.001 | 1 9.988 |
| 1,400 | 1 50.051 | 1 43.658 | 1 38.003 | 1 32.987 | 1 28.508 | 1 24.491 | 1 20.899 |
| 1,500 | 2 6.938 | 1 59.433 | 1 52.815 | 1 46.951 | 1 41.937 | 1 36.997 | 1 32.760 |
| 1,600 | 2 25.183 | 2 16.498 | 2 8.828 | 2 2.038 | 1 55.971 | 1 50.504 | 1 45.598 |
| 1,700 | 2 44.893 | 2 34.883 | 2 26.077 | 2 18.272 | 2 11.300 | 2 5.035 | 1 59.405 |
| 1,800 | 3 6.100 | 2 54.625 | 2 44.575 | 2 35.674 | 2 27.708 | 2 20.591 | 2 14.187 |
| 1,900 | 3 28.92 | 3 15.754 | 3 4.362 | 2 54.277 | 2 45.274 | 2 37.207 | 2 29.951 |
| 2,000 | 3 53.408 | 3 38.504 | 3 25.540 | 3 14.111 | 3 3.985 | 2 54.904 | 2 46.738 |

TABLE III.

| Angle of Departure when $\delta_1 = 1$. | | | | Angle of departure when $\delta_1 = 1$. | | | |
|--|------------------------------------|------------------------------------|------------------------------------|--|------------------------------------|------------------------------------|------------------------------------|
| Range. | M. V. = 2,600 f. s. $\phi =$ | M. V. = 2,700 f. s. $\phi =$ | M. V. = 2,800 f. s. $\phi =$ | Range. | M. V. = 2,600 f. s. $\phi =$ | M. V. = 2,700 f. s. $\phi =$ | M. V. = 2,800 f. s. $\phi =$ |
| <i>Yards.</i> | <i>Deg. Min.</i> | <i>Deg. Min.</i> | <i>Deg. Min.</i> | <i>Yards.</i> | <i>Deg. Min.</i> | <i>Deg. Min.</i> | <i>Deg. Min.</i> |
| 100. | 0 2.612 | 0 2.424 | 0 2.251 | 1,100. | 1 2.394 | 0 57.728 | 0 53.447 |
| 200. | 0 5.573 | 0 5.152 | 0 4.790 | 1,200. | 1 13.696 | 1 8.379 | 1 3.427 |
| 300. | 0 8.941 | 0 8.275 | 0 7.668 | 1,300. | 1 26.106 | 1 20.131 | 1 14.575 |
| 400. | 0 12.806 | 0 11.831 | 0 10.959 | 1,400. | 1 39.633 | 1 32.987 | 1 26.783 |
| 500. | 0 17.248 | 0 15.918 | 0 14.736 | 1,500. | 1 54.266 | 1 46.951 | 1 40.108 |
| 600. | 0 22.378 | 0 20.650 | 0 19.091 | 1,600. | 2 10.050 | 2 2.038 | 1 56.386 |
| 700. | 0 28.315 | 0 26.104 | 0 24.120 | 1,700. | 2 26.985 | 2 18.272 | 2 10.070 |
| 800. | 0 35.205 | 0 32.441 | 0 29.956 | 1,800. | 2 45.099 | 2 35.674 | 2 26.790 |
| 900. | 0 43.152 | 0 39.785 | 0 36.734 | 1,900. | 3 4.429 | 2 54.277 | 2 44.689 |
| 1,000. | 0 52.206 | 0 48.198 | 0 44.552 | 2,000. | 3 25.03 | 3 14.111 | 3 3.793 |

TABLE IV.—ANGLE OF DEPARTURE FOR EVERY 25 YARDS FROM 100 TO 2,000 WHEN

$$\frac{\delta_1}{\delta} = 1.$$

[Showing the relation between the range marked on sight and angle of departure as computed.]

| Range. | Angle of departure. | Range. | Angle of departure. | Range. | Angle of departure. | Range. | Angle of departure. |
|---------------|---------------------|---------------|---------------------|---------------|---------------------|---------------|---------------------|
| <i>Yards.</i> | <i>Deg. Min.</i> | <i>Yards.</i> | <i>Deg. Min.</i> | <i>Yards.</i> | <i>Deg. Min.</i> | <i>Yards.</i> | <i>Deg. Min.</i> |
| 100..... | 0 2.424 | 650..... | 0 23.273 | 1,200.... | 1 8.379 | 1,750... | 2 26.824 |
| 125..... | 0 3.073 | 675..... | 0 24.660 | 1,225.... | 1 11.150 | 1,775... | 2 31.211 |
| 150..... | 0 3.744 | 700..... | 0 26.104 | 1,250.... | 1 14.112 | 1,800.... | 2 35.674 |
| 175..... | 0 4.434 | 725..... | 0 27.602 | 1,275.... | 1 17.080 | 1,825.... | 2 40.211 |
| 200..... | 0 5.152 | 750..... | 0 29.158 | 1,300.... | 1 20.131 | 1,850.... | 2 44.823 |
| 225..... | 0 5.894 | 775..... | 0 30.767 | 1,325.... | 1 23.238 | 1,875.... | 2 49.511 |
| 250..... | 0 6.664 | 800..... | 0 32.441 | 1,350.... | 1 26.421 | 1,900.... | 2 54.277 |
| 275..... | 0 7.454 | 825..... | 0 34.181 | 1,375.... | 1 29.665 | 1,925.... | 2 59.111 |
| 300..... | 0 8.275 | 850..... | 0 35.984 | 1,400.... | 1 32.987 | 1,950.... | 3 4.032 |
| 325..... | 0 9.119 | 875..... | 0 37.851 | 1,425.... | 1 36.368 | 1,975.... | 3 9.028 |
| 350..... | 0 9.996 | 900..... | 0 39.785 | 1,450.... | 1 39.828 | 2,000.... | 3 14.111 |
| 375..... | 0 10.897 | 925..... | 0 41.786 | 1,475.... | 1 43.355 | | |
| 400..... | 0 11.831 | 950..... | 0 43.852 | 1,500.... | 1 46.951 | | |
| 425..... | 0 12.800 | 975..... | 0 45.991 | 1,525.... | 1 50.618 | | |
| 450..... | 0 13.800 | 1,000.... | 0 48.198 | 1,550.... | 1 54.354 | | |
| 475..... | 0 14.844 | 1,025.... | 0 50.482 | 1,575.... | 1 58.158 | | |
| 500..... | 0 15.918 | 1,050.... | 0 52.826 | 1,600.... | 2 2.038 | | |
| 525..... | 0 17.036 | 1,075.... | 0 55.241 | 1,625.... | 2 5.982 | | |
| 550..... | 0 18.194 | 1,100.... | 0 57.728 | 1,650.... | 2 10.003 | | |
| 575..... | 0 19.402 | 1,125.... | 1 0.290 | 1,675.... | 2 14.098 | | |
| 600..... | 0 20.650 | 1,150.... | 1 2.916 | 1,700.... | 2 18.272 | | |
| 625..... | 0 21.943 | 1,175.... | 1 5.615 | 1,725.... | 2 22.512 | | |

EXTERIOR BALLISTICS.

RAPIDITY OF FIRE.

Twenty-three aimed shots have been fired in one minute with this rifle, used as a single-loader, and 25 shots in the same time, using magazine fire.

Firing from the hip without aim, 30 shots have been fired in one minute, using rifle as a single-loader, and 40 shots in one minute, using magazine fire.

MAXIMUM RANGE.
[Computed.]

| Maximum range. | Elevation. | Time of flight. |
|----------------|-------------|-----------------|
| 4,891.6 yards. | 45 degrees. | 38.058 seconds. |

PRESSURE.

The powder pressure in the chamber of this rifle is about 50,000 pounds per square inch.

RECOIL.

[Computed.]

The maximum energy of free recoil of this rifle is 14.98 foot-pounds.

ACCURACY.

[As determined by firings to date.]

| Range, yards. | Deviation. | | |
|---------------|----------------|------------------|--------------|
| | Mean vertical. | Mean horizontal. | Mean radius. |
| | Inches. | Inches. | Inches. |
| 100..... | 0.6 | 0.6 | 0.8 |
| 200..... | 1.1 | 1.1 | 1.4 |
| 300..... | 1.7 | 1.7 | 2.2 |
| 400..... | 2.3 | 2.3 | 3.0 |
| 500..... | 3.0 | 3.0 | 3.8 |
| 600..... | 3.6 | 3.6 | 4.6 |
| 700..... | 4.3 | 4.3 | 5.4 |
| 800..... | 5.0 | 5.0 | 6.2 |
| 900..... | 5.9 | 5.8 | 7.0 |
| 1,000..... | 6.5 | 6.4 | 7.8 |

PENETRATION.

| Material. | Penetration. | | | |
|---|--------------|------------|------------|------------|
| | 50 feet. | 100 yards. | 200 yards. | 400 yards. |
| | Inches. | Inches. | Inches. | Inches. |
| White-pine butts made of 1-inch boards placed 1 inch apart..... | 59.98 | 52.8 | 38.4 | 21.48 |
| Moist sand..... | 10.06 | 14.02 | 21.0 | 33.9 |
| Dry sand..... | 6.32 | 8.8 | 12.0 | 20.06 |
| Loam practically free from sand..... | 19.9 | 17.48 | 12.0 | 17.48 |
| Thoroughly seasoned oak across the grain..... | 34.19 | 31.0 | 24.0 | 17.48 |
| Brick wall..... | | 15 | | |
| Low steel (boiler plate)..... | .528 | 48 | | |

POINT BLANK DANGER SPACE.

[Battle sight, angle of departure, $6^{\circ} 10'$ of 1907.]

| Firing position. | Horizontal distance of point of departure from ground. | Point of departure from ground. |
|------------------|--|---------------------------------|
| Standing..... | 30 | 30.6 |
| Kneeling..... | 30 | 20.6 |
| Lying down..... | 30 | 10.6 |
| | | 30.2 |

[Barrel Horizontal]

| | | |
|---------------|----|------|
| Standing..... | 30 | 30.6 |
| Kneeling..... | 30 | 20.6 |
| Prone..... | 30 | 10.6 |

TABLE OF FIRE FOR UNITED STATES RIFLE, CAL. .30, MODEL OF 1903, MODEL OF 1905 SIGHT, AND 1906 AMMUNITION.
 [Initial velocity = 2,700 feet per second. $C = 0.3894075$, determined experimentally at Frankford Arsenal.]

| Range (yards). | Angle of departure (computed). | Time of flight (computed). | Angle of fall (computed). | Remaining velocity (computed). | Summit of trajectory (computed). | | Remaining energy (computed). |
|----------------|--------------------------------|----------------------------|---------------------------|--------------------------------|----------------------------------|-----------------------|------------------------------|
| | | | | | Height. | Distance from muzzle. | |
| | Deg. Min. | Seconds. | Deg. Min. | Feet per second. | Feet. | Yards. | Foot-pounds. |
| 100 | 0 2.424 | 0.116 | 0 2.576 | 2,465.88 | 0.0546 | 50.9 | 2,034.25 |
| 200 | 0 5.152 | .243 | 0 5.827 | 2,244.57 | 0.2409 | 103.8 | 1,686.80 |
| 300 | 0 8.275 | .384 | 0 9.978 | 2,039.10 | 0.5956 | 157.52 | 1,392.15 |
| 400 | 0 11.831 | .693 | 0 15.240 | 1,846.42 | 1.1681 | 211.94 | 1,141.5 |
| 500 | 0 15.918 | .709 | 0 21.937 | 1,668.57 | 2.0356 | 270.56 | 932.19 |
| 600 | 0 20.650 | .899 | 0 30.435 | 1,509.55 | 3.2733 | 329.47 | 762.97 |
| 700 | 0 26.104 | 1.108 | 0 41.137 | 1,361.36 | 4.9892 | 390.00 | 620.52 |
| 800 | 0 32.441 | 1.340 | 0 54.543 | 1,238.25 | 7.3190 | 452.23 | 513.37 |
| 900 | 0 39.785 | 1.593 | 1 10.814 | 1,141.62 | 10.4340 | 516.13 | 436.37 |
| 1,000 | 0 48.198 | 1.864 | 1 29.669 | 1,068.21 | 14.480 | 580.70 | 382.36 |
| 1,100 | 0 57.728 | 2.153 | 1 50.917 | 1,012.17 | 19.553 | 643.60 | 343.02 |
| 1,200 | 1 8.379 | 2.458 | 2 14.310 | 966.25 | 25.846 | 706.60 | 312.60 |
| 1,300 | 1 20.131 | 2.776 | 2 39.762 | 924.99 | 33.397 | 767.3 | 285.23 |
| 1,400 | 1 32.987 | 3.108 | 3 7.418 | 887.71 | 42.332 | 826.76 | 263.65 |
| 1,500 | 1 46.951 | 3.453 | 3 37.390 | 853.05 | 52.778 | 885.3 | 243.65 |
| 1,600 | 2 2.038 | 3.813 | 4 9.745 | 821.59 | 64.838 | 943.2 | 226.01 |
| 1,700 | 2 18.272 | 4.189 | 4 44.621 | 792.20 | 78.630 | 1,000.9 | 210.12 |
| 1,800 | 2 35.674 | 4.572 | 5 22.245 | 765.56 | 94.262 | 1,058.5 | 196.23 |
| 1,900 | 2 54.277 | 4.977 | 6 2.746 | 738.65 | 111.93 | 1,116.3 | 182.68 |
| 2,000 | 3 14.111 | 5.394 | 6 46.364 | 713.53 | 131.76 | 1,174.46 | 170.46 |
| 2,100 | 3 35.247 | 5.827 | 7 33.479 | 689.07 | 153.98 | 1,233.2 | 158.98 |
| 2,200 | 3 57.744 | 6.277 | 8 24.208 | 665.78 | 178.81 | 1,292.3 | 148.41 |
| 2,300 | 4 21.664 | 6.744 | 9 18.963 | 643.50 | 206.52 | 1,352.4 | 138.64 |
| 2,400 | 4 47.091 | 7.182 | 10 18.230 | 622.11 | 236.58 | 1,412.67 | 129.58 |
| 2,500 | 5 14.127 | 7.734 | 11 21.568 | 601.89 | 271.39 | 1,473.6 | 121.29 |
| 2,600 | 5 42.850 | 8.258 | 12 30.050 | 582.58 | 309.24 | 1,535.1 | 113.63 |
| 2,700 | 6 13.303 | 8.803 | 13 43.750 | 564.25 | 351.13 | 1,597.3 | 106.60 |

| | | | | | | | | | |
|--------|----|--------|--------|----|--------|--------|--------|---------|--------|
| 2,800. | 6 | 45.854 | 9.370 | 15 | 2.970 | 546.93 | 397.49 | 1,660.0 | 100.15 |
| 2,900. | 7 | 20.404 | 9.962 | 16 | 29.021 | 530.66 | 448.77 | 1,723.6 | 94.28 |
| 3,000. | 7 | 57.175 | 10.577 | 17 | 59.200 | 514.29 | 505.48 | 1,787.7 | 88.62 |
| 3,100. | 8 | 36.350 | 11.219 | 19 | 36.801 | 501.09 | 568.18 | 1,852.6 | 84.07 |
| 3,200. | 9 | 20.000 | 11.93 | 21 | 26 | 493 | 628 | 1,928 | 80.97 |
| 3,300. | 10 | 8 | 12.65 | 23 | 25 | 485 | 690 | 2,005 | 78.37 |
| 3,400. | 11 | 0 | 13.38 | 25 | 34 | 478 | 757 | 2,083 | 76.12 |
| 3,500. | 11 | 55 | 14.12 | 27 | 53 | 471 | 832 | 2,161 | 73.91 |
| 3,600. | 12 | 56 | 14.88 | 30 | 22 | 464 | 917 | 2,239 | 71.73 |
| 3,700. | 14 | 0 | 15.66 | 33 | 1 | 458 | 1,014 | 2,318 | 69.88 |
| 3,800. | 15 | 8 | 16.47 | 35 | 50 | 453 | 1,126 | 2,397 | 68.37 |
| 3,900. | 16 | 20 | 17.32 | 38 | 49 | 448 | 1,257 | 2,477 | 66.87 |
| 4,000. | 17 | 37 | 18.22 | 41 | 58 | 445 | 1,412 | 2,557 | 65.97 |
| 4,100. | 19 | 0 | 19.18 | 46 | 15 | 445 | 1,606 | 2,637 | 65.97 |
| 4,200. | 20 | 32 | 20.20 | 49 | 14 | 448 | 1,870 | 2,718 | 66.87 |
| 4,300. | 23 | 16 | 23.06 | 52 | 42 | 456 | 2,403 | 2,800 | 69.28 |
| 4,400. | 29 | 59 | 27.50 | 60 | 15 | 482 | 3,300 | 2,903 | 77.40 |
| 4,407. | 31 | 45 | 28.75 | 62 | 32 | 492 | 3,685 | 2,925 | 80.65 |

TABLE OF FIRE FOR UNITED STATES RIFLE, CAL. .30, MODEL OF 1903, MODEL OF 1905 SIGHT, AND 1906 AMMUNITION—Continued.

[Initial velocity = 2,700 feet per second. C=0.3894075, determined experimentally at Frankford Arsenal.]

| Range (yards). | Angle of departure (computed). | Time of flight (computed). | Angle of fall (computed). | Remaining velocity (computed). | Summit of trajectory (computed). | | Remaining energy (computed). |
|----------------|--------------------------------|----------------------------|---------------------------|--------------------------------|----------------------------------|-----------------------|------------------------------|
| | | | | | Height. | Distance from muzzle. | |
| | Deg. | Seconds. | Deg. | Feet per second. | Feet. | Yards. | Pounds. |
| 4,407. | 31 45 | 28.75 | 62 32 | 492 | 3,685 | 2,925 | 80.65 |
| 4,400. | 33 45 | 30.00 | 64 20 | 501 | 3,878 | 2,928 | 83.62 |
| 4,300. | 39 15 | 32.94 | 69 50 | 535 | 4,708 | 2,878 | 95.36 |
| 4,200. | 42 46 | 34.54 | 70 52 | 554 | 5,160 | 2,819 | 102.25 |
| 4,100. | 44 50 | 35.75 | 72 25 | 566 | 5,580 | 2,759 | 106.73 |
| 4,000. | 46 46 | 36.90 | 73 47 | 577 | 5,845 | 2,698 | 110.91 |
| 3,900. | 48 35 | 37.63 | 74 59 | 586 | 6,105 | 2,636 | 114.40 |
| 3,800. | 50 18 | 38.26 | 76 02 | 595 | 6,350 | 2,573 | 117.95 |
| 3,700. | 51 56 | 38.87 | 76 57 | 603 | 6,565 | 2,510 | 121.14 |
| 3,600. | 53 29 | 39.48 | 77 45 | 611 | 6,762 | 2,446 | 124.37 |
| 3,500. | 54 58 | 40.05 | 78 28 | 618 | 6,943 | 2,382 | 127.24 |
| 3,400. | 56 23 | 40.51 | 79 07 | 625 | 7,110 | 2,317 | 130.14 |
| 3,300. | 57 45 | 40.98 | 79 42 | 631 | 7,264 | 2,252 | 132.65 |
| 3,200. | 59 4 | 41.45 | 80 14 | 636 | 7,406 | 2,186 | 134.76 |
| 3,100. | 60 20 | 41.85 | 80 43 | 640 | 7,537 | 2,119 | 136.46 |
| 3,000. | 61 34 | 42.20 | 81 10 | 644 | 7,659 | 2,051 | 138.17 |
| 2,900. | 62 46 | 42.52 | 81 35 | 648 | 7,774 | 1,983 | 139.89 |
| 2,800. | 63 56 | 42.87 | 81 59 | 652 | 7,883 | 1,915 | 141.63 |
| 2,700. | 65 4 | 43.20 | 82 22 | 655 | 7,987 | 1,847 | 142.93 |
| 2,600. | 66 10 | 43.51 | 82 43 | 659 | 8,067 | 1,775 | 145.68 |
| 2,500. | 67 14 | 43.80 | 83 04 | 664 | 8,153 | 1,709 | 146.89 |
| 2,400. | 68 16 | 44.03 | 83 24 | 666 | 8,275 | 1,640 | 148.66 |
| 2,300. | 69 16 | 44.22 | 83 44 | 671 | 8,363 | 1,571 | 150.00 |
| 2,200. | 70 15 | 44.43 | 84 03 | 674 | 8,447 | 1,502 | 151.34 |
| 2,100. | 71 13 | 44.62 | 84 22 | 678 | 8,527 | 1,433 | 153.15 |
| 2,000. | 72 10 | 44.80 | 84 40 | 681 | 8,603 | 1,364 | 154.51 |
| 1,900. | 73 6 | 44.98 | 84 57 | 683 | 8,675 | 1,295 | 155.41 |

| | | | | | | | | | |
|------------|----|----|-------|----|----|-----|-------|-------|--------|
| 1,800..... | 74 | 1 | 45.12 | 85 | 14 | 685 | 8,743 | 1,226 | 156.32 |
| 1,700..... | 71 | 55 | 45.30 | 85 | 31 | 686 | 8,807 | 1,158 | 156.78 |
| 1,600..... | 75 | 49 | 45.52 | 85 | 47 | 687 | 8,867 | 1,090 | 157.24 |
| 1,500..... | 76 | 43 | 45.70 | 86 | 3 | 688 | 8,923 | 1,022 | 157.70 |
| 1,400..... | 77 | 36 | 45.86 | 86 | 19 | 689 | 8,975 | 954 | 158.16 |
| 1,300..... | 78 | 29 | 45.98 | 86 | 35 | 690 | 9,023 | 886 | 158.62 |
| 1,200..... | 79 | 22 | 46.08 | 86 | 51 | 691 | 9,067 | 818 | 159.08 |
| 1,100..... | 80 | 15 | 46.16 | 87 | 07 | 692 | 9,107 | 750 | 159.54 |
| 1,000..... | 81 | 8 | 46.24 | 87 | 23 | 694 | 9,143 | 682 | 160.46 |
| 900..... | 82 | 1 | 46.30 | 87 | 39 | 695 | 9,175 | 614 | 160.92 |
| 800..... | 83 | 54 | 46.35 | 87 | 55 | 696 | 9,203 | 546 | 161.38 |
| 700..... | 83 | 47 | 46.39 | 88 | 11 | 697 | 9,227 | 478 | 161.85 |
| 600..... | 84 | 40 | 46.43 | 88 | 27 | 698 | 9,247 | 410 | 162.31 |
| 500..... | 85 | 33 | 46.46 | 88 | 43 | 699 | 9,263 | 342 | 162.78 |
| 400..... | 86 | 26 | 46.48 | 88 | 59 | 699 | 9,275 | 274 | 162.78 |
| 300..... | 87 | 19 | 46.50 | 89 | 15 | 699 | 9,284 | 206 | 162.78 |
| 200..... | 88 | 12 | 46.52 | 89 | 31 | 699 | 9,290 | 138 | 162.78 |
| 100..... | 89 | 5 | 46.53 | 89 | 47 | 699 | 9,294 | 70 | 162.78 |

TABLE OF FIRE FOR UNITED STATES RIFLE, CAL. .30, MODEL OF 1903, MODEL OF 1905 SIGHT, AND 1906 AMMUNITION—Continued.

[Initial velocity = 2,700 feet per second. $C = 0.3894075$, determined experimentally at Frankford Arsenal.]

| Range (yards). | Angle of departure (computed). | Time of flight (computed). | Angle of fall (computed). | Remaining velocity (computed). | Summit of trajectory (computed). | | Remaining energy (computed). |
|----------------|--------------------------------|----------------------------|---------------------------|--------------------------------|----------------------------------|-----------------------|------------------------------|
| | | | | | Height. | Distance from muzzle. | |
| 4,407..... | Det. Min. | Seconds. | Deg. Min. | Feet per second. | Feet. | Yards. | Foot-pounds. |
| 4,400..... | 31 45 | 28.75 | 62 32 | 492 | 3,685 | 2,925 | 80.65 |
| 4,400..... | 33 45 | 30.00 | 64 20 | 501 | 3,878 | 2,928 | 83.62 |
| 4,400..... | 39 15 | 32.94 | 69 50 | 535 | 4,708 | 2,878 | 95.36 |
| 4,200..... | 42 46 | 34.54 | 70 52 | 554 | 5,160 | 2,819 | 102.25 |
| 4,100..... | 44 50 | 35.75 | 72 25 | 566 | 5,550 | 2,759 | 106.73 |
| 4,000..... | 46 46 | 36.90 | 73 47 | 577 | 5,845 | 2,698 | 110.91 |
| 3,900..... | 48 35 | 37.63 | 74 59 | 586 | 6,105 | 2,636 | 114.40 |
| 3,800..... | 50 18 | 38.26 | 76 02 | 595 | 6,350 | 2,573 | 117.95 |
| 3,700..... | 51 56 | 38.87 | 76 57 | 603 | 6,565 | 2,510 | 121.14 |
| 3,600..... | 53 29 | 39.48 | 77 45 | 611 | 6,762 | 2,446 | 124.37 |
| 3,500..... | 54 58 | 40.05 | 78 28 | 618 | 6,943 | 2,382 | 127.24 |
| 3,400..... | 56 23 | 40.51 | 79 07 | 625 | 7,110 | 2,317 | 130.14 |
| 3,300..... | 57 45 | 40.98 | 79 42 | 631 | 7,264 | 2,252 | 132.65 |
| 3,200..... | 59 4 | 41.45 | 80 14 | 636 | 7,406 | 2,186 | 134.76 |
| 3,100..... | 60 20 | 41.85 | 80 43 | 640 | 7,537 | 2,119 | 136.46 |
| 3,000..... | 61 34 | 42.20 | 81 10 | 644 | 7,659 | 2,051 | 138.17 |
| 2,900..... | 62 46 | 42.52 | 81 35 | 648 | 7,774 | 1,983 | 139.89 |
| 2,800..... | 63 56 | 42.87 | 81 59 | 652 | 7,883 | 1,915 | 141.52 |
| 2,700..... | 65 4 | 43.20 | 82 22 | 655 | 7,987 | 1,847 | 143.08 |
| 2,600..... | 66 10 | 43.51 | 82 43 | 659 | 8,085 | 1,779 | 144.55 |
| 2,500..... | 67 14 | 43.80 | 83 04 | 664 | 8,178 | 1,711 | 146.00 |
| 2,400..... | 68 16 | 44.03 | 83 24 | 668 | 8,265 | 1,643 | 147.43 |
| 2,300..... | 69 | 44.23 | 83 44 | 672 | 8,347 | 1,575 | 148.84 |
| 2,200..... | 69 | 44.43 | 83 64 | 676 | 8,424 | 1,507 | 150.23 |

| | | | | | | | | | |
|-------|----|----|-------|----|----|-----|-------|-------|--------|
| 1,800 | 34 | 58 | 39.48 | 76 | 02 | 511 | 5,550 | 2,818 | 83.62 |
| 1,700 | 56 | 23 | 40.48 | 76 | 57 | 586 | 5,845 | 2,759 | 95.36 |
| 1,600 | 57 | 45 | 40.05 | 77 | 45 | 595 | 6,105 | 2,759 | 102.25 |
| 1,500 | 58 | 36 | 40.51 | 78 | 28 | 603 | 6,350 | 2,698 | 106.73 |
| 1,400 | 59 | 28 | 41.48 | 78 | 07 | 611 | 6,565 | 2,636 | 110.91 |
| 1,300 | 60 | 20 | 42.45 | 78 | 42 | 618 | 6,763 | 2,573 | 114.40 |
| 1,200 | 61 | 12 | 43.42 | 79 | 19 | 626 | 6,943 | 2,510 | 117.95 |
| 1,100 | 62 | 04 | 44.39 | 80 | 15 | 634 | 7,110 | 2,446 | 121.44 |
| 1,000 | 63 | 00 | 45.36 | 80 | 19 | 642 | 7,277 | 2,383 | 124.93 |
| 900 | 64 | 00 | 46.33 | 86 | 35 | 650 | 9,023 | 818 | 159.08 |
| 800 | 65 | 00 | 45.98 | 86 | 51 | 690 | 9,067 | 750 | 159.54 |
| 700 | 66 | 00 | 46.08 | 86 | 51 | 691 | 9,107 | 682 | 160.46 |
| 600 | 67 | 00 | 46.16 | 87 | 07 | 692 | 9,143 | 614 | 160.92 |
| 500 | 68 | 00 | 46.24 | 87 | 23 | 694 | 9,175 | 546 | 161.38 |
| 400 | 69 | 00 | 46.30 | 87 | 39 | 695 | 9,203 | 478 | 161.85 |
| 300 | 70 | 00 | 46.35 | 87 | 55 | 696 | 9,227 | 410 | 162.31 |
| 200 | 71 | 00 | 46.39 | 88 | 11 | 697 | 9,247 | 342 | 162.78 |
| 100 | 72 | 00 | 46.43 | 88 | 27 | 698 | 9,263 | 274 | 162.78 |
| | 73 | 00 | 46.46 | 88 | 43 | 699 | 9,275 | 206 | 162.78 |
| | 74 | 00 | 46.48 | 88 | 59 | 699 | 9,284 | 138 | 162.78 |
| | 75 | 00 | 46.50 | 89 | 15 | 699 | 9,290 | 70 | 162.78 |
| | 76 | 00 | 46.52 | 89 | 31 | 699 | 9,294 | | 162.78 |
| | 77 | 00 | 46.53 | 89 | 47 | 699 | | | 162.78 |

TABLE OF FIRE FOR UNITED STATES RIFLE, CAL. .30, MODEL OF 1903, MODEL OF 1905 SIGHT, AND 1906 AMMUNITION—Continued.
 [Initial velocity = 2,700 feet per second. $C=0.3894075$, determined experimentally at Frankford Arsenal.]

| Range (yards). | Angle of departure (computed). | Time of flight (computed). | Angle of fall (computed). | Remaining velocity (computed). | Summit of trajectory (computed). | | Remaining energy (computed). |
|----------------|--------------------------------------|-------------------------------|------------------------------|--------------------------------------|-------------------------------------|--------------------------|------------------------------------|
| | | | | | Height. | Distance from muzzle. | |
| | Deg. Min. | Seconds. | Deg. Min. | Feet per second. | Feet. | Yards. | Foot-pounds. |
| 4,407. | 31 45 | 28.75 | 62 32 | 492 | 3,685 | 2,925 | 80.65 |
| 4,400. | 33 45 | 30.00 | 64 20 | 501 | 3,878 | 2,928 | 83.62 |
| 4,300. | 39 15 | 32.94 | 69 50 | 535 | 4,708 | 2,878 | 95.36 |
| 4,200. | 42 46 | 34.54 | 70 52 | 554 | 5,160 | 2,819 | 102.25 |
| 4,100. | 44 50 | 35.75 | 72 25 | 566 | 5,550 | 2,759 | 106.73 |
| 4,000. | 46 46 | 36.90 | 73 47 | 577 | 5,845 | 2,698 | 110.91 |
| 3,900. | 48 35 | 37.63 | 74 59 | 586 | 6,105 | 2,636 | 114.40 |
| 3,800. | 50 18 | 38.26 | 76 02 | 595 | 6,350 | 2,573 | 117.95 |
| 3,700. | 51 56 | 38.87 | 76 57 | 603 | 6,565 | 2,510 | 121.14 |
| 3,600. | 53 29 | 39.48 | 77 45 | 611 | 6,762 | 2,446 | 124.37 |
| 3,500. | 54 58 | 40.05 | 78 28 | 618 | 6,943 | 2,382 | 127.24 |
| 3,400. | 56 23 | 40.51 | 79 07 | 625 | 7,110 | 2,317 | 130.14 |
| 3,300. | 57 45 | 40.98 | 79 42 | 631 | 7,264 | 2,252 | 132.52 |
| 3,200. | 59 4 | 41.45 | 80 14 | 636 | 7,406 | 2,186 | 134.76 |
| 3,100. | 60 20 | 41.85 | 80 43 | 640 | 7,537 | 2,119 | 136.46 |
| 3,000. | 61 34 | 42.20 | 81 10 | 644 | 7,659 | 2,051 | 138.17 |
| 2,900. | 62 46 | 42.52 | 81 35 | 648 | 7,774 | 1,983 | 139.89 |
| 2,800. | 63 56 | 42.87 | 81 59 | 652 | 7,883 | 1,915 | 141.63 |
| 2,700. | 65 4 | 43.20 | 82 22 | 655 | 7,987 | 1,847 | 142.93 |
| 2,600. | 66 10 | 43.51 | 82 43 | 659 | 8,067 | 1,775 | 145.68 |
| 2,500. | 67 14 | 43.80 | 83 04 | 664 | 8,133 | 1,709 | 146.89 |
| 2,400. | 68 16 | 44.03 | 83 24 | 666 | 8,275 | 1,640 | 148.66 |
| 2,300. | 69 16 | 44.22 | 83 44 | 671 | 8,363 | 1,571 | 150.00 |
| 2,200. | 70 15 | 44.43 | 84 03 | 674 | 8,447 | 1,502 | 151.34 |
| 2,100. | 71 13 | 44.62 | 84 22 | 678 | 8,527 | 1,433 | 153.15 |
| 2,000. | 72 10 | 44.80 | 84 40 | 681 | 8,603 | 1,364 | 154.51 |
| 1,900. | 73 6 | 44.98 | 84 57 | 683 | 8,675 | 1,295 | 155.41 |

| | | | | | | | | | |
|-------|----|----|-------|----|----|-----|-------|-------|--------|
| 1,800 | 74 | 1 | 45.12 | 85 | 14 | 685 | 8,743 | 1,226 | 156.32 |
| 1,700 | 71 | 55 | 45.30 | 85 | 31 | 686 | 8,807 | 1,158 | 156.78 |
| 1,600 | 75 | 49 | 45.52 | 85 | 47 | 687 | 8,867 | 1,090 | 157.24 |
| 1,500 | 76 | 43 | 45.70 | 86 | 3 | 688 | 8,923 | 1,022 | 157.70 |
| 1,400 | 77 | 36 | 45.86 | 86 | 19 | 689 | 8,975 | 954 | 158.16 |
| 1,300 | 78 | 29 | 45.98 | 86 | 35 | 690 | 9,023 | 886 | 158.62 |
| 1,200 | 79 | 22 | 46.08 | 86 | 51 | 691 | 9,067 | 818 | 159.08 |
| 1,100 | 80 | 15 | 46.16 | 87 | 07 | 692 | 9,107 | 750 | 159.54 |
| 1,000 | 81 | 8 | 46.24 | 87 | 23 | 694 | 9,143 | 682 | 160.46 |
| 900 | 82 | 1 | 46.30 | 87 | 39 | 695 | 9,175 | 614 | 160.92 |
| 800 | 82 | 54 | 46.35 | 87 | 55 | 696 | 9,203 | 546 | 161.38 |
| 700 | 83 | 47 | 46.39 | 88 | 11 | 697 | 9,227 | 478 | 161.85 |
| 600 | 84 | 40 | 46.43 | 88 | 27 | 698 | 9,247 | 410 | 162.31 |
| 500 | 85 | 33 | 46.46 | 88 | 43 | 699 | 9,263 | 342 | 162.78 |
| 400 | 86 | 26 | 46.48 | 88 | 59 | 699 | 9,275 | 274 | 162.78 |
| 300 | 87 | 19 | 46.50 | 89 | 15 | 699 | 9,284 | 206 | 162.78 |
| 200 | 88 | 12 | 46.52 | 89 | 31 | 699 | 9,290 | 138 | 162.78 |
| 100 | 89 | 5 | 46.53 | 89 | 47 | 699 | 9,294 | 70 | 162.78 |

ORDINATES OF TRAJECTORY ABOVE LINE OF SIGHT.
[Computed.]

| Horizontal distance (yards). | 100 yards. | 200 yards. | 300 yards. | 400 yards. | 500 yards. | 600 yards. | 700 yards. | 800 yards. | 900 yards. | 1,000 yards. |
|------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. |
| 100..... | 0 | | | | | | | | | |
| 200..... | .238 | 0 | | | | | | | | |
| 300..... | .511 | .545 | 0 | | | | | | | |
| 400..... | .821 | 1.165 | .931 | 0 | | | | | | |
| 500..... | 1.178 | 1.879 | 2.001 | 1.427 | 0 | | | | | |
| 600..... | 1.591 | 2.705 | 3.240 | 3.078 | 2.065 | 0 | | | | |
| 700..... | 2.067 | 3.657 | 4.668 | 4.982 | 4.444 | 2.855 | 0 | | | |
| 800..... | 2.619 | 4.762 | 6.326 | 7.194 | 7.021 | 6.173 | 3.871 | 0 | | |
| 900..... | 3.260 | 6.045 | 8.249 | 9.758 | 10.413 | 10.018 | 8.357 | 5.127 | 0 | |
| 1,000..... | 3.994 | 7.513 | 10.452 | 12.695 | 14.085 | 14.423 | 13.496 | 11.000 | 6.607 | 0 |
| 1,100..... | 4.827 | 9.177 | 12.947 | 16.022 | 18.243 | 19.413 | 19.317 | 17.652 | 14.090 | 8.314 |
| 1,200..... | 5.756 | 11.036 | 15.736 | 19.740 | 22.891 | 24.991 | 25.824 | 25.088 | 22.455 | 17.607 |
| 1,300..... | 6.782 | 13.088 | 18.814 | 23.844 | 28.020 | 31.146 | 33.004 | 33.293 | 31.685 | 27.861 |
| 1,400..... | 7.905 | 15.333 | 22.182 | 28.334 | 33.632 | 37.879 | 40.859 | 42.270 | 41.782 | 39.079 |
| 1,500..... | 9.126 | 17.775 | 25.844 | 33.216 | 39.735 | 45.202 | 49.400 | 52.029 | 52.760 | 51.274 |
| 1,600..... | 10.442 | 20.408 | 29.794 | 38.483 | 46.317 | 53.100 | 58.615 | 62.560 | 64.605 | 64.434 |
| 1,700..... | 11.861 | 23.245 | 34.049 | 44.156 | 53.408 | 61.608 | 68.540 | 73.901 | 77.362 | 78.606 |
| 1,800..... | 13.381 | 26.287 | 38.611 | 50.238 | 61.009 | 70.729 | 79.182 | 86.060 | 91.038 | 93.797 |
| 1,900..... | 15.009 | 29.541 | 43.492 | 56.745 | 69.143 | 80.488 | 90.563 | 99.066 | 105.66 | 110.05 |
| 2,000..... | 16.745 | 33.013 | 48.699 | 63.686 | 77.820 | 90.897 | 102.70 | 112.94 | 121.27 | 127.38 |
| 2,100..... | 18.596 | 36.714 | 54.250 | 71.088 | 87.069 | 101.99 | 115.65 | 127.73 | 137.91 | 145.86 |
| 2,200..... | 20.567 | 40.657 | 60.164 | 78.971 | 97.921 | 113.81 | 129.44 | 143.48 | 155.62 | 165.54 |
| 2,300..... | 22.666 | 44.853 | 66.457 | 87.362 | 107.40 | 126.39 | 144.11 | 160.25 | 174.48 | 186.48 |
| 2,400..... | 24.898 | 48.978 | 73.152 | 96.287 | 118.48 | 139.68 | 159.61 | 177.96 | 200.20 | 209.09 |
| 2,500..... | 27.276 | 54.072 | 80.284 | 105.79 | 124.55 | 154.03 | 176.34 | 197.08 | 215.89 | 232.48 |
| 2,600..... | 29.805 | 59.130 | 87.869 | 115.90 | 143.08 | 169.19 | 194.03 | 217.28 | 238.61 | 257.71 |
| 2,700..... | 32.498 | 64.516 | 95.946 | 126.67 | 156.53 | 185.33 | 212.85 | 238.78 | 262.80 | 284.57 |
| 2,800..... | 35.368 | 70.255 | 104.55 | 138.14 | 170.87 | 202.53 | 232.91 | 261.70 | 288.56 | 313.18 |
| 2,900..... | 38.517 | 76.375 | 113.73 | 150.37 | 186.16 | 220.87 | 254.30 | 286.13 | 316.03 | 343.68 |
| 3,000..... | 41.695 | 82.906 | 123.52 | 163.43 | 202.47 | 240.44 | 277.12 | 312.20 | 345.34 | 376.23 |
| 3,100..... | 45.185 | 89.885 | 133.99 | 177.38 | 219.90 | 261.35 | 301.50 | 340.05 | 376.66 | 411.00 |

ORDINATES OF TRAJECTORY ABOVE LINE OF SIGHT—(Continued.)
(Computed.)

| Horizontal distance (yards). | 1,100 yards. | 1,200 yards. | 1,300 yards. | 1,400 yards. | 1,500 yards. | 1,600 yards. | 1,700 yards. | 1,800 yards. | 1,900 yards. | 2,000 yards. |
|------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 100..... | | | | | | | | | | |
| 200..... | | | | | | | | | | |
| 300..... | | | | | | | | | | |
| 400..... | | | | | | | | | | |
| 500..... | | | | | | | | | | |
| 600..... | | | | | | | | | | |
| 700..... | | | | | | | | | | |
| 800..... | | | | | | | | | | |
| 900..... | | | | | | | | | | |
| 1,000..... | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1,100..... | 10.221 | 12.301 | 14.577 | 17.050 | 19.730 | 22.638 | 25.779 | 29.161 | 32.801 | 36.779 |
| 1,200..... | 21.499 | 25.759 | 30.415 | 35.467 | 40.960 | 46.906 | 53.328 | 60.255 | 67.764 | 75.923 |
| 1,300..... | 33.838 | 40.384 | 47.519 | 55.288 | 63.719 | 72.851 | 82.711 | 93.393 | 104.97 | 117.54 |
| 1,400..... | 47.248 | 56.174 | 65.929 | 76.539 | 88.053 | 100.52 | 114.03 | 128.67 | 144.55 | 161.80 |
| 1,500..... | 51.723 | 73.173 | 85.666 | 99.258 | 114.00 | 130.01 | 147.37 | 166.19 | 186.64 | 208.88 |
| 1,600..... | 77.309 | 91.395 | 106.77 | 123.49 | 141.67 | 161.41 | 182.84 | 206.10 | 231.41 | 258.93 |
| 1,700..... | 94.015 | 110.88 | 129.28 | 149.32 | 171.12 | 194.81 | 220.55 | 248.56 | 279.00 | 312.17 |
| 1,800..... | 111.88 | 130.95 | 153.28 | 176.83 | 202.46 | 230.87 | 260.69 | 293.69 | 329.64 | 368.84 |
| 1,900..... | 130.95 | 153.83 | 178.83 | 206.02 | 235.78 | 268.14 | 303.36 | 341.72 | 383.55 | 429.21 |
| 2,000..... | 151.30 | 177.43 | 206.02 | 237.22 | 270.35 | 308.97 | 348.77 | 392.86 | 440.99 | 493.55 |
| 2,100..... | 172.91 | 202.54 | 234.94 | 270.35 | 308.97 | 349.11 | 397.12 | 447.34 | 502.21 | 567.57 |
| 2,200..... | 195.94 | 229.24 | 265.72 | 305.58 | 349.11 | 396.08 | 445.22 | 496.99 | 552.28 | |
| 2,300..... | 220.43 | 257.68 | 298.46 | 343.08 | 391.87 | 437.43 | 486.02 | 537.92 | | |
| 2,400..... | 246.51 | 287.92 | 333.31 | 383.01 | 434.83 | 485.21 | 537.92 | | | |
| 2,500..... | 274.24 | 320.11 | 370.42 | 425.58 | 480.99 | 532.19 | | | | |
| 2,600..... | 303.77 | 354.40 | 404.99 | 452.19 | 504.99 | | | | | |
| 2,700..... | 335.22 | 390.95 | 442.74 | 497.27 | | | | | | |
| 2,800..... | 368.76 | 429.94 | | | | | | | | |
| 2,900..... | 404.44 | 471.59 | | | | | | | | |
| 3,000..... | | | | | | | | | | |
| 3,100..... | | | | | | | | | | |

ORDINATES OF TRAJECTORY ABOVE LINE OF SIGHT—Continued.
[Computed.]

| Horizontal distance (yards). | 2,100 yards. | 2,200 yards. | 2,300 yards. | 2,400 yards. | 2,500 yards. | 2,600 yards. | 2,700 yards. | 2,800 yards. | 2,900 yards. | 3,000 yards. | 3,100 yards. |
|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 100..... | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. | Feet. |
| 200..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 300..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 400..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 500..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 600..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 700..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 800..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 900..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,000..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,100..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,200..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,300..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,400..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,500..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,600..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,700..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,800..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 1,900..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,000..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,100..... | 0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,200..... | 41.067 | 0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,300..... | 84.735 | 45.703 | 0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,400..... | 131.16 | 94.293 | 50.744 | 0 | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,500..... | 180.54 | 145.96 | 104.69 | 55.796 | 0 | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,600..... | 233.02 | 200.87 | 162.02 | 115.53 | 0 | ..... | ..... | ..... | ..... | ..... | ..... |
| 2,700..... | 288.85 | 259.28 | 223.00 | 179.06 | 62.137 | 0 | ..... | ..... | ..... | ..... | ..... |
| 2,800..... | 348.27 | 321.44 | 287.87 | 246.64 | 126.72 | 68.585 | 0 | ..... | ..... | ..... | ..... |
| 2,900..... | 411.56 | 387.63 | 356.96 | 318.60 | 198.47 | 141.53 | 75.598 | 0 | ..... | ..... | ..... |
| 3,000..... | 479.03 | 458.17 | 430.57 | 395.25 | 273.28 | 218.66 | 156.04 | 83.232 | 0 | ..... | ..... |
| 3,100..... | 551.00 | 533.44 | 509.09 | 477.01 | 352.95 | 301.84 | 241.69 | 171.82 | 91.512 | 0 | ..... |
| | | | | | 437.93 | 389.99 | 333.00 | 266.25 | 189.02 | 100.55 | 0 |

DANGEROUS SPACES.

The dangerous spaces were calculated under the assumption that the gun, when fired, is 12 inches above the ground, that the height of a man is 68 inches, that the head of a man on horseback is 8 feet above the ground, and that the gun is aimed at the middle point of the target.]

RIFLE AGAINST INFANTRY AND CAVALRY.

| Distance to target (yards). | Rising branch of trajectory. | | Falling branch of trajectory. | | | | Continuous dangerous space at target. | | Total. | |
|-----------------------------|------------------------------|--------|-------------------------------|---------------|-----------|---------------|---------------------------------------|----------|-----------|----------|
| | In front of target. | | In rear of target. | | Infantry. | Cavalry. | Infantry. | Cavalry. | Infantry. | Cavalry. |
| | Yards. | Yards. | Yards. | Yards. | | | | | | |
| 100..... | All | All | All | 172.6 + 197.2 | 582.2 | 172.6 + 197.2 | 682.2 | 272.6 | 682.2 | 469.8 |
| 200..... | All | All | All | 464.2 | 340.9 | 464.2 | 540.9 | 664.2 | 540.9 | 664.2 |
| 300..... | All | All | All | 318.0 | 233.4 | 318.0 | 533.4 | 618.0 | 533.4 | 618.0 |
| 400..... | All | All | All | 230.5 | 168.7 | 230.5 | 568.7 | 630.5 | 568.7 | 630.5 |
| 500..... | All | All | All | 172.0 | 125.0 | 172.0 | 625.0 | 672.0 | 625.0 | 672.0 |
| 600..... | All | All | All | 130.4 | 94.7 | 130.4 | 694.7 | 730.4 | 694.7 | 730.4 |
| 700..... | All | 113.2 | All | 99.9 | 72.1 | 99.9 | 799.9 | 799.9 | 418.0 | 799.9 |
| 800..... | 174.5 | 73.4 | 120.5 | 77.3 | 55.6 | 77.3 | 803.5 | 197.8 | 303.5 | 471.3 |
| 900..... | 138.2 | 52.6 | 80.3 | 61.0 | 43.6 | 61.0 | 823.4 | 141.3 | 234.4 | 351.5 |
| 1,000..... | 112.4 | 39.7 | 59.0 | 48.9 | 34.8 | 48.9 | 869.9 | 107.9 | 186.9 | 277.2 |
| 1,100..... | 93.1 | 31.4 | 45.8 | 39.9 | 28.3 | 39.9 | 917.5 | 85.7 | 152.8 | 225.4 |
| 1,200..... | 78.3 | 25.5 | 36.8 | 34.7 | 23.6 | 34.7 | 971.5 | 71.5 | 127.4 | 188.8 |
| 1,300..... | 66.7 | 21.2 | 30.4 | 28.0 | 19.9 | 28.0 | 1,028.4 | 58.4 | 107.8 | 158.2 |
| 1,400..... | 57.4 | 18.0 | 25.6 | 24.0 | 17.0 | 24.0 | 1,095.4 | 49.6 | 92.4 | 135.4 |
| 1,500..... | 49.8 | 15.3 | 21.9 | 20.8 | 14.7 | 20.8 | 1,173.3 | 42.7 | 79.8 | 117.3 |
| 1,600..... | 43.7 | 13.3 | 19.0 | 18.0 | 12.7 | 18.0 | 1,261.3 | 37.0 | 69.7 | 102.3 |
| 1,700..... | 38.5 | 11.5 | 16.6 | 15.8 | 11.3 | 15.8 | 1,359.1 | 32.4 | 61.3 | 90.1 |
| 1,800..... | 34.2 | 10.4 | 14.7 | 13.9 | 9.8 | 13.9 | 1,466.1 | 28.6 | 54.4 | 79.8 |
| 1,900..... | 30.5 | 9.2 | 13.0 | 12.3 | 8.7 | 12.3 | 1,581.1 | 25.3 | 48.4 | 71.1 |
| 2,000..... | 27.4 | 8.2 | 11.5 | 10.8 | 7.8 | 10.8 | 1,706.1 | 22.3 | 43.4 | 63.4 |
| 2,100..... | 24.7 | 7.8 | 11.1 | 9.2 | 6.5 | 9.2 | 1,841.1 | 20.3 | 39.0 | 57.3 |
| 2,200..... | 22.4 | 7.0 | 9.9 | 8.3 | 5.9 | 8.3 | 1,986.1 | 18.2 | 35.3 | 51.7 |
| 2,300..... | 20.3 | 6.3 | 8.9 | 7.4 | 5.2 | 7.4 | 2,141.1 | 16.3 | 31.8 | 46.8 |
| 2,400..... | 18.5 | 5.7 | 8.0 | 6.7 | 4.8 | 6.7 | 2,306.1 | 14.7 | 29.0 | 42.4 |
| 2,500..... | 16.9 | 5.2 | 7.3 | 6.1 | 4.3 | 6.1 | 2,481.1 | 13.4 | 26.4 | 38.7 |
| 2,600..... | 15.5 | 4.7 | 6.6 | 5.5 | 3.9 | 5.5 | 2,666.1 | 12.1 | 24.1 | 35.3 |
| 2,700..... | 14.2 | 4.3 | 6.0 | 5.0 | 3.5 | 5.0 | 2,861.1 | 11.0 | 22.0 | 32.3 |
| 2,800..... | 13.0 | 3.9 | 5.5 | 4.5 | 3.2 | 4.5 | 3,066.1 | 10.0 | 20.1 | 29.6 |

HORIZONTAL DEVIATION.

The rifle has a right-hand twist, and the drift proper is therefore to the right. There is, however, a slight lateral jump to the left, and the total horizontal deviation of the bullet, excluding wind, is the algebraic sum of the drift and the lateral jump. The trajectory is found to be very slightly to the left of the central or uncorrected line of sight up to a range of 500 yards, and beyond that range to the right of this line. In order to minimize the deviations at the most important ranges the drift slot on the sight leaf is so cut as to make the trajectory cross the adjusted line of sight at a range of 500 yards. The deviations under these conditions are shown in column (4) of the table below.

This drift and the deviations due to wind, given below, have been determined by experimental firings, up to 2,000 yards.

| Range (yards). (1) | Drift with targeted rifles, model of 1905 sights graduated for 1906 ammunition. | | | | | Deviation at target produced by a 1-mile wind normal to the plane of fire. (5) |
|-----------------------|---|----------------|---------------------------------------|----------------|-----------------------------------|---|
| | Total drift. (2) | | Drift corrected by sight leaf. (3) | | Drift uncorrected (right). (4) | |
| | Left. | Right. | Left. | Right. | | |
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 100..... | 0.26 | ..... | 0.26 | ..... | 0.0 | 0.1 |
| 200..... | 0.42 | ..... | 0.42 | ..... | 0.0 | 0.3 |
| 300..... | 0.45 | ..... | 0.45 | ..... | 0.0 | 0.8 |
| 400..... | 0.32 | ..... | 0.32 | ..... | 0.0 | 1.5 |
| 500..... | 0.0 | ..... | 0.0 | ..... | 0.0 | 2.4 |
| 600..... | | 0.55 | ..... | 0.55 | 0.0 | 3.6 |
| 700..... | | 2.0 | ..... | 1.4 | 0.6 | 5.1 |
| 800..... | | 4.5 | ..... | 2.6 | 1.9 | 6.9 |
| 900..... | | 8.2 | ..... | 4.2 | 4.0 | 9.1 |
| 1,000..... | | 13.0 | ..... | 6.3 | 6.7 | 11.5 |
| 1,100..... | | 20.5 | ..... | 9.0 | 11.5 | 14.3 |
| 1,200..... | | 29.3 | ..... | 12.3 | 17.0 | 17.2 |
| 1,300..... | | 40.0 | ..... | 16.3 | 23.7 | 20.4 |
| 1,400..... | | 50.7 | ..... | 21.1 | 29.6 | 23.8 |
| 1,500..... | | 61.75 | ..... | 26.75 | 35.0 | 27.4 |
| 1,600..... | | 74.8 | ..... | 33.3 | 41.5 | 31.2 |
| 1,700..... | | 90.0 | ..... | 40.8 | 49.2 | 35.2 |
| 1,800..... | | 107.0 | ..... | 49.3 | 57.7 | 39.4 |
| 1,900..... | | 126.5 | ..... | 59.1 | 67.4 | 43.9 |
| 2,000..... | | 148.5 | ..... | 69.9 | 78.6 | 48.6 |
| 2,100..... | | 174.5 | ..... | 82.1 | 92.4 | 53.5 |
| 2,200..... | | 202.0 | ..... | 95.6 | 106.4 | 58.6 |
| 2,300..... | | 232.0 | ..... | 110.4 | 121.6 | 63.8 |
| 2,400..... | | 264.0 | ..... | 126.7 | 137.3 | 69.1 |
| 2,500..... | | 301.0 | ..... | 145.3 | 155.7 | 74.6 |
| 2,600..... | | 339.0 | ..... | 165.4 | 173.6 | 80.0 |
| 2,700..... | | 381.0 | ..... | 188.1 | 192.9 | 84.5 |
| 2,800..... | | 428.0 | ..... | 212.8 | 215.2 | 90.3 |
| 2,850..... | | 456.0 | ..... | 226.3 | 229.7 | 93.2 |

CORRECTIONS CORRESPONDING TO ONE POINT OF THE DEFLECTION SCALE AND TO A CHANGE IN ELEVATION OF 25 YARDS.

| Range (yards). | Correction caused by moving the eyepiece one point. | Correction corresponding to a change in elevation of 25 yards. | Range (yards). | Correction caused by moving the eyepiece one point. | Correction corresponding to a change in elevation of 25 yards. |
|----------------|---|--|----------------|---|--|
| 100..... | 4.31 | 0.72 | 1,500..... | 64.66 | 59.18 |
| 200..... | 8.62 | 1.61 | 1,600..... | 68.97 | 68.33 |
| 300..... | 12.93 | 2.77 | 1,700..... | 73.28 | 77.79 |
| 400..... | 17.24 | 4.32 | 1,800..... | 77.59 | 88.22 |
| 500..... | 21.55 | 6.18 | 1,900..... | 81.90 | 98.92 |
| 600..... | 25.86 | 8.54 | 2,000..... | 86.22 | 111.45 |
| 700..... | 30.17 | 11.67 | 2,100..... | 90.53 | 123.86 |
| 800..... | 34.48 | 15.62 | 2,200..... | 94.84 | 136.91 |
| 900..... | 38.79 | 19.76 | 2,300..... | 99.15 | 150.62 |
| 1,000..... | 43.11 | 24.81 | 2,400..... | 103.46 | 165.96 |
| 1,100..... | 47.42 | 30.87 | 2,500..... | 107.77 | 186.09 |
| 1,200..... | 51.73 | 37.09 | 2,600..... | 112.08 | 207.29 |
| 1,300..... | 56.04 | 43.89 | 2,700..... | 116.39 | 230.64 |
| 1,400..... | 60.35 | 51.82 | 2,800..... | 120.70 | 271.07 |

TABLE SHOWING NUMBER OF POINTS OF DEFLECTION OR WINDAGE NECESSARY TO CORRECT FOR A 10-MILE-AN-HOUR WIND, DRIFT NOT CONSIDERED.

[Computed.]

| Range (yards). | Direction of wind. | | | Range (yards). | Direction of wind. | | |
|----------------|--------------------|------------------|----------------|----------------|--------------------|------------------|----------------|
| | III, IX. | II, IV, VIII, X. | I, V, VII, XI. | | III, IX. | II, IV, VIII, X. | I, V, VII, XI. |
| 100 | 0.23 | 0.2 | 0.1 | 1,600 | 4.52 | 3.92 | 2.26 |
| 200 | .34 | .31 | .17 | 1,700 | 4.80 | 4.15 | 2.40 |
| 300 | .61 | .53 | .30 | 1,800 | 5.01 | 4.34 | 2.50 |
| 400 | .86 | .75 | .43 | 1,900 | 5.36 | 4.64 | 2.68 |
| 500 | 1.11 | .96 | .55 | 2,000 | 5.63 | 4.87 | 2.81 |
| 600 | 1.39 | 1.2 | .69 | 2,100 | 5.91 | 5.11 | 2.95 |
| 700 | 1.68 | 1.45 | .84 | 2,200 | 6.17 | 5.35 | 3.09 |
| 800 | 2.00 | 1.73 | 1.00 | 2,300 | 6.44 | 5.57 | 3.22 |
| 900 | 2.34 | 2.03 | 1.17 | 2,400 | 6.67 | 5.77 | 3.33 |
| 1,000 | 2.67 | 2.30 | 1.33 | 2,500 | 6.92 | 5.99 | 3.46 |
| 1,100 | 3.01 | 2.61 | 1.50 | 2,600 | 7.14 | 6.18 | 3.57 |
| 1,200 | 3.32 | 2.88 | 1.66 | 2,700 | 7.26 | 6.29 | 3.63 |
| 1,300 | 3.64 | 3.15 | 1.82 | 2,800 | 7.48 | 6.48 | 3.74 |
| 1,400 | 3.94 | 3.41 | 1.97 | 2,850 | 7.58 | 6.56 | 3.79 |
| 1,500 | 4.24 | 3.66 | 2.12 | | | | |

LONGITUDINAL WIND COMPONENTS FOR MODEL OF 1903 RIFLE, 1905 SIGHT, 1906 AMMUNITION (CALCULATED)

[+ΔX = yards short at target on horizontal plane; -ΔX = yards over at target on horizontal plane; +ΔY = distance above at target in vertical plane; -ΔY = distance below at target in vertical plane.]

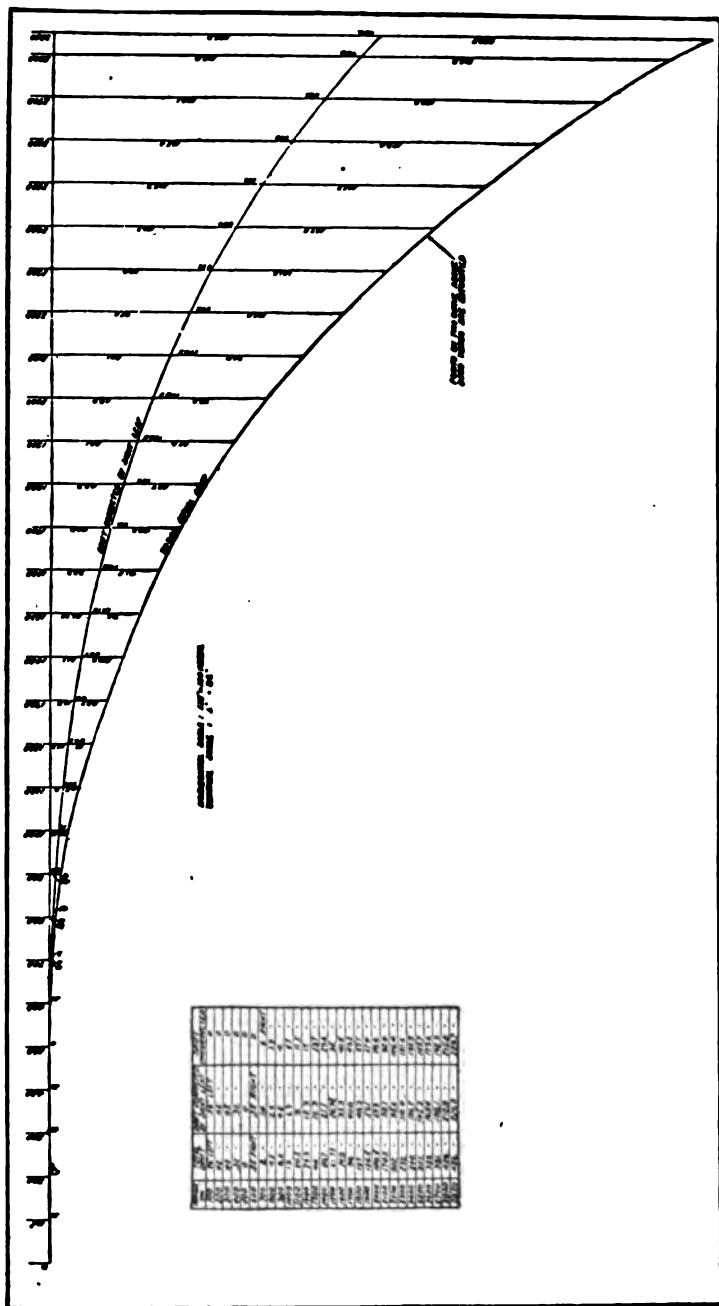
| Wind velocities..... | 5 miles per hour. | | | | | | 10 miles per hour. | | | | | | 15 miles per hour. | | | | | |
|--------------------------|-------------------|-------|-------|------|--------|-------|--------------------|-------|--------|-----|------|-----|--------------------|-------|------|------|--------|------|
| | VI. | | XII. | | VI. | | XII. | | VI. | | XII. | | VI. | | XII. | | VI. | |
| | +ΔX | -ΔY | +ΔY | -ΔY | +ΔX | -ΔY | +ΔY | -ΔY | +ΔX | -ΔY | +ΔY | -ΔY | +ΔX | -ΔY | +ΔY | -ΔY | +ΔX | -ΔY |
| Direction of wind..... | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. |
| Variation at target..... | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. | in. | Fl. | Yards. | Fl. |
| Range (yards). | | | | | | | | | | | | | | | | | | |
| 100..... | 0.48 | 0 | 0.013 | 0 | 0.97 | 0 | 0.012 | 0 | 0.92 | 0 | 0.03 | 0 | 1.41 | 0 | 0.04 | 0 | 1.40 | 0 |
| 200..... | 1.00 | 0 | 0.061 | 0 | 2.03 | 0 | 0.060 | 0 | 2.00 | 0 | 0.12 | 0 | 3.02 | 0 | 0.18 | 0 | 3.00 | 0 |
| 300..... | 1.59 | 0 | 0.203 | 0 | 3.22 | 0 | 0.203 | 0 | 3.15 | 0 | 0.41 | 0 | 4.76 | 0 | 0.61 | 0 | 4.72 | 0 |
| 400..... | 2.25 | 0 | 0.344 | 0 | 4.50 | 0 | 0.343 | 0 | 4.40 | 0 | 0.69 | 0 | 6.20 | 0 | 1.05 | 0 | 6.03 | 0 |
| 500..... | 3.06 | 3.04 | 0.702 | 0 | 6.1 | 0.700 | 0 | 0.700 | 6.04 | 0 | 1.4 | 0 | 9.20 | 9.03 | 0 | 2.10 | 9.03 | 0 |
| 600..... | 3.99 | 3.95 | 0 | 1.27 | 8.0 | 0 | 1.26 | 0 | 7.9 | 0 | 2.5 | 0 | 12.0 | 11.8 | 0 | 3.84 | 0 | 3.75 |
| 700..... | 5.08 | 5.02 | 0 | 2.19 | 10.2 | 0 | 2.16 | 0 | 9.9 | 0 | 4.4 | 0 | 15.3 | 14.9 | 0 | 6.6 | 0 | 6.4 |
| 800..... | 6.80 | 6.69 | 0 | 3.88 | 13.6 | 0 | 3.82 | 0 | 13.3 | 0 | 7.8 | 0 | 20.6 | 19.9 | 0 | 11.8 | 0 | 11.3 |
| 900..... | 9.85 | 9.61 | 0 | 7.30 | 19.9 | 0 | 7.12 | 0 | 19.0 | 1 | 2.7 | 1 | 30.2 | 28.2 | 1 | 10.0 | 1 | 9.0 |
| 1,000..... | 13.23 | 12.91 | 1 | 4.2 | 26.7 | 1 | 4.13 | 1 | 25.5 | 2 | 1.1 | 1 | 40.6 | 37.8 | 3 | 2.2 | 3 | 2.2 |
| 1,100..... | 16.80 | 16.39 | 1 | 7.52 | 34.0 | 1 | 7.04 | 1 | 33.0 | 3 | 3.5 | 3 | 51.7 | 47.9 | 5 | 5.1 | 5 | 4.7 |
| 1,200..... | 20.34 | 20.03 | 2 | 4.62 | 40.9 | 2 | 4.19 | 2 | 39.6 | 4 | 9.6 | 4 | 61.3 | 58.6 | 8 | 11.9 | 8 | 10.5 |
| 1,300..... | 22.67 | 22.39 | 3 | 1.96 | 45.6 | 3 | 1.50 | 3 | 44.5 | 6 | 4.4 | 6 | 68.9 | 66.3 | 9 | 7.4 | 9 | 7.0 |
| 1,400..... | 25.14 | 24.77 | 4 | 1.40 | 50.6 | 4 | 1.10 | 4 | 49.3 | 8 | 3.6 | 8 | 76.4 | 73.4 | 12 | 6.2 | 12 | 5.8 |
| 1,500..... | 27.69 | 27.32 | 5 | 3.11 | 55.7 | 5 | 2.3 | 5 | 54.3 | 10 | 7.0 | 10 | 84.2 | 80.8 | 15 | 11.9 | 15 | 11.5 |
| 1,600..... | 30.36 | 29.94 | 6 | 7.50 | 61.1 | 6 | 6.4 | 6 | 59.4 | 13 | 4.1 | 13 | 93.5 | 88.5 | 20 | 5.0 | 20 | 4.6 |
| 1,700..... | 33.03 | 32.63 | 8 | 2.6 | 66.3 | 8 | 1.4 | 8 | 64.7 | 16 | 6.2 | 16 | 111.7 | 105.7 | 24 | 9.6 | 24 | 9.2 |
| 1,800..... | 34.98 | 34.59 | 9 | 10.4 | 70.2 | 9 | 9.0 | 9 | 69.1 | 19 | 9.6 | 19 | 124.3 | 117.7 | 29 | 5.8 | 29 | 5.4 |
| 1,900..... | 36.93 | 36.68 | 11 | 8.8 | 74.1 | 11 | 7.8 | 11 | 73.1 | 23 | 6.6 | 23 | 139.9 | 132.9 | 35 | 11.6 | 35 | 11.2 |
| 2,000..... | 38.97 | 38.72 | 13 | 10.6 | 77.1 | 13 | 9.5 | 13 | 77.0 | 27 | 9.2 | 27 | 159.3 | 151.9 | 41 | 11.0 | 41 | 10.6 |
| 2,100..... | 41.15 | 40.79 | 16 | 4.5 | 82.5 | 16 | 2.8 | 16 | 81.2 | 32 | 10.1 | 32 | 174.2 | 166.4 | 49 | 6.0 | 49 | 5.6 |
| 2,200..... | 43.28 | 42.94 | 19 | 2.0 | 86.9 | 19 | 1.4 | 19 | 85.5 | 38 | 5.8 | 38 | 194.8 | 186.4 | 57 | 11.6 | 57 | 11.2 |
| 2,300..... | 45.54 | 45.17 | 22 | 4.0 | 91.5 | 22 | 1.8 | 22 | 90.0 | 44 | 10.2 | 44 | 214.8 | 206.4 | 67 | 6.6 | 67 | 6.2 |
| 2,400..... | 47.83 | 47.45 | 25 | 10.7 | 96.1 | 25 | 8.2 | 25 | 94.5 | 52 | 0.4 | 52 | 234.8 | 226.4 | 78 | 6.5 | 78 | 6.1 |
| 2,500..... | 50.20 | 49.78 | 30 | 12 | 100.8 | 30 | 9.3 | 30 | 99.2 | 60 | 3.7 | 60 | 254.8 | 246.4 | 90 | 10.0 | 90 | 9.6 |
| 2,600..... | 52.65 | 52.18 | 34 | 4.3 | 105.6 | 34 | 0.6 | 34 | 103.9 | 68 | 11.0 | 68 | 274.8 | 266.4 | 103 | 11.6 | 103 | 11.2 |
| 2,700..... | 54.98 | 54.47 | 39 | 2.8 | 110.4 | 39 | 10.4 | 39 | 108.4 | 78 | 9.4 | 78 | 294.8 | 286.4 | 118 | 8.5 | 118 | 8.1 |
| 2,800..... | 57.53 | 56.95 | 44 | 8.9 | 115.6 | 44 | 3.5 | 44 | 113.5 | 89 | 10.7 | 89 | 314.8 | 306.4 | 135 | 5.7 | 135 | 5.3 |
| 2,900..... | 60.15 | 59.53 | 50 | 10.8 | 121.6 | 50 | 4.6 | 50 | 118.6 | 102 | 10.6 | 102 | 334.8 | 326.4 | 154 | 2.4 | 154 | 2.0 |
| 3,000..... | 62.82 | 62.22 | 57 | 8.1 | 126.3 | 57 | 2.5 | 57 | 123.8 | 116 | 1.6 | 116 | 354.8 | 346.4 | 174 | 1 | 174 | 0.6 |

LONGITUDINAL WIND COMPONENTS FOR MODEL OF 1903 RIFLE, 1905 SIGHT, 1906 AMMUNITION (CALCULATED)—Continued.

[+ΔX = yards short at target on horizontal plane; -ΔX = yards over at target on horizontal plane; +ΔY = distance above at target in vertical plane; -ΔY = distance below at target in vertical plane.]

| Wind velocities..... | 20 miles per hour. | | | | | | 25 miles per hour. | | | | | | 30 miles per hour. | | | | | |
|--------------------------|--------------------|--------|----------------------|------------|----------------------|------------|----------------------|------------|----------------------|------------|----------------------|------------|----------------------|------------|----------------------|------------|----------------------|------------|
| | VI. | | XII. | | VI. | | XII. | | VI. | | XII. | | VI. | | XII. | | VI. | |
| | +ΔX | -ΔX | +ΔY | -ΔY | +ΔX | -ΔX | +ΔY | -ΔY | +ΔX | -ΔX | +ΔY | -ΔY | +ΔX | -ΔX | +ΔY | -ΔY | +ΔX | -ΔX |
| Direction of wind..... | Yards. | Yards. | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> | <i>F_L</i> | <i>in.</i> |
| Variation at target..... | | | | | | | | | | | | | | | | | | |
| Range (yards). | | | | | | | | | | | | | | | | | | |
| 100..... | 1.9 | 1.8 | 0 | 0.05 | 2.4 | 2.3 | 0 | 0.064 | 0 | 0.063 | 2.8 | 2.7 | 0 | 0.08 | 0 | 0.07 | 0 | 0.07 |
| 200..... | 4.0 | 3.9 | 0 | .20 | 5.0 | 4.5 | 0 | .31 | 0 | .27 | 6.0 | 5.9 | 0 | .40 | 0 | .36 | 0 | .36 |
| 300..... | 6.4 | 6.3 | 0 | .80 | 8.0 | 7.8 | 0 | 1.03 | 0 | 1.00 | 9.6 | 9.4 | 0 | 1.22 | 0 | 1.2 | 0 | 1.2 |
| 400..... | 8.9 | 8.8 | 0 | 1.3 | 11.2 | 11.0 | 0 | 1.70 | 0 | 1.68 | 13.5 | 13.3 | 0 | 2.16 | 0 | 2.0 | 0 | 2.0 |
| 500..... | 12.2 | 12.0 | 0 | 2.7 | 15.4 | 15.0 | 0 | 3.53 | 0 | 3.44 | 18.4 | 17.9 | 0 | 4.20 | 0 | 4.1 | 0 | 4.1 |
| 600..... | 16.0 | 15.7 | 0 | 5.0 | 20.0 | 19.6 | 0 | 6.39 | 0 | 6.23 | 24.1 | 23.4 | 0 | 7.70 | 0 | 7.5 | 0 | 7.5 |
| 700..... | 20.6 | 19.8 | 0 | 8.7 | 25.8 | 24.6 | 0 | 11.14 | 0 | 10.61 | 31.2 | 29.5 | 1 | 1.4 | 1 | 1.4 | 1 | .7 |
| 800..... | 27.8 | 26.3 | 1 | 3.8 | 35.2 | 32.8 | 1 | 8.1 | 1 | 6.7 | 42.7 | 37.8 | 2 | 0.4 | 2 | 0.4 | 1 | 9.6 |
| 900..... | 40.8 | 37.2 | 2 | 6.2 | 51.6 | 46.0 | 3 | 2.3 | 3 | 2.3 | 62.7 | 54.6 | 3 | 10.5 | 3 | 4.5 | 3 | 4.5 |
| 1,000..... | 54.8 | 49.8 | 4 | 3.4 | 69.4 | 61.6 | 5 | 5.2 | 5 | 5.2 | 84.3 | 73.1 | 6 | 7.2 | 6 | 7.2 | 5 | 8.7 |
| 1,100..... | 69.8 | 63.2 | 6 | 9.0 | 88.4 | 78.1 | 8 | 6.7 | 8 | 6.7 | 107.5 | 92.6 | 10 | 4.9 | 10 | 4.9 | 8 | 11.6 |
| 1,200..... | 82.9 | 77.2 | 9 | 8.7 | 104.3 | 95.3 | 12 | 2.8 | 12 | 2.8 | 126.1 | 113.0 | 14 | 9.4 | 14 | 9.4 | 13 | 3.1 |
| 1,300..... | 92.6 | 87.8 | 12 | 11.0 | 116.4 | 109.1 | 16 | 3.0 | 16 | 3.0 | 140.7 | 130.1 | 19 | 7.6 | 19 | 7.6 | 18 | 1.8 |
| 1,400..... | 102.6 | 97.2 | 16 | 9.6 | 129.1 | 120.8 | 21 | 1.7 | 21 | 1.7 | 156.0 | 144.1 | 25 | 6.6 | 25 | 6.6 | 23 | 7.1 |
| 1,500..... | 113.1 | 107.0 | 21 | 2.7 | 142.3 | 133.0 | 27 | .4 | 27 | .4 | 172.1 | 158.5 | 32 | 8.3 | 32 | 8.3 | 30 | 1.3 |
| 1,600..... | 124.0 | 117.2 | 27 | 9.9 | 156.1 | 145.6 | 34 | .9 | 34 | .9 | 188.4 | 173.6 | 41 | 1.7 | 41 | 1.7 | 37 | 10.7 |
| 1,700..... | 133.7 | 127.8 | 33 | 3.4 | 167.7 | 158.7 | 41 | 9.1 | 41 | 9.1 | 202.0 | 189.1 | 50 | 3.6 | 50 | 3.6 | 47 | 1.0 |
| 1,800..... | 141.5 | 137.3 | 39 | 10.9 | 177.4 | 170.8 | 50 | .6 | 50 | .6 | 213.8 | 204.0 | 60 | 3.6 | 60 | 3.6 | 57 | 6.5 |
| 1,900..... | 149.4 | 145.1 | 47 | 5.8 | 187.5 | 180.7 | 59 | 6.9 | 59 | 6.9 | 225.9 | 216.1 | 71 | 9.2 | 71 | 9.2 | 68 | 8.0 |
| 2,000..... | 157.7 | 153.1 | 56 | 2.4 | 196.6 | 190.7 | 70 | .6 | 70 | .6 | 238.5 | 228.0 | 84 | 11.6 | 84 | 11.6 | 81 | 2.8 |
| 2,100..... | 166.4 | 161.3 | 66 | 2.8 | 208.8 | 200.9 | 83 | 1.2 | 83 | 1.2 | 251.6 | 240.3 | 100 | 1.7 | 100 | 1.7 | 95 | 7.3 |
| 2,200..... | 175.3 | 169.8 | 77 | 7.8 | 220.0 | 216.3 | 97 | 5.0 | 97 | 5.0 | 265.1 | 252.9 | 117 | 4.6 | 117 | 4.6 | 111 | 11.4 |
| 2,300..... | 184.4 | 178.6 | 90 | 5.3 | 231.5 | 222.4 | 113 | 6.5 | 113 | 6.5 | 279.0 | 265.9 | 136 | 9.8 | 136 | 9.8 | 130 | 4.7 |
| 2,400..... | 193.8 | 187.6 | 104 | 11.0 | 243.3 | 233.5 | 131 | 8.4 | 131 | 8.4 | 293.3 | 279.2 | 158 | 9.1 | 158 | 9.1 | 151 | 1.3 |
| 2,500..... | 203.5 | 196.7 | 121 | 8.4 | 256.0 | 245.0 | 153 | 1.2 | 153 | 1.2 | 307.8 | 292.8 | 184 | 1.8 | 184 | 1.8 | 175 | 1.0 |
| 2,600..... | 213.4 | 206.1 | 139 | 3.2 | 268.0 | 256.6 | 174 | 1.1 | 174 | 1.1 | 323.1 | 306.7 | 210 | 10.0 | 210 | 10.0 | 200 | 2.2 |
| 2,700..... | 222.9 | 215.0 | 159 | .4 | 279.9 | 267.7 | 199 | 8.5 | 199 | 8.5 | 337.5 | 319.9 | 240 | 9.2 | 240 | 9.2 | 228 | 2.6 |
| 2,800..... | 233.4 | 224.9 | 181 | 6.0 | 293.2 | 280.0 | 228 | 0.1 | 228 | 0.1 | 353.5 | 334.6 | 274 | 11.1 | 274 | 11.1 | 260 | 2.4 |
| 2,900..... | 244.1 | 235.1 | 206 | 7.4 | 306.7 | 292.6 | 259 | 7.2 | 259 | 7.2 | 369.9 | 349.6 | 312 | 4.4 | 312 | 4.4 | 295 | 10.3 |
| 3,000..... | 255.2 | 245.4 | 234 | 8.4 | 320.7 | 305.5 | 294 | 10.2 | 294 | 10.2 | 386.9 | 364.9 | 357 | 1.1 | 357 | 1.1 | 335 | 6.8 |

PLATE I.



**PRINCIPAL DIMENSIONS AND WEIGHTS OF UNITED STATES
RIFLE, CAL. .30, MODEL OF 1903.**

| Barrel: | DIMENSIONS. | Inches. |
|---|--------------------|----------------|
| Diameter of bore | | 0.30 |
| Exterior diameter at muzzle | | .619 |
| Exterior diameter at breech | | 1.14 |
| Length of chamber and bore | | 23.79 |
| Length of travel of bullet in bore..... | | 21.697 |
| Diameter of chamber, rear end..... | | .4716 |
| Diameter of chamber, front end | | .442 |
| Diameter of neck of chamber, rear end..... | | .3425 |
| Diameter of neck of chamber, front end..... | | .3405 |
| Length of body of chamber | | 1.793 |
| Length of shoulder of chamber..... | | .16 |
| Length of neck of chamber | | .396 |
| Length of chamber, total | | 2.3716 |
| Rifling: | | |
| Number of grooves, 4. | | |
| Twist, uniform, one turn in | 10.00 | |
| Width of grooves | | .1767 |
| Width of lands | | .0589 |
| Depth of grooves | | .004 |
| Height of front sight above axis of bore | | 1.05 |
| Distance from top of front sight to rear side of leaf, leaf raised..... | | 22.1254 |
| Stock: | | |
| Length, with butt plate | | 40.166 |
| Crook, i.e., distance from axis of bore to heel of butt..... | | 2.089 |
| Distance from trigger to butt plate | | 12.74 |
| Length of gun complete | | 43.212 |
| Sight radius | | 22.1254 |
| Sight radius (battle sight)..... | | 21.5404 |
| Width of single division on windage scale | | .0267 |

| | WEIGHTS. | Pounds |
|--|-----------------|---------------|
| Barrel | | 2.79 |
| Barrel, with rear-sight base and front-sight stud | | 3.00 |
| Butt plate | | .26 |
| Receiver | | .98 |
| Bolt mechanism | | 1.00 |
| Magazine and trigger guard | | .44 |
| Magazine mechanism, including floor plate | | .17 |
| Bayonet | | 1.00 |
| Stock | | 1.58 |
| Hand guard | | .13 |
| Front and rear bands, including swivels | | .25 |
| Rear sight, not including base | | .20 |
| Total weight of metal parts | | 7.30 |
| Oiler and thong case | | .19 |
| Total weight of arm, including oiler and thong case, with bayonet..... | | 9.69 |
| Total weight of arm, including oiler and thong case, without bayonet.. | | 8.69 |
| Weight to compress mainspring | | 16 to 18 |
| Trigger pull (measured at middle point of bow of trigger)..... | | 4 to 5 |

MISCELLANEOUS DATA.

Initial velocity2,700 feet per second.
Powder pressure in chamber.....about 51,000 pounds per square inch.
Weight of ball cartridge.....about 395.5 grains.
Weight of bullet150 grains.
Weight of powder chargeabout 50 grains.

War Department,

Office of the Chief of Ordnance.

Washington, January 22, 1917.

March 3, 1904.

Revised April 18, 1906.

Revised February 14, 1908.

Revised April 2, 1909.

Revised October 17, 1911.

Revised March 20, 1914.

Revised January 22, 1917.

No. 1717.

**INSTRUCTIONS FOR
ASSEMBLING THE INFANTRY EQUIPMENT
MODEL OF 1910**

War Department,
Office of the Chief of Staff,
Washington, March 11, 1912.

This Manual is published for the information and government of the Regular Army and Organized Militia of the United States.

By order of the Secretary of War:

WILLIAM CROZIER,
Brigadier General, Chief of Ordnance.

INSTRUCTIONS FOR ASSEMBLING THE INFANTRY EQUIPMENT MODEL OF 1910

1. The Cartridge Belt. (a) To assemble the belt. Place the adjusting strap on the ground, eyeleted edge to the front; place the pocket sections on the ground in prolongation of the adjusting strap, pockets down, tops of pockets to the front; insert end of adjusting strap in outer loop of metal guide, from the upper side, carry it under the middle bar and up through the inner loop; engage the wire hook on the end of adjusting strap in the eyelets provided on the inner surface of the belt.

(b) To adjust the belt. Adjust the belt to fit loosely about the waist—i.e., so that when buckled it may rest well down over the hip bones on the sides of the body and below the pit of the abdomen in front. Care should be taken that the adjustment be made equally from both ends of the adjusting strap so that the center eyelet will be in the middle of the belt.

(c) To fill the belt. Unsnap the flap of the pocket and the interior retaining strap; lay the retaining strap out flat in prolongation of the pocket, insert a clip of cartridges, points of bullets up, in front of the retaining strap; press down until the base of the clip rests on the bottom of the pocket; pass the retaining strap over the bullet points and fasten it to the outside of the pocket by means of the fastener provided; insert a second clip of cartridges, points of bullets down, in rear of the first clip; press down until the points of the bullets rest on the bottom of the pocket; close the flap of the pocket and fasten by means of the fastener provided.

The remaining nine pockets are filled in like manner.

2. To Attach the First-aid Pouch. Attach the pouch under the second pocket of the left section of the belt by inserting one hook of the double-hook attachment in the eyelet from the inside of the belt; pinch the base of the pocket, bringing eyelets close together, and insert the other hook in the same manner in the adjoining eyelet.

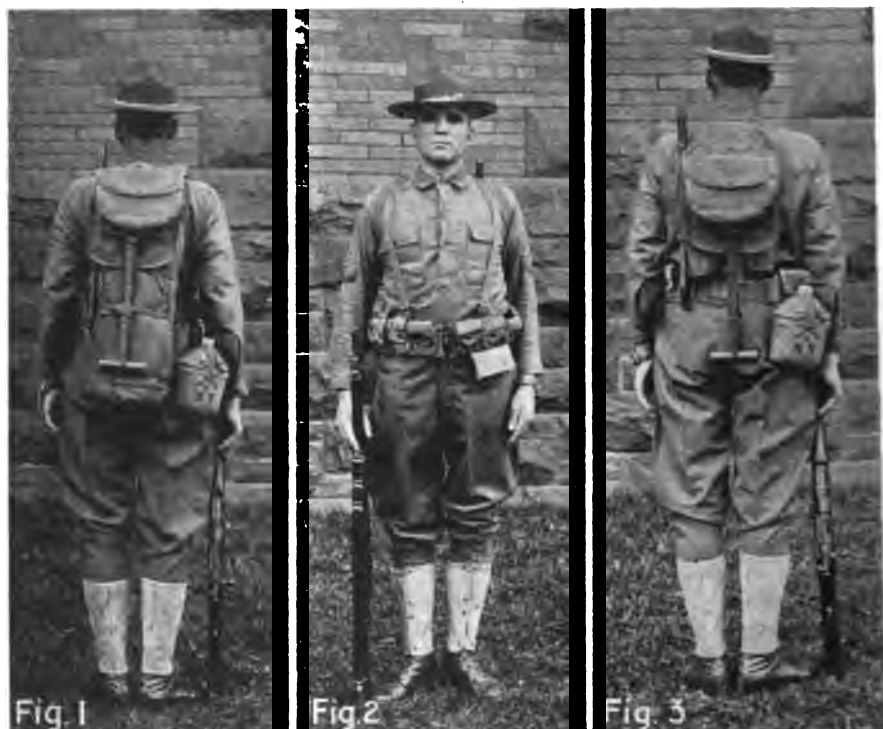
Place the first-aid packet in the pouch and secure the cover.

3. To Attach the Canteen Cover. Attach the canteen cover to the belt under the rear pocket of the right section in the same manner as the first-aid pouch. Place the canteen and cup (assembled) in the cover and secure the flaps.

4. To Attach the Pack Carrier to the Haversack. Spread the haversack on the ground, inner side down, outer flap to the front (Fig. 4); place the buttonholed edge of the pack carrier on the buttonholed edge of the haversack, lettered side of carrier up; buttonholes of carrier superimposed upon the corresponding ones of the haversack; lace the carrier to the haversack by passing the ends of the coupling strap down through the corresponding buttonholes of the carrier and haversack nearest the center of the carrier, bringing the ends up through the next buttonholes and continuing to the right and left, respectively, to the sides.

5. To Attach the Cartridge Belt to the Haversack. Place the haversack and pack carrier (assembled) on the ground, inner side down (Fig. 5); place the cartridge belt, pockets down, tops to the front, along the junction of the haversack and carrier; insert hook on rear belt suspender in the center eyelet of the adjusting strap, so that the end of the hook will be on the outside of the belt; insert hooks on ends of front belt suspenders in the eyelets between the second and third pockets from the outer ends of the belt, so that the end of the hooks will be on the outside of the belt.

6. To Attach the Bayonet Scabbard to the Haversack. Attach the scabbard by passing its lower end through the loop provided on the side of the haver-



sack body, then engage the double-hook attachment in the eyelets on the outer flap on the haversack, inserting the hooks from the inside.

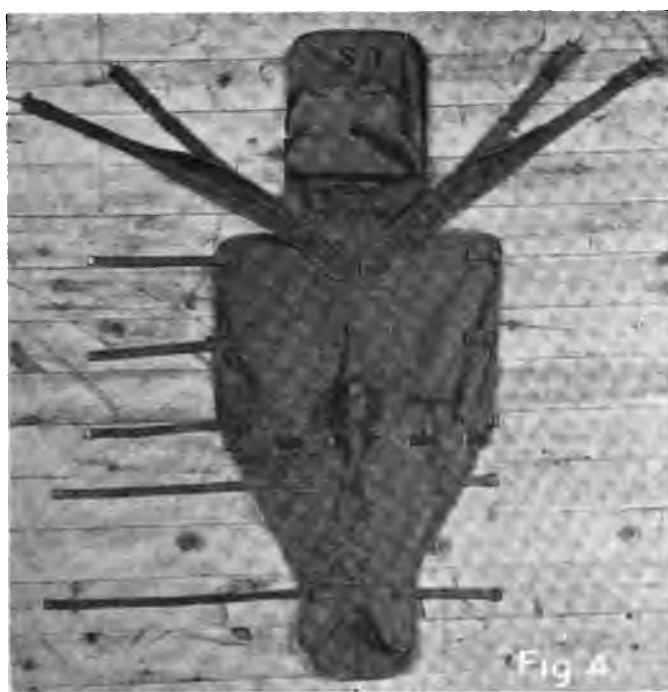
Place the bayonet in the scabbard.

7. To Attach the Intrenching Tool Carrier to the Haversack. Fold the outer flap of the haversack over so that the meat-can pouch is uppermost; pass the intrenching tool carrier underneath the meat-can pouch and engage the double-hook attachment in the eyelets in the flap provided, inserting the hooks from the underside.

Place the intrenching tool in the carrier and secure.

Place the meat can, knife, fork, and spoon in the meat-can pouch.

The equipment is now assembled and is never disassembled except to detach the pack carrier and its contents as hereinafter provided for.



TO ASSEMBLE THE FULL EQUIPMENT.**WITH RATIONS.**

Place the assembled equipment on the ground, suspender side of haversack down, pockets of cartridge belt up, haversack spread out, inside flap and pack carrier extended their full length to the rear (Fig. 6).

Place three cartons of hard bread in the center of the haversack body, the lower one on the line of attachment of the inside flap; lay the remaining carton of hard bread, the condiment can and the bacon can on the top of these, the condiment can and the bacon can at the bottom, top of the bacon can to the front; the socks and toilet articles are rolled, towel on the outside, into a bundle of the same approximate dimensions as a carton of hard bread, and are placed in front of the two rows thus formed.

The inside flap of the haversack is folded over these articles, the end of the flap being turned in so that the flap, thus shortened, extends about 2 inches beyond the top of the upper row; the sides of the haversack are folded over the sides of the rows; the upper binding straps are passed through the loops on the outside of the inside flap, each strap through the loop opposite the point of its attachment to the haversack body, and fastened by means of the buckle on the opposite side, the strap being passed through the opening in the buckle next to its attachment, over the center bar, and back through the opening of the buckle away from its attachment; the strap is pulled tight to make the fastening secure; the outer flap of the haversack is folded over and fastened by means of the lower haversack binding strap and the buckle on the inside of the outer flap; the strap is pulled tight, drawing the outer flap snugly over the filled haversack.

The haversack is now packed and the carrier is ready for the reception of the pack (Fig. 7).

If one haversack ration and one emergency ration are carried in lieu of two haversack rations, the haversack is packed in the manner described above, except that two cartons of hard bread and the bacon can form the bottom layer, the bacon can on the bottom; the condiment can, the emergency ration, and the toilet articles form the top layer.

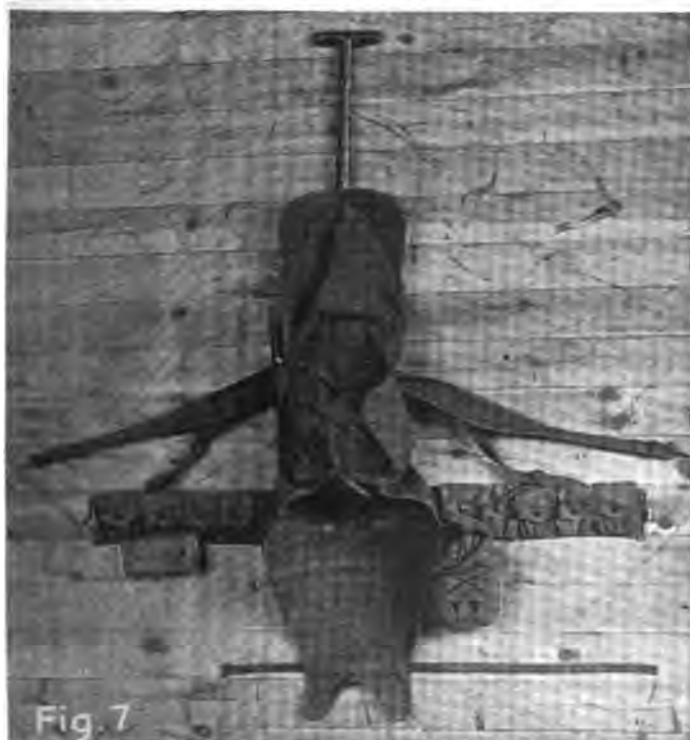
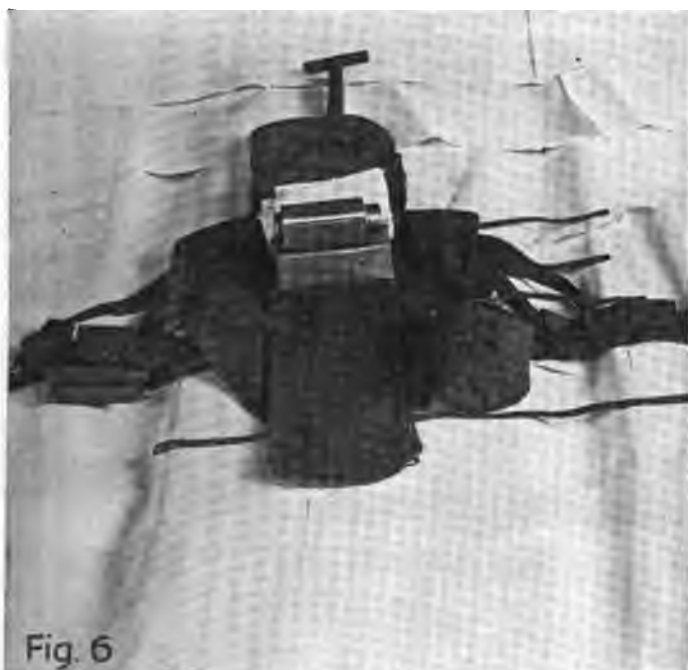
If one emergency ration is carried in addition to the two haversack rations, it is packed on top of the top layer.

To Make the Pack (Fig. 8). Spread the shelter half on the ground and fold in the triangular ends, forming an approximate square from the half, the guy on the inside; fold the poncho once across its shortest dimension, then twice across its longest dimension, and lay it in the center of the shelter half; fold the blanket as described for the poncho and place it on the latter; place the shelter tent pins in the folds of the blanket, in the center and across the shortest dimension; fold the edges of the shelter half snugly over the blanket and poncho and, beginning on either of the short sides, roll tightly and compactly. This forms the pack.

To Assemble the Pack (Fig. 9). Place the pack in the pack carrier and grasp the lower suspension rings, one in each hand; place the right knee against the bottom of the roll; pull the carrier down and force the pack up close against the bottom of the packed haversack; without removing the knee, pass the lower carrier binding strap over the pack and secure it by means of the opposite buckle; in a similar manner secure the lower haversack binding strap and then the upper carrier binding strap.

Engage the snap hook on the pack suspenders in the lower suspension rings.

The equipment is now assembled and packed as prescribed for the full equipment.



TO ASSEMBLE THE FULL EQUIPMENT.**WITHOUT RATIONS.**

Place the assembled equipment on the ground as heretofore described; fold up the inside flap of the haversack so that its end will be on a line with the top of the haversack body; fold up the lower haversack strap in the same manner.



To Make up the Pack. Fold the poncho, blanket and shelter half, and make up the pack as heretofore prescribed, except that the condiment and bacon can (the former inside the latter) and the toilet articles and socks are rolled in the pack. In this case the pack is rolled, beginning on either of the long sides instead of the short sides, as heretofore described.

To Assemble the Pack. Place the pack on the haversack and pack carrier, its upper end on a line with the upper edge of the haversack body; bind it to the haversack and carrier by means of the haversack and pack binding straps; fold down the outer flap on the haversack and secure it by means of the free end of the middle haversack binding strap and the buckle provided on the underside of the flap; engage the snap hooks of the pack suspenders in the lower suspension rings.

The equipment is now packed and assembled (Fig. 10).



Fig. 11



Fig. 10

To Adjust the Equipment to the Soldier. Put on the equipment, slipping the arms one at a time through the pack suspenders as through the sleeves of a coat; by means of the adjusting buckles on the belt suspenders, raise or lower the belt until it rests well down over the hip bones on the sides and below the pit of the abdomen in front; raise or lower it in rear until the adjusting strap lies smoothly across the small of the back; by means of the adjusting buckles on the pack suspenders, raise or lower the load on the back until the top of the haversack is on a level with the top of the shoulders, the pack suspenders, from their point of attachment to the haversack to the line of tangency with the shoulder, being horizontal. The latter is absolutely essential to the proper adjustment of the load.

The position of the belt is the same whether filled or empty.

TO ASSEMBLE THE FULL EQUIPMENT LESS THE PACK.

WITH RATIONS, FIG. 11.

Detach the carrier from the haversack; place the rest of the equipment on the ground as heretofore described; place the four cartons of hard bread, the bacon can, the condiment can, and the toilet articles in one row in the middle of the haversack body, the toilet articles at the top, the bacon can at the bottom, top to the front, the row extending from top to bottom of the haversack; fold the inside flap over the row thus formed; fold the sides of the haversack up and over; pass the three haversack binding straps through the loops on the inside flap and secure by means of the buckles on the opposite side of the haversack; pass the lower haversack binding strap through the small buttonhole in the lower edge of the haversack, fold the outer flap of the haversack over the whole and secure by means of the buckle on its underside and the lower haversack binding strap.

Pass the haversack suspension rings through the contiguous buttonholes in the lower edge of the haversack and engage the snap hooks on the ends of the pack suspenders.

If one haversack ration and one emergency ration are carried in lieu of two haversack rations, the haversack is packed in the manner described above, except that one emergency ration is substituted for two of the cartons of hard bread.

If one emergency ration is carried in addition to the two haversack rations, it is packed on top of the layer.

TO ASSEMBLE THE FULL EQUIPMENT LESS THE PACK.

WITHOUT RATIONS.

Detach the carrier from the haversack; place the rest of the equipment on the ground as heretofore described; fold up the inside flap of the haversack until its upper end is on a line with the top of the haversack body; fold the sides of the haversack over, pass the three haversack binding straps through the loops on the inside flap and secure by means of the buckles on the opposite side of the haversack; pass the lower haversack binding strap through the small buttonhole in the lower edge of the haversack; place the condiment and bacon can (the former inside the latter) and the toilet articles and socks in the bottom of the pouch thus formed; fold the outer flap of the haversack over the whole and secure by means of the buckle on its underside and the lower haversack binding strap.

Pass the haversack suspension rings through the contiguous buttonholes in the lower edge of the haversack and engage the snap hooks on the ends of the pack suspenders.

To Adjust the Equipment to the Soldier. Put on the equipment as prescribed for the full equipment. Adjust the cartridge belt as prescribed for the full equipment. Adjust the pack suspenders so that the top of the haversack is on a level with the top of the shoulders.

**TO DISCARD THE PACK WITHOUT REMOVING THE EQUIPMENT
FROM THE BODY.**

Unsnap the pack suspenders from the suspension rings and snap them into the eyelets on top of the belt and in rear of the rear pockets of the right and left pocket sections; support the bottom of the pack with the left hand and with the right hand grasp the coupling strap at its middle and withdraw first one end, then the other; press down gently on the pack with both hands and remove it. When the pack has been removed, lace the coupling strap into the buttonholes along the upper edge of the carrier. Adjust the pack suspenders.

War Department,

Office of the Chief of Ordnance,

Washington, March 11, 1912.

Form No. 1717.

SMALL ARMS FIRING MANUAL

1913

INCLUDING CHANGES NO. 16, FEBRUARY 21, 1917.

PARAGRAPHS NOS. 143 TO 146, 176 TO 199 INCLUSIVE
ELIMINATED, AS THEY DO NOT APPLY TO INFANTRY

War Department,
Office of the Chief of Staff,
Washington, February 28, 1913.

The following "Small Arms Firing Manual" is approved and published for the information and guidance of the Regular Army and the Organized Militia of the United States. Its provisions will take effect January 1, 1914.

By order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

Note: Paragraphs Nos. 176 to 179 inclusive have been eliminated, as they pertain to mounted pistol practice, and such practice is not required of Infantry.

SMALL ARMS FIRING MANUAL

DEFINITIONS.

Aiming Device:

A device to be attached to the rifle by which the instructor, standing on one side and facing the rear sight on the rifle, when the soldier is in the act of aiming, can see the reflection of both sights and the object aimed at, and can therefore judge of the accuracy of the soldier's aim and the steadiness of his trigger squeeze.

Anemometer:

An instrument for measuring the velocity of the wind.

Battle Sight:

The position of the rear sight in which the leaf is laid down.

Beaten Zone:

The intersection of the cone of dispersion with the surface on which the objective of the fire stands, or the space on the ground in which the bullets strike, in a series of shots fired by a body of soldiers with the same aiming point and the same rear sight setting.

Bore:

The cylindrical cavity in the small-arms barrel.

Bull's-eye:

The black circular division in the center of the bull's eye target.

Butt:

The embankment or other means used to stop bullets in rear of the target. The plural "butts" is used to designate collectively the parapet, pit, and back stop of a group of targets.

Caliber:

The interior diameter of the small-arms barrel, measured between the lands.

Cant:

To revolve the barrel of the piece on its axis to the right or left while aiming.

Center:

The annular division of the bull's-eye targets A, B, and C embraced between the bull's-eye and the circumference of the next larger circular division of the target. Shots in this space have a value of 4.

Classification:

The arranging of the individuals of an organization in groups or classes according to the degree of skill displayed in record practice on the range with the rifle or pistol.

Coach:

A special instructor charged with the duty of giving advice and information to the firer.

Combat Practice:

The prescribed firing at targets which simulate the appearance of an enemy under conditions approaching those found in war, and the application of this class of fire to tactical exercises.

Cone of Dispersion:

A term applied to the figure formed in space by the trajectories considered together of a series of shots fired by a body of soldiers at a common objective and with the same rear sight setting.

Danger Space:

The sum of the distances in the path of the bullet in which an object of given height will be struck. At long ranges the danger space at the farther end of the range alone is considered.

Defilade:

An obstacle either natural or artificial of sufficient thickness to intercept projectiles and afford shelter from fire delivered from a given point.

Disappearing Target:

A target which is temporarily exposed to view.

Disk, Marking:

A staff, with a disk at each end, used by the marker in the pit in signaling the results of hits on the target.

Distinguished Marksman:

An officer or enlisted man who has won three of the authorized medals in department, departmental, division, and army rifle or carbine competitions or as a member actually firing on a prize-winning team in the national team match.

Distinguished Pistol Shot:

An officer or enlisted man who has won three of the authorized medals in department, departmental, division, and army pistol competitions.

Drift:

The lateral deviation of the bullet caused by the resistance of the air and the rotation of the bullet on its longer axis.

Echelon, Order in:

In the order in echelon the targets or firing stands are placed one behind another to the right or left and unmasking one another.

Emplacement:

The space on the target range allotted for the position of the target.

Estimating Distance:

Judgment by the eye of the distance of an object from the observer. Distance may also be judged by sound.

Expert Pistol Shot:

The highest grade or classification for skill displayed in record practice with the pistol. (See "Classification," par. 243.)

Expert Rifleman:

The highest grade or classification for skill displayed in record practice on the range with the rifle. (See "Classification," par. 240.)

Fire at Will:

That class of fire in which, within the restrictions of the command for firing, the individuals deliver their fire independently of the commander and of each other.

Fire Control:

Or conduct of fire, is the exercise by a commander, over his unit or units, of that power which enables him to regulate the fire in obedience to his will. It pertains especially to the technicalities immediately involved in delivery of fire.

Fire Direction:

Or employment of fire, is a general term embracing the various steps, including tactical disposition, which enable the commander of one or more fire units to bring an effective fire to bear upon the desired target at the proper time. It pertains especially to preparation of fire

Fire Discipline:

Is that condition of the personnel of a fire unit, resulting from training and practice, which enables the commander to obtain an orderly and efficient delivery of fire.

First-class Man:

A grade of rifleman just below that of marksman. (See "Classification," par. 240.)

First-class Pistol Shot:

A grade of pistol shot just below that of expert pistol shot. (See "Classification," par. 243.)

Gallery Practice:

Firing at reduced targets at short ranges with small-caliber rifles.

Gallery, Shooting:

A room or inclosure in which gallery practice can be conducted.

Grooves:

The spiral channels within the bore of the rifle barrel.

Individual Practice:

The firing on the range by which the individual soldier receives his instruction and by which his classification is determined.

Inner:

The annular division of the bull's-eye targets A, B, and C outside the center. Shots in this space have a value of 3.

Insignia:

Badges or distinguishing marks issued for expertness with the rifle or pistol.

Instruction Practice:

The prescribed firing on the range which precedes record practice and which is devoted to the instruction of the soldier.

Lands:

Spaces in the bore of the rifle barrel between the grooves.

Line of Aim:

The imaginary right line joining the middle point of the horizontal line of the open sight, or the center of the peep sight, and the point of aim.

Long Range:

From 800 to 1,200 yards.

Marksman:

A grade of rifleman just below that of sharpshooter. (See "Classification," par. 240.)

Midrange:

From 500 to 800 yards.

Mirage:

A word used to designate the heat waves observed on the target range on warm days. The waves indicate the direction in which the air is moving.

O'clock:

A term employed to indicate, by means of the divisions on the dial of the clock, the location of a hit on the target or the direction from which the wind may be blowing, as a 7 o'clock, 4 or 5 o'clock, wind. In speaking of the position of a hit, the dial is supposed to occupy the front of the target facing the firer, with 12 at the top of the target. In speaking of wind, the dial is supposed to lie on the ground, with the 12 toward the target and the center at the firing point.

Outer:

The space on the bull's-eye targets A, B, and C outside the inner. Shots in this space have a value of 2.

Parapet:

An elevation of earth or other material thrown up in front of the targets to protect the markers.

Pit:

The space between the parapet and the butt or bullet stop occupied by the markers.

Practice Season:

Those portions of the target year devoted to firing with the service cartridge. They include the regular season and the supplementary season.

Preliminary Drills:

Consist of sighting drills, position and aiming drills, gallery practice, deflection and elevation correction drills.

Preliminary Practice:

The prescribed firing on the range which precedes competitions.

Proficiency Test:

The annual test conducted to determine the proficiency of organizations in collective marksmanship.

Prone:

Lying flat on the belly. The only position with the body extended on the ground authorized in known distance firing.

Protest:

A formal objection against some act or decision.

Qualification:

The grade attained in known distance practice depending upon the scores made by individuals in the qualification course, record practice.

Qualification Course, Record Practice:

The course in slow and rapid fire designed as the test of the soldier's ability as a rifleman and which determines his classification. It immediately follows the soldier's instruction practice in the qualification course.

Quick Fire:

The class of fire employed in instruction and record practice for pistol and revolver when bobbing targets are specified.

Range:

Any tract of land over which firing with small arms is conducted. This term is also used to signify the distance of the objective from the firer.

Range Determination:

Finding the range to an object by the use of instrumental range finders, measurement, calculation, or trial shots or volleys.

Range Officer:

A commissioned officer charged with the care, police, etc., of a target range and its accessories.

Rapid Fire:

The class of fire employed in instruction and qualification practice in which a time limit is set for completing a score or scores.

Regular Season:

Comprises two months, not necessarily consecutive, of the target year, selected by the department commander, in which the prescribed course of known distance and combat firing is pursued.

Ricochet Shots:

Bullets which rebound after striking the ground or any other obstacle and continue their flight are said to ricochet.

Score Book:

A book containing forms for recording scores as well as data concerning conditions affecting firing and instructions for the rifleman.

Score Cards:

Pasteboard cards issued to competitors at competitions, giving the number of the target of each competitor firing, with his order of firing, and containing a blank space for the record of the shots fired and for the signature of the scorer.

Score:

A string of consecutive shots fired in individual practice. The term "score" is also used to express the record or register of number of points made in one or more scores, the value of sighting shots being excluded. In record practice with rifle, scores consist of 5 shots in slow fire and 10 shots in rapid fire; with the automatic pistol, 5 shots. In instruction practice with rifle, 10 shots or 5 shots may constitute a score.

Second-class Man:

The lowest grade of those who are given a classification in rifle practice. (See "Classification," par. 240.)

Second-class Pistol Shot:

The lowest grade of those who are given a classification in pistol practice. (See "Classification," par. 243.)

Sharpshooter:

A grade of rifleman just below that of expert rifleman. (See "Classification," par. 240.)

Short Range:

0 to 500 yards.

Shot Marks:

Disks of thin material, 3 inches, 5 inches, and 10 inches in diameter, respectively, with a wire spring of two branches secured to the disk near its center. They are white on one side and black on the other, and are used to mark on the bull's-eye target the position of the last shot.

Sighting Shots:

The trial shots which precede scores in the qualification test firing to enable the soldier to determine the proper sight setting or point of aim.

Slow Fire:

The class of fire employed in instruction and record practice in which no time limit is imposed for completing a score.

Special Course A:

Special course A is a course of rifle practice provided for the Coast Artillery Corps. It is also the course provided for posts where a complete rifle range is not available, but where a range of 200 and 300 yards can be had. Recruits fire a portion of this course in the practice held during the supplementary season.

Spotter:

One who, in team practice, announces the value of shots and indicates on a wooden target, by means of pins, the position of hits on the range target.

Supplementary Season.

A period of the target year designated by the department commander, in which all recruits who have joined too late to participate in the regular practice season will fire a prescribed course.

Target:

An object presenting a mark to be fired at. (See description of targets. Part IV.)

Telescopic Sight:

A telescope or other magnifying device attached to the barrel of the rifle for getting, while aiming, a better definition of a distant objective, provision being made for adjustments in elevation and for windage.

Trajectory:

The path described by a bullet in the air moving under the combined influences of the force of propulsion, the force of gravity, and the resistance of the air.

Twist:

The spiral formed by the grooves in the barrel of a rifled piece. In the United States magazine rifle, model 1903, this twist is uniform, one turn in 10 inches.

Unqualified:

Those who in the last practice season failed to qualify as a second-class shot or better, and those who for any reason did not fire the course and are not otherwise classified.

Windage:

The influence of the wind in deflecting the bullet from the point at which it is aimed; also applied to the amount of change made on the wind gauge.

Wind Gauge:

A graduated attachment on the rear sight of the rifle by which allowance may be made in aiming for the effect of the wind upon the bullet and for drift.

PART I.

GENERAL SCHEME.

1. Object of Instruction. The sole purpose of rifle training for the soldier is to make of him a good shot under war conditions, and a scheme of instruction will be effective in so far as it tends to produce that result. The soldier should therefore be so trained at known distances in the various kinds of fire employed in actual service as to bring his skill as a rifleman up to the capabilities of his weapon, after which he should be so trained in firing as part of tactical units as to utilize his individual skill to the best advantage in operations simulating those of the battle field. The scheme of instruction is prescribed with a view to attaining these objects. By means of preliminary drills and gallery practice the soldier is trained in the fundamental principles of marksmanship; by means of range practice he is taught to apply these principles in firing, at fixed distances, at clearly defined targets. This training is merely preparatory to combat firing in which individuals learn coöperation and commanders and leaders learn how to obtain the maximum efficiency of fire by a judicious coördination of the skill and the efforts of all the individuals of the group or fire unit.

In all preliminary practice and in range firing the soldier is taught to reduce the size of his shot group as much as possible and to place the center of the shot group at the center of his target. In combat firing this principle should be utilized in securing superiority of fire.

In actual combat, individual targets will not, in general, be visible, but if individual shot groups be so combined as to produce a grazing fire uniformly distributed along the hostile line, a large number of hits will necessarily result and shots which miss will have the approximate value of hits in determining superiority of fire.

"In a decisive battle success depends on gaining and maintaining superiority of fire. Every effort must be made to gain it early and then to keep it." (Par. 400, Infantry Drill Regulations.)

"The purpose of fire superiority is to get hits whenever possible, but at all events to keep down the enemy's fire and render it harmless." (Par. 413, Infantry Drill Regulations.) The ultimate object of all instruction is, therefore, to enable troop commanders to deliver a heavy volume of close, accurate fire upon any designated objective. With a given extent of front, however, there is a limit to the number of men who can use their rifles effectively. When the maximum number of rifles has been brought into action, a further increase in the volume of fire can be obtained only by increasing the rate of fire. The rate of fire to be employed will always be dependent upon the tactical situation; as conditions are never the same no fixed rules concerning rates of fire can be prescribed, but "In unexpected, close encounters a great advantage accrues to the side which first opens rapid and accurate fire with battle sight." (Par. 405, Infantry Drill Regulations.) Within such ranges a high degree of proficiency in rapid fire is deemed necessary. The course of instruction in rapid fire is therefore drawn with a view to enabling troop commanders to deliver the most rapid fire possible, consistent with accuracy, upon targets exposed within the ordinary ranges of the battle sight.

2. Scheme of Instruction. The course herein prescribed has been arranged as follows:

- (a) Nomenclature and care of the rifle.
- (b) Sighting drills.
- (c) Position and aiming drills.
- (d) Deflection and elevation correction drills.
- (e) Gallery practice.
- (f) Estimating distance drill.
- (g) Individual known distance firing, instruction practice.
- (h) Individual known distance firing, record practice.
- (i) Long-distance practice.
- (j) Practice with telescopic sights.
- (k) Instruction combat practice.
- (l) Combat practice.
- (m) Proficiency test.

The course of pistol firing includes the following:

- (a) Nomenclature and care of the pistol, general facts and principles.
- (b) Position and aiming drills and rapid-fire drills; dismounted and mounted.
- (c) Individual firing, instruction practice.
- (d) Individual firing, record practice.

3. Grades of Shots and Basis of Qualification. Soldiers are graded according to proficiency exhibited in the record practice as experts, sharpshooters, marksmen, first-class men, second-class men, and unqualified. The grades of first and second class men, corresponding to certain percentages made in the qualification course, are intended to give encouragement to the poorer grades of shots and to provide the soldier, who has been unable to qualify as marksman or better, with a more definite record of marksmanship. The class unqualified is made to include those men borne on the rolls of an organization who have fired and failed to qualify as second class or better and all others who for any reason have not been classified.

As a test of individual proficiency the single course in slow and rapid fire has been devised, qualifications for the various grades being on a percentage basis, as hereinafter shown. The targets used in this test are such that equal conditions as to visibility are provided for all. The time limits chosen after experience and special trials are such that with care and practice the average soldier will be able to deliver without great difficulty the prescribed number of shots in well aimed fire at targets which are plainly visible.

4. Period of Preliminary Instruction. The portion of the year which immediately precedes the instruction of the soldier upon the target ground will be utilized in laying, by a thorough course of the preliminary drills and gallery practice, a good foundation for future proficiency. This applies especially to recruits and those who in the last season failed to qualify as marksman or better. The instructors will also improve this opportunity for explaining the different theoretical principles, as far as the capacity and interest of the men appear to render it advantageous. Recruits will also receive preliminary instruction during the month after joining their commands.

The purpose in the training of a company should be to produce uniform proficiency rather than expertness on the part of a comparatively few men. A man who has once learned to shoot will seldom lose his ability. The attention of the instructor should therefore be concentrated on the poorer shots. The prescribed course in firing admits a saving of ammunition on the best shots, which saving should be applied to the better instruction of recruits and those who in the last season's practice were unable to attain the grade of marks-

man or better. Particular care should be taken to avoid discouraging the poor shots.

5. Supplementary Practice Season. A supplementary course of instruction is prescribed for the benefit of recruits. This practice is for the purpose of preventing an accumulation of recruits totally uninstructed.

6. Discretion Allowed Instructors. Standards of proficiency being set for the individual by the established grades of riflemen, and the purposes of target instruction being understood, it is expected that as far as practicable instructors will be given some latitude in methods to suit peculiarities of individuals and special conditions. Accordingly, while the methods laid down for the preliminary work and instruction courses are given in some detail, these need not necessarily be followed implicitly when departures therefrom appear to be justifiable or advantageous. Improvements in methods of instruction and in target appliances should constantly be sought for and reported upon.

7. Duties of Company Officers. The training of the men in small arms firing will be under the immediate supervision of the company commander, who will be held responsible that a suitable standard of proficiency is reached. He will be assisted by his lieutenants, noncommissioned officers, and expert shots, and these assistants should be given the theoretical instruction necessary to fit them to be coaches and instructors.

As good teaching requires a practical as well as a theoretical knowledge of the subject taught, all company officers will be required to fire with the men, subject to the exceptions given in paragraph 89.

8. Duties of the Battalion Commander. The battalion commander is the supervisor and inspector of firing instruction for the organizations under his command. He will give such theoretical instruction to the officers as may be necessary, and, through proper supervision of the preliminary drills and exercises and of the range practice, assure himself that the company commanders and their assistants are thoroughly conversant with the details of the course and that suitable methods within the meaning and intent of those herein prescribed are being followed. He should not attempt to fix definite lines of procedure, but should endeavor to leave some room for initiative and ingenuity on the part of his subordinates, subject to such restrictions as circumstances and the necessities of other troops may impose.

He will also supervise the combat-firing exercises of his command, endeavoring by every means to realize to the fullest extent the instructional value of these exercises.

In combat-firing exercises designed for a company, the battalion commander will supervise the firing and judge the results according to the prescribed standard, and he will also supervise and judge the annual proficiency test of the organizations of his command unless some other officer has been specially designated.

Each battalion commander will, at the end of the target-practice season, make a written report to the regimental commander of the state of instruction in target practice in the organizations of his command, basing the opinions expressed both on the individual qualifications attained in record firing and upon the results obtained in the combat firing and in the annual proficiency test.

9. Duties of the Regimental Commander. The regimental commander will exercise general supervision over the organizations of his command and will endeavor to maintain the highest possible standard of efficiency in his regiment. Upon receipt of the company and the battalion commanders' reports, he will submit, with the regimental consolidated report of classification (see par. 255), a brief report, through the brigade commander, to the department commander on the state of instruction of his command.

10. The post commander will exercise a general supervision over the target practice of troops at his post and direct supervision over the target practice of troops pertaining to the tactical unit to which he belongs. When troops of different brigades are serving at the same post he will see that the approved programs with reference to target practice prescribed in accordance with instruction orders of the War Department are faithfully complied with.

The post commander will recommend the months of the year most suitable for target practice, including the supplementary practice season, for his post, and when combat-firing facilities do not exist on the reservation, should use every effort to procure suitable firing grounds in the vicinity so that the advantage of this training may not be lost.

11. **Duties of the Department Commander.** The department commander will supervise instruction in small arms for the troops in his department and will make every effort to have complete facilities for this instruction at every post. He will satisfy himself that the purposes of instruction in firing are fully understood and carried out, and to this end he will make the necessary examination of the firing records and order such test firings at the time of his annual inspection as he may deem advisable and of which the ammunition available will admit.

PART II.

INDIVIDUAL INSTRUCTION.

CHAPTER I.

PRELIMINARY INSTRUCTION AND SIGHTING DRILLS FOR THE RIFLE.

12. Nomenclature and Care of the Rifle. Although each recruit is required to be instructed in the nomenclature, care, use, and preservation of the rifle, this instruction will be repeated as the initial step for each season's known distance practice.

The precautions necessary to avoid accidents will also be thoroughly impressed upon the soldier at this time.

SIGHTING DRILLS.

13. Value. The value of the sighting drills and the position and aiming drills can not be too strongly emphasized. By means of them the fundamental principles of shooting may be inculcated before the soldier fires a shot.

14. To Whom Given. The sighting drills will be given to all soldiers who have not qualified as "marksman" or better in the preceding target year.

15. Purpose:

- (a) To show how to align the sights properly on the mark.
- (b) To discover and demonstrate errors in sighting.
- (c) To teach uniformity in sighting.

16. Apparatus and Its Use—Sighting Bar. (See Pl. I.) To consist of:

(a) A bar of wood about 1 by 2 inches by 4 feet, with a thin slot 1 inch deep cut across the edge about 20 inches from one end.

(b) A front sight of tin or cardboard $\frac{1}{2}$ by 3 inches tacked to the end nearer the slot and projecting 1 inch above bar.

(c) An eyepiece of tin or cardboard 1 by 3 inches tacked to the other end of, and projecting 1 inch above, the bar, with a very small hole (0.03 inch) $\frac{1}{2}$ inch from top of part projecting above the bar.

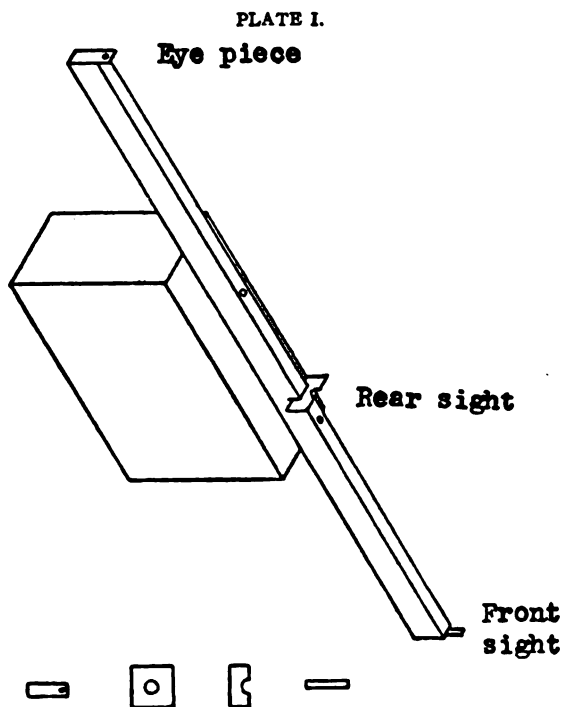
(d) An open rear sight of tin or cardboard $1\frac{1}{2}$ by 3 inches, with a U-shaped notch $\frac{3}{4}$ inch wide cut in the middle of one of the long edges. This is placed in the slot on the bar. A slight bend of the part of the tin fitting in the slot will give enough friction to hold the sight in any part of slot in which it is placed.

(e) A peep rear sight of tin or cardboard 3 by 3 inches, with a peep hole $\frac{3}{4}$ inch in diameter cut in the center. This replaces the open sight when the peep sight is shown.

Carefully blacken all pieces of tin or cardboard and the top of the bar. Nail the bar to a box about 1 foot high and place on the ground, table, or other suitable place. Then adjust the open or peep rear sight in the slot and direct the bar upon a bull's-eye (preferably a Y target) placed about 5 yards from the

bar. No other than the sight desired can be seen. Errors, etc., are shown by manipulating the open and peep rear sights.

17. **Sighting Rest for Rifle.** (See Pl. II.) Take an empty pistol ammunition box or a similar well-made box, remove the top and cut notches in the ends to fit the rifle closely. Place the rifle in these notches with the trigger guard close to and outside one end. (The stock may be removed from the rifle so as to bring the eye as near the rear sight as in shooting.) Nail a plank (top of a box will do) to a stake or wall about 12 inches from the ground. Fasten a blank sheet of paper to the plank. Place the rest firmly on the ground, 20 or 30 feet from the plank, so that the rifle is canted neither to the right nor left—weight the box with sand if necessary—and without touching the rifle or rest, sight the rifle near the center of the blank sheet of paper. Changes in the line of sight



are made by changing the elevation and windage. Take the prone position with elbows on the ground, hands supporting the head. A soldier acting as marker is provided with a pencil and a small rod bearing a disk of white cardboard about 3 inches in diameter, with a black bull's-eye (a black paster is best) pierced in the center with a hole just large enough to admit the point of a lead pencil. The soldier sighting directs the marker to move the disk to the right, left, higher, or lower, until the line of aim is established, when he commands "Mark" or "Hold." At the command "Mark," being careful not to move the disk, the marker records through the hole in its center the position of the disk and then withdraws it. At the command "Hold," the marker holds the disk carefully in place without marking until the position is verified by the instructor, and the disk is not withdrawn until so directed.

18. **Line of Sight.** With the open sight the line of sight is determined by a

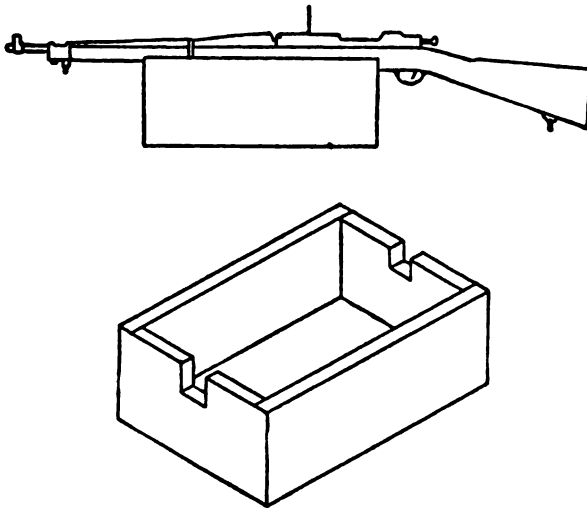
point on the middle line of the notch of the rear sight and the top of the front sight. With the peep sight, the line of sight is determined by the center of the peep and the top of the front sight.

19. Point of Aim. The soldier will be informed that to give the greatest uniformity a point just below the mark, and not the mark, is taken as the point of aim, as it is impossible to always know, if touching the mark with the top of the front sight, how much of the front sight is seen; that the term "on the mark or bull's-eye" will be understood to mean an aim, taken just below the mark, showing a fine line of light between the mark and the top of the front sight.

20. The Normal Sight. Look through the rear-sight notch at the bull's-eye or mark and bring the top of the front sight on a line with the top of and in the center of the rear-sight notch and aligned upon the point of aim. (See Fig. 1, Pl. III.)

21. The Peep Sight. Look through the peep hole at the bull's-eye or mark

PLATE II.



and bring the top of the front sight to the center of the aperture and aligned upon the point of aim. (See Fig. 2, Pl. III.)

The soldier should be informed that regular results in firing can be obtained only when the same amount of front sight is taken each time, and that this can be done only by using the normal sight with the open notch or the peep sight in the manner described above. He should understand that the effect of taking less than the normal amount of sight is to cause a point lower than that aimed at to be struck, and that taking too much of the front sight causes a higher point to be struck.

Although men will be found occasionally who can get excellent results by using the fine sight (Fig. 1, Pl. IV), the average man can not, and this form of sighting is not recommended. The so-called full sight should not be taught under any circumstances. If shown to the men at all, it should be for the purpose of pointing out a fault to be carefully avoided.

Remarks. The eye can be focused accurately upon objects at but one distance at a time; all other objects in the field of view will appear more or less

blurred, depending on their distance from the eye. This can readily be seen if a pencil is placed in the field of view near the eye while looking at some distant object. The pencil will appear blurred. This is the condition met with by the normal eye in sighting a rifle. If the eye is focused on one of the three points—the bull's-eye, the front sight, or the rear sight—the other two will appear blurred. This blurring effect is best overcome by using the "peep sight," as though looking through a window, and focusing the eye on the bull's-eye. The blurring of the peep hole will be concentric, giving a clear and easily defined center. The blurring of the front sight will be less, but symmetrical on

PLATE III.



Fig. 1



Fig. 2

both sides with very little blur on the top. It can be readily and naturally brought to the center of the peep hole. Variations in light have less effect on the peep than on the open sight.

But the limited field of view and lack of readiness in getting a quick aim with the peep sight limit its use to those stages of the combat when comparative deliberation will be possible. In the later stages of battle—especially when a rapid fire is to be delivered—the open sight will, in most cases, be used. In this case the normal sight should be used, as the horizontal line at the top of the notch of the rear sight affords a good guide for regularity.

Whatever sight is used, the eye must be focused on the bull's-eye, or mark, not on the front or rear sight.

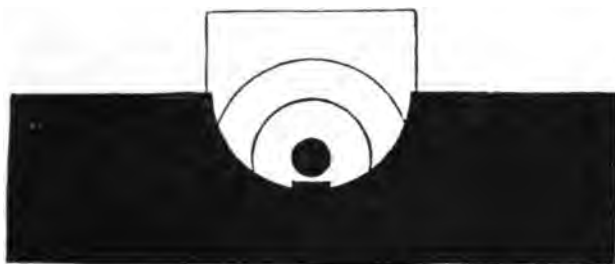
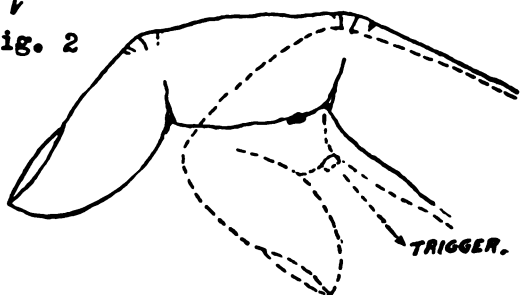
FIRST SIGHTING EXERCISE.

22. Using illustrations, describe the normal sight and the peep sight.
23. Using the sighting bar, represent the normal sight and the peep sight and require each man in the squad to look at them.
24. Using the sighting bar, describe and represent the usual errors of sighting and require each man in the squad to look at them.

SECOND SIGHTING EXERCISE.

25. Using the sighting rest for the rifle, require each man to direct the marker to move the disk until the rifle is directed on the bull's-eye with the normal sight and command "Hold." The instructor will verify this line of

PLATE IV.

**Fig. 1****Fig. 2****Fig. 3****Fig. 4**

sight. Errors, if any, will be explained to the soldier and another trial made. If he is still unable to sight correctly, the first exercise will be repeated.

Soldiers will sometimes be found who do not know how to place the eye in the line of sight; they often look over or along one side of the notch of the rear sight and believe that they are aiming through the notch because they see it at the same time that they do the front sight. This error will probably be made evident by the preceding exercise. Some men in sighting will look at

the front sight and not at the object. As this often occasions a blur, which prevents the object from being distinctly seen and increases both the difficulties and inaccuracies of sighting, it should be corrected.

26. Repeat the above, using the peep sight.

THIRD SIGHTING EXERCISE.

27. Using the sighting rest for the rifle, require each man to direct the marker to move the disk until the rifle is directed on the bull's-eye with the normal sight and command "Mark"; then, being careful not to move the rifle or sights, repeat the operation until three marks have been made.

(a) The Triangle of Sighting. Join the three points determined as above by straight lines, mark with the soldier's name, and call his attention to the triangle thus formed. The shape and size of this triangle will indicate the nature of the variations made in aiming.

(b) Abnormal Shape, Causes. If the triangle is obtuse angled, with its sides approaching the vertical (see Fig. 2, Pl. IV), the soldier has not taken a uniform amount of front sight. If the sides of the triangle are more nearly horizontal (see Fig. 3, Pl. IV) the errors were probably caused by not looking through the middle of the notch or not over the top of the front sight. If any one of the sides of the triangle is longer than one-half inch, the instructor directs the exercise to be repeated, verifying each sight and calling the soldier's attention to his errors. The instructor will explain that the sighting gains in regularity as the triangle becomes smaller.

(c) Verifying the Triangle. If the sides of the triangle are so small as to indicate regularity in sighting, the instructor will mark the center of the triangle and then place the center of the bull's-eye on this mark. The instructor will then examine the position of the bull's-eye with reference to the line of sight. If the bull's-eye is properly placed with reference to the line of sight, the soldier aims correctly and with uniformity. If not so placed, he aims in a regular manner but with a constant error.

(d) Causes of Errors. If the bull's-eye is directly above its proper position, the soldier has taken in aiming too little front sight, or if directly below too much front sight. If directly to the right or left, the soldier has not sighted through the center of the rear-sight notch and over the top of the front sight. If to the right, he has probably either sighted along the left of the rear sight notch or the right side of the front sight, or has committed both of these errors. If the bull's-eye is too far to the left, he has probably sighted along the right of the rear sight notch or to the left of the front sight, or has combined both of these errors.

If the bull's-eye is placed with reference to its proper position diagonally above and to the right, the soldier has probably combined the errors which placed it too high and too far to the right. Any other diagonal position would be produced by a similar combination of vertical and horizontal errors.

As the errors thus shown are committed when the rifle is fixed in position, while that of the bull's-eye or target is altered, the effect will be directly opposite to the changes in the location of a hit in actual fire, occasioned by the same errors, when the target will be fixed and the rifle moved in aiming.

After the above instruction has been given to one man, the line of sight will be slightly changed by moving the sighting rest or by changing the elevation and windage, and the exercises similarly repeated with the other men in the squad.

28. Repeat the third sighting exercise, using the peep sight.

PLATE V.



FOURTH SIGHTING EXERCISE.

29. This exercise is a demonstration of the effect of canting the piece. The soldier must be impressed with the necessity of keeping the sights vertical when aiming, and not canting the piece to the right or left. Explain to the soldier that if the piece is canted to the right, the bullet will strike to the right and below the point aimed at, even though the rifle be otherwise correctly aimed and the sights correctly set. Similarly, if the piece is canted to the left, the bullet will strike to the left and low. This can be explained by showing that the elevation fixes the height of the point where the bullet will hit the target, and that the windage fixes the point to the right or left; i.e., the elevation gives vertical effects and the windage horizontal effects. Let a pencil (or rod) held vertical represent the elevation; now if the pencil is turned to the right 90° , or horizontal, all of the elevation has been taken off, causing the shot to strike low and changed into windage, causing the shot to strike to the right.

30. This effect may be demonstrated as follows: Use the sighting rest with the rifle firmly held in the notches, the bolt removed. Paste a black paster near the center of the bottom line of the target. Sight the rifle on this mark, using about 2,000 yards elevation, then, being careful not to move the rifle, look through the bore and direct the marker to move the disk until the bull's-eye is in the center of the field of view and command "Mark." Next turn the rest with the rifle on its side, and with the same elevation sight on the same paster as above, then, being careful not to move the rifle, look through the bore and again direct the marker to move the disk until the bull's-eye is in the center of the field of view and command "Mark." Not considering the fall of the bullet, the first mark represents the point struck, with the sight vertical, the second mark represents the point struck, low and to the right, using the same elevation and the same point of aim, when the piece is canted 90° to the right.

Different degrees of canting the piece can be represented by drawing an arc of a circle through the two marks with the paster as a center. The second mark will be at a point on this arc corresponding to the degree of canting the piece. Emphasis will be laid upon the fact that this effect of canting increases with the distance from the target.

31. **Other Exercises.** If time permits, the instructor may devise other exercises which suggest themselves as useful and beneficial to his men. The following are examples:

(a) In strong sunlight make a triangle of sighting, using a rifle having sights worn bright. Then, being careful not to move the rifle, blacken sights and make another triangle. Use dotted lines for the triangle made with bright sights and full lines for the triangle made with blackened sights. The position and size of the two triangles will plainly show the advantage of the blackened sights.

(b) In strong sunlight make a triangle of sighting; then, being careful not to move the rifle, make another triangle, having first shaded the target and the man sighting. The relative position of the triangles will show the importance of knowing the effects of varying degrees of light.

CHAPTER II.**POSITION AND AIMING DRILLS.**

32. **Purpose.** These drills are intended to so educate the muscles of the arm and body that the piece, during the act of aiming, shall be held without restraint, and during the operation of firing shall not be deflected from the target by any convulsive or improper movement of the trigger or of the body.

arms, or hands. They also establish between the hand and eye such prompt and intimate connection as will insure that the finger shall act upon the trigger, giving the final pressure at the exact moment when the top of the front sight is seen to be directed upon the mark.

The fact, though simple, can not be too strongly impressed upon the recruit that if, at the moment of discharge, the piece is properly supported and correctly aimed, the mark will surely be hit. Since any intelligent man can be taught to aim correctly and to hold the sights aligned upon the mark with a fair amount of steadiness, it follows that bad shooting must necessarily arise from causes other than bad aiming. The chief of these causes is known to be the deflection given to the rifle when it is discharged, due to the fact that the soldier, at the moment of firing, instead of squeezing the trigger, jerks it. This convulsive action is largely due to lack of familiarity with the methods of firing and to a constrained position of the muscles of the body, arm, and hands, which constrained position it is the purpose of the position and aiming drills to correct.

To become a good shot, constant, careful, and patient practice is required. Systematic aiming and squeezing the trigger will do much to make a rifleman. The men will be taught to take advantage of every opportunity for practicing aiming, and squeezing the trigger. For this purpose the barracks and ground in the vicinity of the barracks should be furnished with aiming targets, which the men will be encouraged to use at odd moments, as when waiting for a formation or during a rest. At drill the soldier will be cautioned never to squeeze the trigger without selecting an object and taking careful aim. When on the range waiting for his turn to fire, the soldier should use part of his time in position and aiming exercises, aiming at the target or at objects outside of the range, and he should be made to understand that this practice previous to firing will tend to prevent nervousness and will have a marked effect upon his score.

33. To Whom Given. The position and aiming drills will be given to all soldiers who have not qualified as "marksman" or better in the preceding target year. Some practice in these drills (especially in the trigger-squeeze exercise) is recommended for those who have qualified as "marksman" or better. The amount to be given is left to the discretion of the company commander.

34. Drills; General Instructions. These drills are divided into four progressive exercises. The first exercise teaches the position; the second exercise teaches the position and the aim; the third exercise teaches the aim and the manner of squeezing the trigger; and the fourth exercise teaches the methods of rapid fire. The exercises should be taught by the numbers at first; when fully understood, without numbers.

To correct any tendency to cant the piece, the rear sight will be raised. A black paster at which to aim will be placed on the wall opposite each man. The squad being formed in single rank, with an interval of 1 yard between files, the instructor directs the men to take the position of "Ready," except that the position of the feet will be such as to insure the greatest firmness and steadiness of the body. The instructor then cautions "Position and aiming drill."

The exercise which is being taught should be repeated frequently and made continuous. The instructor prefaces the preparatory command by "Continue the motion," or "At will," and gives the command "Halt" at the conclusion of the exercise, when the soldier will return to the position of "Ready." Or the soldier may be made to repeat the first and second motions by the command "One," "Two," the exercise concluding with the command "Halt."

Care should be taken by the instructor not to make the position and aiming

drills tedious. Thirty minutes daily should be spent in this practice during the period of preliminary instruction. After gallery practice is taken up, however, five or ten minutes daily should be sufficient for these exercises.

In order that the instructor may readily detect and correct errors, the squads for these drills should not consist of more than eight men.

The instructor should avoid holding the squad in tiresome positions while making explanations or correcting errors.

POSITION EXERCISE.

35. The instructor commands: 1. **Position**, 2. **EXERCISE**. At the last command, without moving the body or eyes, raise the rifle smartly to the front of the right shoulder to the full extent of the left arm, elbow inclined downward, the barrel nearly horizontal, muzzle slightly depressed, heel of the butt on a line with the top of the shoulder.

(Two.) Bring the piece smartly against the hollow of the shoulder, without permitting the shoulder to give way, and press the rifle against it, mainly with the right hand, only slightly with the left, the forefinger of the right hand resting lightly against the trigger, the rifle inclined neither to the right nor left.

(Three.) Resume the position of "Ready."

36. **Remarks.** The instructor should especially notice the position of each soldier in this exercise, endeavoring to give to each man an easy and natural position. He should see that the men avoid drawing in the stomach, raising the breast, or bending the small of the back.

The butt of the piece must be pressed firmly, but not too tightly, into the hollow of the shoulder and not against the muscles of the upper arm. If held too tightly, the pulsations of the body will be communicated to the piece; if too loosely, the recoil will bruise the shoulder. If only the heel or toe touches the hollow of the shoulder, the recoil may throw the muzzle down or up, affecting the position of the hit. While both arms are used to press the piece to the shoulder, the left arm should be used to direct the piece and the right forefinger must be left free to squeeze the trigger.

AIMING EXERCISE.

37. The instructor will first direct the sights to be adjusted for the lowest elevation and subsequently for the different longer ranges.

The instructor commands: 1. **Aiming**, 2. **EXERCISE**.

At the last command execute the first and second motion of the position exercise.

(Two.) Bend the head a little to the right, the cheek resting against the stock, the left eye closed, the right eye looking through the notch of the rear sight at a point slightly below the mark.

(Three.) Draw a moderately long breath, let a portion of it escape, then, with the lungs in a state of rest, slowly raise the rifle with the left hand, being careful not to incline the sight to either side, until the line of sight is directly on the mark; hold the rifle steadily directed on the mark for a moment; then, without command and just before the power to hold the rifle steadily is lost, drop the rifle to the position of "Ready" and resume the breathing.

38. **Remarks.** Some riflemen prefer to extend the left arm. Such a position gives greater control over the rifle when firing in a strong wind or at moving objects. It also possesses advantages when a rapid as well as accurate delivery

of fire is desired. Whatever the position, whether standing, kneeling, sitting or prone, the piece should rest on the palm of the left hand, never on the tips of the fingers, and should be firmly grasped by all the fingers and the thumb.

The eye may be brought to the line of sight either by lowering the head or by raising the shoulder; it is best to combine somewhat these methods; the shoulder to be well raised by raising the right elbow and holding it well to the front and at right angles to the body.

If the shoulder is not raised, it will be necessary for the soldier to lower the head to the front in order to bring the eye in to the line of sight. Lowering the head too far to the front brings it near the right hand, which grasps the stock. When the piece is discharged, this hand is carried by the recoil to the rear and, when the head is in this position, may strike against the nose or mouth. This often happens in practice, and as a result of this blow often repeated many men become gun-shy, or flinch, or close their eyes at the moment of firing. Much bad shooting, ascribed to other causes, is really due to this fault. Raising the right elbow at right angles to the body elevates the right shoulder, and lifts the piece so that it is no longer necessary to incline the head materially to the front in order to look along the sights.

As the length of the soldier's neck determines greatly the exact method of taking the proper position, the instructor will be careful to see that the position is taken without restraint.

39. As changes in the elevation of the rear sight will necessitate a corresponding change in the position of the soldier's head when aiming, the exercise should not be held with the sight adjusted for the longer ranges until the men have been practiced with the sights as the latter would generally be employed for offhand firing.

40. The soldier must be cautioned that while raising the line of sight to the mark he must fix his eyes on the mark and not on the front sight; the latter can then be readily brought into the line joining the rear-sight notch and mark. If this plan be not followed when firing is held on the range at long distances the mark will generally appear blurred and indistinct. The front sight will always be plainly seen, even though the eye is not directed particularly upon it.

41. The rifle must be raised slowly, without jerk, and its motion stopped gradually. In retaining it directed at the mark, care must be taken not to continue the aim after steadiness is lost; this period will probably be found to be short at first, but will quickly lengthen with practice. No effort should be made to prolong it beyond the time that breathing can be easily restrained. Each soldier will determine for himself the proper time for discontinuing the aim.

42. The men must be cautioned not to hold the breath too long, as a trembling of the body will result in many cases.

43. Some riflemen prefer, in aiming, to keep both eyes open but, unless the habit is fixed, the soldier should be instructed to close the left eye.

TRIGGER-SQUEEZE EXERCISE.

44. The instructor commands: 1. **Trigger squeeze.** 2. **EXERCISE.** At the command Exercise, the soldier will execute the first motion of the aiming exercise.

(Two.) The second motion of the aiming exercise.

(Three.) Draw a moderately long breath, let a portion of it escape, hold the breath and slowly raise the rifle with the left hand until the line of sight is on the mark, being careful not to incline the sights to either side. Contract the trigger finger gradually, slowly and steadily increasing the pressure on the

trigger, while the aim is being perfected; continue the gradual increase of pressure so that when the aim has become exact the additional pressure required to release the point of the sear can be given almost insensibly and without causing any deflection of the rifle. Continue the aim a moment after the release of the firing pin, observe if any change has been made in the direction of the line of sight, and then resume the position of "Ready," cocking the piece by raising and lowering the bolt handle.

45. Remarks. Poor shooting is often the result of lack of proper coördination of holding the breath, the maximum steadiness of aim, and the squeeze of the trigger. By frequent practice in this exercise, each man may come to know the exact instant his firing pin will be released. He must be taught to hold the breath, bring the sights to bear upon the mark, and squeeze the trigger all at the same time.

46. The Trigger Squeeze. The trigger should be squeezed, not pulled, the hand being closed upon itself as a sponge is squeezed, the forefinger sharing in this movement. The forefinger should be placed as far around the trigger as to press it with the second joint. (See Fig. 4, Pl. IV.) By practice the soldier becomes familiar with the trigger squeeze of his rifle, and knowing this, he is able to judge at any time, within limits, what additional pressure is required for its discharge. By constant repetition of this exercise he should be able finally to squeeze the trigger to a certain point beyond which the slightest movement will release the sear. Having squeezed the trigger to this point, the aim is corrected and, when true, the additional pressure is applied and the discharge follows.

RAPID-FIRE EXERCISE.

47. Object. The object of this exercise is to teach the soldier to aim quickly and at the same time accurately in all the positions he will be called upon to assume in range practice.

48. The instructor commands: 1. Rapid-fire exercise. 2. COMMENCE FIRING. At the first command the first and second motions of the trigger-squeeze exercise are performed. At the second command the soldier performs the third motion of the trigger-squeeze exercise, squeezing the trigger without disturbing the aim or the position of the piece, but at the same time without undue deliberation. He then, without removing the rifle from the shoulder, holding the piece in position with the left hand, grasps the handle of the bolt with the right hand, rapidly draws back the bolt, closes the chamber, aims, and again squeezes the trigger. This movement is repeated until the trigger has been squeezed five times, when, without command, the piece is brought back to the position of "Ready."

When the soldier has acquired some facility in this exercise, he will be required to repeat the movement ten times, and finally, by using dummy cartridges, he may, by degrees, gain the necessary quickness and dexterity for the execution of the rapid fire required in range firing.

49. Methods. The methods of taking position, of aiming, and of squeezing the trigger, taught in the preceding exercises, should be carried out in the rapid-fire exercise, with due attention to all details taught therein; the details being carried out as prescribed except that greater promptness is necessary. In order that any tendency on the part of the recruit to slight the movements of aiming and of trigger squeeze shall be avoided, the rapid-fire exercise will not be taught until the recruit is thoroughly drilled and familiar with the preceding exercises. The recruit will be instructed that with practice in this class of fire the trigger can be squeezed promptly without deranging the piece.

50. Repetition. If the recruit seems to execute the exercise hurriedly or carelessly, the instructor will require him to repeat it at a slower rate.

51. Manipulation of the Breech Mechanism. To hold the piece to the shoulder and, at the same time, manipulate the breech mechanism with the proper facility, are learned only after much practice. Some riflemen, especially men who shoot from the left shoulder, find it easier, in rapid firing, to drop the piece to the position of load after each shot. While at first trial this method may seem easier, it is believed that, with practice, the advantage of the former method will be apparent.

POSITION AND AIMING DRILL, KNEELING.

52. These exercises will be repeated in the kneeling position by causing the squad to kneel by the commands prescribed in the Drill Regulations. The exercises will be executed as prescribed for standing, except that at the command "Two" in the position exercise, the soldier will rest the left elbow on the left knee, the point of the elbow in front of the kneecap. The pasters for the kneeling exercise should be at $2\frac{1}{2}$ feet from the floor or ground.

53. Remarks. Frequent rests will be given during practice in these exercises kneeling, as the position, if long continued, becomes constrained and fatigues the soldier unnecessarily.

In raising the rifle to the mark in the second and third exercises, the position of the left hand should not be changed, but the left forearm should be brought toward the body and at the same time the body bent slightly to the rear.

When aiming kneeling there is, from the nature of the position, a tendency to press the butt of the rifle against the upper arm instead of against the hollow of the shoulder; this will necessitate inclining the head considerably to the right to get the line of sight, and by bringing the rifle so far to the rear will, if the thumb is placed across the stock, cause it to give by the recoil a blow upon the nose or mouth.

These difficulties may be avoided by advancing the right elbow well to the front, at the same time raising it so that the arm is about parallel with the ground. The hollow of the shoulder will then be the natural place for the rifle butt, and the right thumb will be brought too far from the face to strike it in the recoil.

Some riflemen prefer, by bending the ankle, to rest the instep flat on the ground, the weight of the body coming more on the upper part of the heel; this obviates any tendency of the right knee to slip; or, by resting the right side of the foot on the ground, toe pointing to the front, to bring the weight of the body on the left side of the foot. These positions are authorized.

54. Choice of Position. In firing kneeling, the steadiness obtained depends greatly upon the position adopted. The peculiarities of conformation of the individual soldier exert when firing kneeling a greater influence than when firing either standing, sitting, or prone; the instructor should, therefore, carefully endeavor, noticing the build of each soldier, to place him in the position for which he is best adapted and which will exert the least tension or strain upon the muscles and nerves. It should be remembered, however, that without the rest of the left elbow on the knee this position possesses no advantage of steadiness over the standing position.

55. Kneeling Position; When Taken. The kneeling position can be taken more quickly than either the sitting or the prone position. It is, therefore, the position naturally assumed when a soldier, who is standing or advancing, has to make a quick shot at a moving or disappearing object and desires more steadiness than can be obtained standing.

POSITION AND AIMING DRILL, SITTING DOWN.

56. In many cases the men, while able to kneel and hold the piece moderately steady, can obtain in a sitting position much better results. All should, therefore, be instructed in aiming sitting down as well as kneeling.

To practice the soldier in the preceding exercises in a sitting position, the squad being formed in a single rank, with an interval of one pace between files, the rifle should first be brought to "Order arms"; the instructor then commands: **SIT DOWN.**

At this command make a half face to the right and, assisted by the left hand on the ground, sit down, facing slightly to the right, the left leg directed toward the front, right leg inclined toward the right, both heels, but not necessarily the bottoms of the feet, on the ground, the right knee slightly higher than the left; body erect and carried naturally from the hips; at the same time drop the muzzle of the piece to the front, and to the position of the first motion of load, right hand upon the thigh, just in front of the body, the left hand slightly above, but not resting upon, the left leg.

The exercise will be executed as heretofore prescribed, except that at the command "Two" (position exercise) the soldier will rest the left elbow on the left knee, the point of the elbow in front of the kneecap, and the right elbow against the left or inside of the right knee, at the same time inclining the body from the hips slightly forward.

For the aiming and trigger-squeeze exercises the pasters, used as aiming points, will be $2\frac{1}{2}$ feet from the floor or the ground.

To afford the men rest or on the completion of the kneeling or sitting down exercises the instructor will command **RISE**, when the men rise, face to the front, and resume the "Order arms."

57. **Remarks.** If the preceding position is carefully practiced, steadiness is quickly attained. The right leg should not be carried so far to the right as not to afford a good support or brace for the right elbow.

This position may be modified, but, in general, not without impairing the steadiness of the man, by crossing the legs at the ankle, the outside of each foot resting upon the ground, body more erect, and the knees slightly more raised than in the previous position.

POSITION AND AIMING DRILL, PRONE.

58. From the nature of the position it is not practicable to execute these exercises according to the method followed when standing or kneeling. Instruction will, however, always be given with reference to the position, to the manner of assuming it, and to aiming and squeezing the trigger.

For this purpose the squad being formed as specified in paragraph 56 (the black pasters therein mentioned being about 12 inches from the ground), the squad will be brought to "Order arms."

Then (the squad either standing or kneeling), the instructor commands: **LIE DOWN**, which will be executed as prescribed in the Drill Regulations; the legs may be spread apart and the toes turned out if found to give a steadier position.

After the squad has taken the position as prescribed above, the legs should be inclined well to the left, and either crossed or separated as the soldier prefers or as his particular conformation appears to render most desirable, and the body at the same time inclined slightly to the right.

With care and practice the soldier may acquire an easy position which he is able to assume with great facility.

Being at "Ready," the instructor then commands: 1. **Trigger squeeze.** 2. **EXERCISE.**

At the latter command carry the elbow to the front and slightly to the right, the left hand under the barrel at the balance, weight of the body mainly supported by the left elbow, the right resting lightly on the floor or ground.

(Two.) Slide the rifle with the right hand through the left hand to the front until the left hand is a little in front of the trigger guard; at the same time raise the rifle with both hands and press it against the hollow of the shoulder.

(Three.) Direct the rifle upon the mark and carry out the further details of aiming and squeezing the trigger as prescribed in paragraph 44.

Then resume the position, lying down.

As soon as the men have acquired with accuracy the details of the position they will be practiced, without the numbers, in aiming and squeezing the trigger at will; after which the rapid-fire exercise in the prone position will be practiced, the necessary skill and dexterity being acquired by degrees.

To afford the men rest, or on completion of the exercise, the instructor will command: **RISE**, which is executed as prescribed in the Drill Regulations.

59. Remarks. The preceding position for firing lying down possesses in a greater degree than any other position the merit of adaptability to the configuration of the ground; it enables the soldier to deliver fire over low parapets or improvised shelters, thus making the best use of cover. The importance of training the soldier in firing from the other positions should not, however, be lost sight of, since from the prone position it will frequently be impossible to see the objective.

Back positions are not authorized.

In the prone position, when aiming, the left elbow should be well under the barrel, the other elbow somewhat to the right, but not so far as to induce any tendency to slip on the floor or ground.

The greater changes in elevation required in first directing the rifle on the object should be given by altering the position of the left hand under the barrel, the slighter changes only by advancing or withdrawing the shoulder.

As the body does not yield to the recoil, as when firing standing or kneeling, the force of recoil, if the rifle is not properly held, may severely bruise the soldier. It is one of the objects of this exercise to so teach him that this will be prevented by assuming a correct position. Care must be exercised that the butt is not brought against the collar bone. By moving the shoulder slightly to the front or rear, and by moving the right elbow from the body or toward it, each soldier may determine the position in which the shoulder gives to the butt of the rifle the easiest rest. This will probably be the one in which the force of the recoil will be least felt.

The soldier should persist in this exercise until he obtains a position in which he feels no constraint, which will not subject him to bruises from the recoil, and from which the mark appears plainly through the sights. Having secured such a position, he must not change it when firing, as a variation in the points of support of the rifle, the distance of the eye from the rear sight, or the tension of the hold has a decided effect, especially at the longer ranges, upon the location of the point struck.

60. Use of Sling. After the soldier has been drilled in the proper standing, kneeling, sitting, and prone positions in the foregoing exercises, the use of the sling will be taught. Its use is described in paragraph 91. Adjustments and their advantages will be taught with the idea of noninterference with quickness and freedom of action. The trigger-squeeze exercises will then be continued in the different positions, using the sling.

GENERAL REMARKS ON THE PRECEDING DRILLS.

61. The importance of sighting and position and aiming drills can not be too persistently impressed upon the soldier. If these exercises are carefully practiced, the soldier, before firing a shot at a target, will have learned to correctly aim his piece, to hold his rifle steadily, to squeeze the trigger properly, to assume that position best adapted to the particular conformation of his body, and will have acquired the quickness and manual dexterity required for handling the piece in rapid fire. This knowledge can not be successfully acquired upon the target ground. At that place the time that can be given to instruction is limited and should be devoted to the higher branches of the subject. Even if the desired amount of attention could be given to each soldier, nevertheless, from the circumstances of the firing, his errors can not be readily determined. It is more than likely that the soldier would never discover the reasons for his failures and would, therefore, be unable to properly correct them.

Under such conditions the knowledge that he may have of the many other requisites for good marksmanship can not be utilized to full advantage, and, in fact, can but in a limited degree compensate for the neglect of these first principles and for the failure to lay, by assiduously practicing them, the only firm foundation for future proficiency.

If, in the instruction practice on the range, it is found that the soldier makes errors in his position, he should be required to stop firing and to practice the third exercise for 10 or 15 minutes. He should be encouraged to go through these exercises frequently at other than drill hours, care being taken that, in the aiming and trigger-squeeze exercises, he always has some definite object for a mark.

CHAPTER III.**DEFLECTION AND ELEVATION CORRECTION DRILLS.**

62. **Sight Correction.** The soldier may find when firing at a target that the first shot has missed the bull's-eye or figure, and in order to cause the second to hit, two methods may be used: The point of aim may be changed or the sights may be moved and the same point be aimed at. In order to do accurate shooting it is essential to have a well-defined mark at which to aim; consequently, except for very slight corrections, the method of moving the sights, involving changes in elevation and windage, is devised.

63. **Elevation.** The instructor will show the men the graduations on the rear-sight leaf, and will explain to them the value of the different divisions. He will explain how to adjust their sights for different distances. He will make it clear that raising or lowering the slide on the rear-sight leaf has the effect of raising or lowering the point struck. The amount of change which a given amount of elevation will cause in the point struck varies with the range and with the rifle and the ammunition used.

64. **Deflection.** The instructor will explain how to move the movable base by use of the windage screw; that the graduations on the rear end of the movable base are for convenience in setting the sights and applying corrections; that each division is called a point of windage; that turning the movable base of the rear sight to the right or left changes the point struck to the right or left; that to overcome the drifting effect of a wind from the right, the movable base must be moved to the right, and, if the wind be from the left, the movable sight base must be moved to the left.

65. **Adjusting the Sights.** (a) **Elevation.** The graduations on the rear sight will be found correct for but few rifles. This is due to slight variations in the parts of the rifle, especially the barrel, which occur under the most exact

methods of fabrication. Not all rifles are tested at the arsenal, and when the graduations for the rear sight have been experimentally determined, they are correct only for the particular conditions existing when they were so determined. The correction necessary for each particular rifle at any range is found by shooting it at that range, and is constant with the same ammunition and when firing under the same conditions. If no correction is necessary, the rifle is said to "shoot on the mark."

(b) **The Zero of a Rifle.** That reading of the wind gauge necessary to overcome the drift of a rifle at a particular range is called the "zero" of that rifle for that range, and all allowances for wind should be calculated from this reading.

The "zero" of a rifle is found by shooting it on a perfectly calm day.

66. The following table gives the approximate corrections on the rear-sight leaf and the wind gauge necessary to move the point struck 1 foot at ranges from 100 to 1,000 yards:

| Range. | Correction on wind gauge necessary to move the point struck 1 foot. | Correction in elevation necessary to change the point struck 1 foot. |
|---------------|--|---|
| <i>Yards.</i> | <i>Points.</i> | <i>Yards.</i> |
| 100 | 3 | 415 |
| 200 | 1.5 | 185 |
| 300 | 1 | 105 |
| 400 | .75 | 70 |
| 500 | .6 | 48 |
| 600 | .5 | 35 |
| 700 | .43 | 25 |
| 800 | .375 | 20 |
| 900 | .333 | 15 |
| 1,000 | .3 | 12 |

67. **Exercise.** To give the soldier practice in correcting elevation and windage, a target should be placed on the wall facing the squad and a blank paster attached a foot or more from the bull's-eye, at first directly above or below the bull's-eye, then on a horizontal line with it, and finally in an oblique direction.

For this drill the rifle of each soldier who has not determined by actual firing the "zero" and the correct elevations for the different ranges will be assumed to shoot on the mark and to require no windage.

Announce the range and tell the men that the paster represents the position of an assumed hit and require each man to correct his sight so as to bring the next hit into the bull's-eye. This exercise should be repeated daily during gallery practice, using the A, B, C, and D targets, until the men have acquired accuracy in making corrections for all ranges up to 1,000 yards.

When the men have learned how to adjust their sights, this exercise should be carried on in connection with gallery practice. The rear sight on each rifle is given an incorrect setting in elevation and windage by the instructor, and the soldier required to find the correct adjustment by firing.

68. **The Effect of Wind.** It is important that before going on the range the soldier should be taught to estimate the force and direction of the wind and the amount of correction necessary to apply to the movable rear-sight base to overcome the effect of the wind on the bullet in its flight.

The direction of the wind, for convenience, is expressed by a clock-face notation, the clock being supposed to lie on the ground with the hour XII toward

the target or mark and the hour III at the firer's right hand. A wind blowing from the front (that is from the direction of the target) is called a "XII-o'clock wind," one directly from the left and across the field of fire is called a "IX-o'clock wind," and so on. The direction of the wind can be obtained by observing its effect upon the smoke, on trees, or grass, or dust, or by wetting the finger and holding it up.

The force of the wind is designated in miles per hour. An anemometer should be placed near the barracks, where it will not be exposed to cross currents, and so that the dial can be readily seen. The force of the wind can then be read from the dial and at the same time the effect of the wind on the boughs of trees, flags, and streamers, and the smoke from chimneys should be observed. The soldier should be required to estimate the force of the wind and then verify his estimation by anemometer readings. This exercise should be repeated frequently until the soldier has learned to estimate roughly the force of the wind without the aid of an anemometer.

Heat waves, when present, are an important aid in estimating the force of the wind.

69. In the following table are shown the points of windage necessary to correct for a 10-mile-an-hour wind:

| Range. | III or IX. | II, IV, VIII, X. | I, V, VII, XI. |
|---------------|----------------|------------------|----------------|
| <i>Yards.</i> | <i>Points.</i> | <i>Points.</i> | <i>Points.</i> |
| 100 | 0.23 | 0.20 | 0.10 |
| 200 | .34 | .31 | .17 |
| 300 | .61 | .53 | .30 |
| 400 | .86 | .75 | .43 |
| 500 | 1.11 | .96 | .55 |
| 600 | 1.39 | 1.20 | .69 |
| 700 | 1.68 | 1.45 | .84 |
| 800 | 2.00 | 1.73 | 1.00 |
| 900 | 2.34 | 2.03 | 1.17 |
| 1,000 | 2.67 | 2.30 | 1.33 |

Winds blowing from XII and VI o'clock directions have no deviating influence on the flight of the bullet, but these winds have the effect of shortening (in the case of XII-o'clock wind) or lengthening the range (in the case of VI-o'clock wind). The correction necessary to apply in the case of such winds is inappreciable.

70. **Remarks.** If the soldier is well drilled in applying the windage and elevation corrections necessary to bring an assumed hit into the bull's-eye or figure, using in turn each of the targets at which he fires on the range, he will need very little further instruction in applying the necessary corrections. The instructor should assure himself that the men understand the reasons for these corrections, and they should never forget that they must move the rear-sight movable base into the wind and in the same direction they wish to move the point struck.

CHAPTER IV. GALLERY PRACTICE.

71. After the soldier has been thoroughly instructed in sighting, and in the position, aiming, deflection, and elevation-correction drills, he will be exercised in firing at short ranges with reduced charges.

72. **Value of Gallery Practice.** Notwithstanding the value of the position and aiming drills, it is impossible to keep up the soldier's interest if these exercises

are unduly prolonged. By gallery practice, however, the interest is easily maintained and further progress, especially in teaching the trigger squeeze, is made. Many of the external influences, which on the range affect the firing, being absent, the soldier is not puzzled by results for which, at this stage of his education, he could not account were he advanced to firing with full charges. Furthermore, as there is no recoil to induce nervousness or flinching, the soldier soon finds that he can make good scores, and this success is the surest stimulus to interest.

Not only to the beginner is gallery practice of value; to the good shot it is a means of keeping, to a certain extent, in practice, and practice in shooting, as much as in anything else, is essential. Since it can be carried on throughout the year, gallery practice is of much value in fixing in the men the habit of aimed fire, than which nothing in his training is of more importance.

73. Gallery Practice. During the month preceding range practice the minimum number of scores given in the following table must be fired by all who are required to fire under the provisions of paragraph 89:

| Range (feet). | Target. | Position. | Scores. |
|------------------|---|-----------|--|
| 50 | The iron gallery target issued by the Ordnance Department, or one similar thereto, or the paper "X" target. | Kneeling. | { A minimum of four (4) at each range in each of the positions prescribed. |
| 50 | | Standing. | |
| 75 | | Prone. | |
| 75 | | Sitting. | |

74. Scores. Gallery practice will be conducted in scores of five shots. The number of scores to be fired by any man at a single practice is determined by the company commander.

No reports of the results of the firing will be required, although a record of it should be kept in the company for the instruction and guidance of the soldier.

75. Additional Practice. In addition to the minimum number of scores prescribed in paragraph 73, practice in this class of firing should be carried on throughout the year when practicable, the amount and details of the practice being left to the discretion of the company commander. The practice should be varied as much as possible. It should include exercises in slow and rapid fire, in assuming the various firing positions and opening fire quickly, and in finding the correct adjustment of the rear sight without unnecessary loss of time. Moving or disappearing targets can easily be improvised and the instruction made as interesting as possible.

76. Matches. Matches in gallery firing between the men, particularly the recruits, and between teams of the same or different companies, should be promoted and encouraged. While such matches increase the interest of the men in their practice, they at the same time afford experience in the conditions of competitive firing.

CHAPTER V.

ESTIMATING-DISTANCE TEST.

77. Importance. Ability to estimate distances correctly is an important element in the education of the soldier.

While it is true that fire on the battle field will usually be by groups and the ranges given by officers or noncommissioned officers, the battle field is reached only after a long series of experiences in scout, patrol, and outpost duty, in which the soldier is frequently placed in positions where it is essential that he shall determine for himself the range to be used in order that the fire may be

effective. It is, therefore, here made a prerequisite to qualification that the soldier shall be proficient in estimating distances by eye.

During the estimating-distance drills advantage should be taken of every opportunity to train the soldier in observing his surroundings from positions and when on the march. He should be practiced in pointing out and naming different features of the ground; in discovering and describing different objects; in counting different objects or beings. Especially should noncommissioned officers be trained in describing the location, with reference to other objects, of objects difficult to see and in imparting information of this kind quickly and accurately.

78. Distances can be estimated by the eye or by sound; they can be determined by range-finding instruments, by trial shots or volleys, or from maps.

79. **Estimation of Distance by Eye.** To estimate distance by the eye with accuracy, it is necessary to be familiar with the appearance, as to length, of a unit of measure which can be compared mentally with the distance which is to be estimated. The most convenient unit of length is 100 yards. To impress upon the soldier the extent of a stretch of 100 yards two posts 100 yards apart, with short stakes between to mark each 25 yards, should be placed near the barracks, or on the drill ground, and the soldier required to pace off the marked distance several times, counting his steps. He will thus learn how many of his steps make 100 yards and will become familiar with the appearance of the whole distance and of its fractional parts.

Next a distance of more than 100 yards will be shown him and he will be required to compare this distance with the 100-yard unit and to estimate it. Having made this estimate, he will be required to verify its accuracy by pacing the distance.

A few minutes each day should be spent in this practice, the soldier often being required to make his estimate by raising his rear-sight leaf and showing it to the instructor. After the first drills the soldier should be required to pace the distance only when the estimate is unusually inaccurate.

The soldier should be taught that, in judging the distance from the enemy, his estimate may be corrected by a careful observation of the clearness with which details of dress, the movements of limbs or of the files in a line may be seen. In order to derive the benefit of this method, the soldier will be required to observe closely all the details noted above in single men or squads of men posted at varying distances, which will be measured and announced.

Although the standing and kneeling silhouettes used in field practice afford good objects upon which to estimate distances, the instructor should make frequent use of living figures and natural objects, as this is the class of targets from which the soldier will be compelled to estimate his range in active service.

80. **Methods of Estimating Long Distances by the Eye.** The following methods are found useful:

(a) The soldier may decide that the object can not be more than a certain distance away nor less than a certain distance; his estimates must be kept within the closest possible limits and the mean of the two taken as the range.

(b) The soldier selects a point which he considers the middle point of the whole distance, estimates this half distance and doubles it, or he similarly divides the distance into a certain number of lengths which are familiar to him.

(c) The soldier estimates the distance along a parallel line, as a road on one side, having on it well-defined objects.

(d) The soldier takes the mean of several estimates made by different persons. This method is not applicable to instruction.

81. **Appearance of Objects: How Modified by Varying Conditions of Light; Difference of Level, Etc.** During instruction the men should be taught the

effect of varying conditions of light and terrain upon the apparent distance of an object.

Objects seem nearer—

- (a) When the object is in a bright light.
- (b) When the color of the object contrasts sharply with the color of the background.
- (c) When looking over water, snow, or a uniform surface like a wheat field.
- (d) When looking from a height downward.
- (e) In the clear atmosphere of high altitudes.

Objects seem more distant—

- (a) When looking over a depression in the ground.
- (b) When there is a poor light or a fog.
- (c) When only a small part of the object can be seen.
- (d) When looking from low ground upward toward higher ground.

82. Estimating Distance by Sound. Sound travels at the rate of about 1,100 feet, or 366 yards, per second. If a gun is fired at a distance, a certain time elapses before the sound is heard. If the number of seconds or parts of seconds between the flash and the report be carefully taken and multiplied by 366, the product will be approximately the distance in yards to the gun. This method will be of doubtful use on the battle field, owing to the difficulty of distinguishing the sound of the gun whose flash is seen from that of any other. It will probably be useful in determining the range to a hostile battery when it first opens fire.

83. Determining Distance by Range-finding Instruments. Accuracy in determining by range-finding instruments depends upon care and facility in use of the instrument and clearness of definition of the objective. Knowledge of the use of the instrument issued is essential to all company officers and should be imparted to sergeants when time is available.

84. Determination of Distance by Trial Shots or Volleys. If the ground is so dry and dusty that the fall of the bullets is visible through a glass or with the naked eye, a method of determining the distance is afforded by using a number of trial shots or volleys.

The method of using trial volleys is as follows:

The sights are raised for the estimated range and one volley is fired. If this appears to hit but little short of the mark an increase of elevation of 100 yards will be used for the next volley. When the object is inclosed between two volleys, a mean of the elevations will be adopted as the correct range.

The range may be obtained from a near-by battery or machine gun. This is the best method where available.

85. Estimating Distance Test. When instruction shall, in the opinion of the company commander, have progressed to such an extent as to enable the soldier to judge distances with the eye with fair accuracy, he will be tested for proficiency.

As the danger space is continuous for a man kneeling within a range of 547 yards (battle-sight range), and as individual fire and the fire of small squads will ordinarily be limited to 1,200 yards, the soldier will be tested for proficiency at distances between these two ranges.

The rules governing this test are as follows:

- (a) The test will be supervised by an officer.
- (b) Each soldier will be tested separately.
- (c) The ground shall be other than that over which he fired or has previously estimated distances.
- (d) The use of any device to mark the limits within which distances are tested

(550 and 1,200 yards), at the time the test is given, so that this device can be seen from the estimating point, is prohibited.

(e) The objectives will be natural objects, men standing, kneeling, or prone, or silhouettes.

(f) For objectives, five or more natural objects will be selected, or single men or groups of men stationed or silhouettes placed within the ranges indicated above. The distances of the objectives will not be measured until all who are to estimate on them have made their estimates.

The men to be tested are conducted to a point near that from which the estimates are to be made, and remain facing away from the objectives or hidden therefrom by some feature of the ground. They are not permitted to know what objects are to be used in the test until they are called up to the estimating point.

The officer conducting the test calls up one man at a time, points out to him an objective and causes him to estimate the distance thereto. This is continued until the soldier's estimates on five objectives have been obtained. When the test for the day is completed by any man, he will not be allowed to join the squad awaiting test. After all the men have made estimates of distances to a given series of objectives, ranges thereto will be measured.

(g) Proficiency for the expert rifleman and for the sharpshooter shall consist in making in five consecutive estimates an average degree of accuracy of 90 per cent.

Similarly for proficiency, marksmen, first-class men, and second-class men are required to make in five consecutive estimates an average degree of accuracy of 85 per cent.

Not more than three trials will be given, and should the soldier fail three times to make the required percentage, his final qualification will be reduced one grade below that obtained in firing.

86. Range Finders. The estimating test having been completed, five or six enlisted men, selected by the company commander from the most accurate estimators, will be designated as "Range finders." These men will be given practice in estimating distances throughout the year. The practice will be on varied ground and at distances up to 2,000 yards.

CHAPTER VI.

KNOWN-DISTANCE PRACTICE.

87. General Description. When gallery practice has been completed as required, the soldier is advanced to known-distance firing. The general scheme for firing is shown on opposite page.

1. The instruction practice, qualification course, embraces slow fire at targets A, B, and D at 200, 300, 500, and 600 yards, and rapid fire at target D at 200, 300, and 500 yards.

2. Record practice, qualification course, consists of slow fire at targets A and B at 300, 500, and 600 yards, and rapid fire at target D at 200, 300, and 500 yards.

3. Long-distance practice is for experts and sharpshooters only. It is for instruction and is not a factor in qualification.

4. Practice with telescopic sights is for instruction of specially selected men in the use of this device, these to be experts or otherwise, four of the best shots among the enlisted men of the company. It is not a factor in qualification.

5. The supplementary course is designed for recruits and others who have joined after the practice season or so late in the season that it has been impracticable for them to fire.

6. Special course A is designed for the Coast Artillery Corps, for bandmen when required to fire, and for posts where ranges not greater than 300 yards can be obtained.

88. **Target Year and Practice Season.** The target year, being the period for which reports are rendered and which includes the practice season, will commence January 1 and terminate December 31.

The practice season will consist of two months, called the regular season, and a period, not to exceed one month, called the supplementary season. All to be designated by the department commander upon the recommendation of subordinate commanders.

| | | | | |
|--------------------------|--|------------------------------------|--|--|
| KNOWN DISTANCE PRACTICE. | Regular courses. | Qualification course... | Instruction practice... | { Slow fire, targets A and B. Slow fire, target D. Rapid fire, target D. |
| | | | Record practice..... | { Slow fire, targets A and B. Rapid fire, target D. |
| | | Long-distance practice. | Slow fire..... | { 800 yards, target C. 1,000 yards, target C. |
| | | | | |
| | | Practice with telescopic sights. | { Target B. Target C. | |
| | Supplementary Course—Special Course A, Instruction Practice. | | | |
| | Special courses. | Special course A.... | Instruction practice... | { Slow fire, target A. Slow fire, target D. Rapid fire, target D. |
| | | | Record practice..... | { Slow fire, target A. Rapid fire, target D. |
| | | Courses for Organized Militia..... | Qualification course... | { Slow fire, targets A and B. Slow fire, target D. Rapid fire, target D. |
| | | | | { Slow fire, targets A and B. Rapid fire, target D. |
| | | | Long-distance practice, slow fire..... | { 800 yards, target C. 1,000 yards, target C. |
| | | | Practice with telescopic sights..... | { Target B. Target C. |

During the period designated as the practice season, known distance firing will be carried on in such manner that, while record firing should take place on favorable days and under the most favorable circumstances, the men should be required to practice under variable conditions of weather, care being taken that the shooting is not held under such adverse conditions as to make it unprofitable.

As far as practicable, organizations actually firing will be excused from all post duties during this time, the usual duties being performed by the remainder of the garrison.

It shall be the duty of the post commander to see that, as far as the exigencies of the service permit, all men on extra and special duty who are required to

fire be given as much preliminary instruction and range practice as is given to other men.

All range work will be performed by the troops firing, except that during record practice, qualification course, such officers as may be required for range duty will be detailed from troops not firing.

In the regular season, the known distance firing will be carried to completion, all officers and men who are required to fire taking part.

Recruits who join in the last month of the regular season will fire in the supplementary season only.

89. Who Will Fire. Known-distance practice.

REQUIRED TO FIRE.

All officers and enlisted men of regiments of Infantry, Cavalry, and Engineers, and of Mounted Battalions of Engineers, except those authorized but not required to fire, and except bandmen, who will not fire (except in the Philippine Islands, when required to do so by the department commander).

All officers and enlisted men of companies of Coast Artillery will fire special course A.

AUTHORIZED BUT NOT REQUIRED TO FIRE.

Staff departments, except medical and chaplains, all officers and enlisted men. Staff Corps, all officers and enlisted men.

Field and staff officers of regiments of Infantry, Cavalry, and Engineers, of Mounted Battalions of Engineers, and of the Coast Artillery Corps.

Enlisted men of headquarters, supply, and machine-gun troops and companies of Cavalry and Infantry. Enlisted men of regiments and Mounted Battalions of Engineers who do not belong to companies. Noncommissioned staff officers of the Coast Artillery Corps.

All officers enumerated above of over 15 years' commissioned or commissioned and enlisted service, except officers of the Medical Department and chaplains, are authorized but not required to fire.

Cooks may be excused from firing.

Upon the recommendation of the surgeon, the post commander may excuse officers and men from practice.

A soldier who has completed the qualification course, record practice, and who is transferred or who is discharged and reenlists, will not fire the qualification course a second time in the same year.

A soldier will begin his regular practice each target-practice season with the instruction practice, qualification course (Tables 1, 2, and 3). Having completed this, he will fire the record practice, same course (Tables 4 and 5).

Officers and enlisted men authorized but not required to fire, and who are not on duty with a company or troop which takes target practice, will, if they fire, be attached to organizations for practice and will be classified on the report of the organization to which so attached.

90. Restrictions as to the Arm. The rifle or pistol shall be used as issued by the Ordnance Department, except that the wood of the upper band may be worked down. This change to be made under the supervision of the company commander. The use of additional appliances, such as temporary shades for sights, spirit levels, orthoptic eyepieces, etc., is prohibited. The front-sight cover may be left on the rifle during firing and the sights may be blackened if desired. Telescopic sights may be used in combat practice. Troops will use, in small-arms practice, the weapon with which they are armed.

Small arms and appliances issued by the Ordnance Department for test and report will not be used in determining classifications.

91. Use of Gun Sling. The gun sling may be used at all ranges as an auxiliary to steady the piece, in connection with one arm only, provided that for the purposes of adjustment for shooting, neither end shall have been passed through either sling swivel. No knot will be tied in the sling and the sling itself will not be added to nor modified in any manner.

92. Use of Rests—Positions. In known distance practice a rest will not be allowed for the rifle or any part of the body except as prescribed in these regulations.

In combat firing such rests as are available will be permitted.

Within the limits of these regulations, the soldier should be allowed to take the position giving him the greatest ease and steadiness.

93. Use of Devices for Determining Force and Direction of Wind. Anemometers, wind clocks, and other instruments, and flags, vanes or streamers for determining the force or direction of the wind will be allowed on the range during instruction practice but not during record firing for qualification.

94. Dress and Equipment. In all classes of firing the service uniform and service hat will be worn. In all known distance practice the soldier will be equipped with the rifle and cartridge belt; for infantry and troops equipped as infantry, who are provided with the model 1910 equipment, the garrison belt, or the cartridge belt, model 1910, when the garrison belt is not available;¹ for cavalry provided with the new equipment, the field belt; for other troops, the cartridge belt stripped; cartridge belt suspenders will not be worn in known-distance firing; the coat may be omitted when authorized by the post commander.

For combat practice, the service uniform "for field duty" will be worn (see Table of Occasions, Uniform Regulations), together with that field equipment prescribed as one of the conditions of the exercise (see paragraph 223 (d) and paragraph 224), and may be any one of the following:

(a) The full field equipment; with or without rations as may be prescribed for the exercise.

(b) The full field equipment less pack (or blanket roll); with or without rations as may be prescribed for the exercise.

Officers will, when firing, wear the same uniform and equipment as the men. In conducting combat firing exercises officers will be equipped with field glasses and pistols; sabers will not be worn.

95. Instruction Practice. Instruction practice, qualification course, should carry out the purposes which the term implies, and hence the amount of ammunition to be expended in this practice should be in proportion to the instruction needed. For recruits and those who in the last season's practice failed to qualify as marksman or better, not less than that prescribed in Tables 1, 2, and 3 should be fired, and, in special cases, considerably more, so that the inexperienced shot may be given ample opportunity to determine the nature of his errors and the best methods of correcting them.

For those who have qualified as marksman or better and who have learned the principles of shooting, not so much practice is required to keep in condition for retaining the qualification or for improving it; hence, for experts and sharpshooters, the expenditure of ammunition in the instruction practice, qualification course, will not exceed 100 rounds and 130 rounds per man, respectively, in one season's practice. For marksmen, in one season of practice, this expenditure

¹ The last sentence of paragraph 7, page 742, Instructions for Assembling the Infantry Equipment, model of 1910, is not intended to prohibit the detaching of the cartridge belt from the equipment for known-distance practice when the garrison belt is not available.

per man will not exceed the minimum number of rounds prescribed in the tables.

Subject to these restrictions, the expenditure of ammunition and the procedure as to order of practice and details followed in the instruction practice, qualification course, will be at the discretion of the company commander. Scores of 5 shots are permitted in rapid fire, instruction practice, and, in some instances, it may be found advantageous to begin instruction at 100 yards. The firing in this practice by a recruit of more than 50 rounds in one day is prohibited.

96. Record Practice. Record practice is for two purposes: First, to afford the soldier an object lesson of his progress; second, to obtain a record by means of which the soldier may be graded in awarding insignia and increased pay.

The rules for record practice must be fixed and be applicable to all alike. These rules must be strictly observed by all; scores must be recorded accurately; the work in the pit must be conducted with great efficiency.

In this practice "coaching" of any nature is prohibited. Each firer must observe the location of his own hit as indicated by the marking disk or spotter. After a soldier has taken his place at the firing point, no person shall render or attempt to render him any assistance whatever.

This practice will be conducted according to the regulations governing competitions, except that in a continuous pit there will be one officer to every two targets or less, and in each single target pit there will be an officer.

Scores will be kept in the pit and compared with the record made at the firing point.

97. Field Glasses. Officers and enlisted men will be allowed and encouraged to use field glasses, subject to the restrictions concerning coaching contained in paragraph 96.

98. Order of Procedure. The practice season opens with instruction practice, qualification course. This is carried to completion for each soldier before he proceeds to record practice. When the instruction practice, qualification course, is completed, the soldier proceeds to record practice (same course) and follows this to completion.

No individual will fire record practice, qualification course, on the same day as any part of instruction practice. Record practice having begun for any individual will be finished before any other firing is taken up.

While record practice is being conducted at any distance, there will be no other firing on the range at that distance.

A record practice score for any individual once begun at a range will be carried to completion at that range without interruption.

99. Sighting Shots. Sighting shots form no part of the score and are not recorded as such. When sighting shots are prescribed they must be taken. If, through no fault of his own, a soldier's record score is not completed at a range where sighting shots are prescribed and has to be repeated, he must be given sighting shots with the new score.

100. Instruction shots fired by an officer or enlisted man will be permitted only in instruction practice.

101. Scoring. The record of the score, from which classification will be made, will be kept at each firing point by a noncommissioned officer, who will be assigned, unless at a one-company post, to a point where his own company is not firing. The scoring will be closely supervised and the record verified by a company officer. Scores will be recorded on the range with pencil on sheets prepared for that purpose.

A separate sheet will be kept for each man firing, and as soon as the man's score at any range is completed the scorer will sign the sheet and the company

commander will take it up, initial it, and keep it in his personal possession until the soldier is again called upon to fire. The record scores will be transferred from these sheets to the company target record by the company commander. The company target record will be kept in the personal possession of the company commander and not allowed in the hands of an enlisted man from the beginning of record practice until the required reports for range practice have been rendered. All entries in the company target record will be made in ink and no corrections or alterations will be made except by the company commander, who will initial each correction.

102. Scoring Slow Fire. The scorer, as each shot is signaled, will announce in a tone loud enough to be heard by the firer the name of the firer and the value of the hit, and will record it on a sheet assigned to that soldier.

A shot upon the wrong target will be entered upon the score of the man firing as a miss, no matter what the value of the hit upon the wrong target.

If two shots strike a target at the same or nearly the same time, both will be signaled; and if a shot was just fired from the firing point assigned to that target, the hit having the higher value of the two will be entered in the score of the soldier firing from that target point, and no record made of the other hit.

103. Scoring Rapid Fire. In rapid fire as each shot is signaled it is announced as follows: One five, two fives, three fives, one four, two fours, three fours, four fours, one three, one miss, two misses, and jotted down on a pad as called, the scorer watching the target as he calls the shot. After the marking is finished the scorer counts the number of shots marked and, if more or less than 10, calls: "Re-mark No. —." If 10 shots have been marked, he then enters the score on the soldier's score card and totals it as follows: 5 5 5 4 4 4 3 0 0 = 34.

In record practice, in case of two men firing on the same target, the resulting score will be rejected, the soldier at fault being credited with only such hits, if any, as he may have made on his own target, the other soldier repeating his score. In case of more than 10 hits on a target the score will not be recorded and the soldier assigned to that target will repeat the score.

104. Officer in Charge of Firing. At stations where the range is provided with several targets and practice is usually held simultaneously by two or more companies and successively by others, an officer in charge of the firing will be appointed.

The officer in charge of the firing, who should be, when practicable, a field officer, will have general supervision of the firing and of the target range during the practice season. He will not supervise the details of the instruction of the companies practicing on the range, but will maintain order, regulate the distribution of ranges and targets to organizations, prevent infractions of regulations, and in general assist by every proper means to secure efficient and accurate service from the working force of the range.

He will see that all necessary precautions are taken for the safety of the markers and such spectators as may be present.

When ranges are not provided with butts and the surroundings are such that persons or animals might attempt to cross the range, the officer in charge of firing, before firing is begun, will post lookouts, in positions to be seen from the pit, whose duty it will be to prevent any attempt to cross the line of fire. Whenever the lookouts can not prevent the line of fire being crossed they should display a danger signal, when the markers will withdraw the targets.

105. Range Officer. At all ranges a range officer will be appointed who will be charged with the care and police of the range and with the necessary repairs to targets, shelters, butts, and firing points. He will be assisted by a noncommissioned officer and such fatigue parties as may be required. He will make timely estimates for material and labor to place the range in proper

condition for the practice season, and all necessary repairs will be made under his direction and the supervision of the post commander. He will be responsible for the accurate measuring of the range and the correct location of the different firing points, for the condition of the telephone system, and for the arrangement and efficiency of the personnel at the butts. During the practice season he will act as assistant to the officer in charge of the firing.

106. Noncommissioned Officer in Charge of Pit. A competent noncommissioned officer, with such assistants as the post commander deems necessary, will be detailed permanently during the target season in charge of arrangements at the butts. He will be under the direction of the range officer and will be responsible for the efficiency and discipline of the target details. It will be his duty to see that targets are ready for the firing desired and that all targets are serviceable; also to see that as the target details report they are provided with the proper flags, marking disks, paste, pasters, etc.

107. Target Details. The detail for marking each target will consist of two privates belonging to the company firing at that target, and one noncommissioned officer, always selected, except at a one-company post, from some other company. The noncommissioned officer will be held responsible that order is kept at his target and should be familiar with the regulations governing the markers and with the method of marking. Upon arriving at the pit the noncommissioned officer in charge of the target will see that his detail procures from the noncommissioned officer in charge of the pit the necessary ricochet and danger flags, spotters, marking disks, pasters, and paste. He will display the danger flag in front of his target, examine the target carefully to see that it is in good working order and that all old shot holes are pasted up. In case any target is, or becomes, so badly mutilated as to be unserviceable, he will procure a new one from the noncommissioned officer in charge of the pit. Upon completion of the firing he will take down the target and return it, with the disks, flags, etc., to the pit house. He will also report to the noncommissioned officer in charge of the pit such repairs as that target and its accessories may require for a subsequent practice.

If it should become necessary before the completion of the firing for the markers to leave or for other persons to enter a target pit not provided with a continuous shelter or covered approach, the target should first be turned or withdrawn from the firing position and the danger signal displayed. After the signal "Cease firing" has been sounded, or if there is no musician present at the firing point after a few seconds' delay, the target pit may be entered or left, the target turned back to the firing position, the danger signal removed, and the firing resumed.

In case of a disabled target the danger signal should be displayed and not withdrawn until the target is in working order.

108. Marking. When a post is garrisoned by a single company and it is impossible to detail noncommissioned officers of other companies to supervise the marking and scoring, those duties will be performed by the noncommissioned officers of the firing company. In record firing, qualification course, when only one company is firing, new paper targets will be used for each day's firing, and upon its completion the company commander or one of his lieutenants will count the number of hits made in each division of the target and compare the totals with the recorded scores.

As in some cases the markers may inadvertently make errors in signaling hits, whenever an examination of the target gives results very closely agreeing with the recorded scores, the record should be permitted to stand, but the markers cautioned to exercise greater care in the future.

Any shot cutting the edge of the figure or bull's-eye will be signaled and

recorded as a hit in the figure or bull's-eye, and as the limiting line of each division of the target is the outer edge of the line separating it from the exterior division, whenever this line is touched by a shot, it will be signaled and recorded as a hit in the higher division.

In record firing the officers in the pit will verify every miss before it is signaled, and will closely observe the marking on the targets to which they are assigned to prevent fraud or errors on the part of the markers.

109. Marking, Slow Fire. In slow fire with the rifle, as each shot is fired the noncommissioned officer indicates to one of the markers the value and position of the hit, if any is made, and supervises this marker while he signals the result of the shot to the firing point. The center of the disk should be placed over the shot hole. When double sliding targets are used the target hit will be withdrawn and the location of the hit indicated with the proper disk on the other target. After the result of the shot has been signaled, if a direct or ricochet hit has been made, the other marker will cover the shot hole with the proper paster. When spotters are used the shot hole will not be pasted up, but the spotter hung in the hole. When the exposed target is hit it is withdrawn and the other target run up, the spotter showing the exact location of the preceding hit on that target. When another hit is made on that target it is withdrawn, the spotter changed from the first shot hole to the second, and the first shot hole pasted up. When spotters are used care must be taken to paste up a shot hole as soon as the spotter is removed and also to paste up any shot hole in the spotter itself.

The value of a shot will be indicated to the firing point as follows:

If a bull's-eye, with a white disk.

If a center (four), with a red disk.

If an inner (three), with a black and white disk.

If an outer (two), with a black disk.

With spotters, two disks may be used, fixed in sockets on the top of the parapet so that they may be seen from the firing point. One disk is white on one side and red on the other; the other disk a black cross on a white field on one side and all black on the other. When a hit is made its value is indicated by turning the proper face toward the firer, exposing it a few seconds, and then turning its edge toward the firer. When not indicating the value of hits, disks should be kept edge toward the firing point.

In marking targets the following will govern:

If a ricochet, by displaying the ricochet flag; and if the target is hit, by placing over the shot hole at the same time the appropriate disk. The ricochet flag has a white field with a red center, similar to the flag used in signaling, the size depending on the distance.

If a miss, by waving the danger flag across the front of the target. If the markers know on which side of the target the miss is made, the flag will also be held on that side, but this should not be done unless the marker is absolutely certain on which side the miss is made, as false information regarding misses will so mislead the firer that he is likely to continue to miss the target.

If a hit is in the parapet the flag will be so held as to give the necessary indication.

If two shots strike a target at about the same time both will be signaled.

In slow fire with the pistol two disks are used, one a white disk to indicate a bull's-eye, the other a black disk to indicate all other hits. On one side of the target is printed a column of figures from 2 to 5, inclusive, and on the other side a column of figures from 6 to 9, inclusive. These numbers are large enough to be seen at 75 yards. When a bull's-eye is made the white disk is placed with the center of the disk over the hit. When a hit is made on any other part of

the target than the bull's-eye, the black disk is placed on the number indicating the value of the hit, and after a slight pause is placed so that the center of the disk is over the shot hole.

Instead of two disks, a staff with a spearhead, white on one side and black on the other, may be used, the white side being shown the firer when indicating the location of a hit in the bull's-eye and the black side when indicating a hit on any other part of the target.

110. Marking Rapid Fire. In this class of fire the time is regulated in the pit. The targets being ready, they are pulled fully down and a red flag is displayed at the center target. On signal from the firing line, the flag is waved and lowered and five seconds thereafter the targets are run up, being fully exposed for the time required for that range.

At the expiration of the time limit the targets are run down and the hits are marked, beginning with the highest in value, the disk being placed over the shot hole, then swung off the target and back to the next shot hole, care being taken to mark slowly enough to avoid confusing the scorer. The misses will be indicated by slowly waving the red flag once across the face of the target for each miss. The shot holes are then pasted and the target made ready for further firing.

During record practice the officer in charge of each pair of targets will keep a record showing the actual hits made on each of his targets in each score. At the end of the day's firing, or oftener if required by the officer in charge of the firing, this record will be turned over to the company firing at that target and compared with the record kept at the firing point, in order to determine if the hits recorded at the firing point agree with the hits recorded in the pit. In case the records differ greatly, they may be fired over, at the discretion of the officer in charge of the firing.

The following is suggested as a form for the pit record, rapid fire:

PIT RECORD.

TARGET —.

| Order. | 5's. | 4's. | 3's. | 2's. | Misses. |
|---------|------|------|------|------|---------|
| 1..... | | | | | |
| 2..... | | | | | |
| 3..... | | | | | |
| 4..... | | | | | |
| 5..... | | | | | |
| 6..... | | | | | |
| 7..... | | | | | |
| 8..... | | | | | |
| 9..... | | | | | |
| 10..... | | | | | |
| 11..... | | | | | |
| 12..... | | | | | |

Sig. of officer in charge.

QUALIFICATION COURSE—LONG-DISTANCE PRACTICE—PRACTICE WITH TELESCOPIC SIGHTS.

111. Tabulation. For convenience of reference a part of the general scheme outlined in paragraph 87 is here tabulated. The tables relate to the following subjects and have the force of written regulations: Qualification course; long-distance firing; practice with telescopic sights. Each table is followed by its regulations.

112. Qualification Course—Instruction Practice. The range practice begins with the instruction practice, qualification course. The order of firing is as laid down in Tables 1, 2, and 3.

TABLE 1.—SLOW FIRE.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|-----------|--------|----------|--|
| 200 | No limit. | 15 | A | 5 shots prone. 5 shots kneeling. 5 shots standing. |
| 300 | No limit. | 10 | A | 5 shots prone. 5 shots sitting. |
| 500 | No limit. | 10 | B | Prone. |
| 600 | No limit. | 10 | B | Prone, sand-bag rest. |

In firing with the sand-bag rest either the back of the hand or the rifle must be on the sand bag.

TABLE 2.—TARGET D, SLOW FIRE.

[THE BATTLE SIGHT ONLY WILL BE USED.]

| Range. | Time. | Shots. | Position. |
|--------|-----------|--------------------------------------|-----------|
| 200 | No limit. | A minimum of 10 shots at each range. | Kneeling. |
| 300 | No limit. | A minimum of 10 shots at each range. | Prone. |
| 500 | No limit. | A minimum of 10 shots at each range. | Prone. |

TABLE 3.—TARGET D, RAPID FIRE.

[THE BATTLE SIGHT ONLY WILL BE USED.]

| Range. | Time. | Shots. | Position. |
|--------|----------------------|--------|-------------------------|
| 200 | 1 minute. | 10 | Kneeling from standing. |
| 300 | 1 minute 10 seconds. | 10 | Prone from standing. |
| 500 | 1 minute 20 seconds. | 10 | Prone. |

[Note: If the model 1898 rifle (Krag-Jorgensen) is used, the time allowance is as follows:

200 yards, 1 minute 5 seconds.

300 yards, 1 minute 20 seconds.

500 yards, 1 minute 35 seconds.]

The course in rapid fire (Table 3) will be fired twice, but on different days, for instruction.

Procedure, Rapid Fire. At 200 yards there will be but one man firing at each target. The officer in charge of the line will command "Load." The magazine will be filled, the piece loaded with one cartridge therefrom, and the safety lock turned to "Safe." When all is ready in the pit the targets to be fired upon will be drawn fully down (the rear targets being blank or targets of another class than those being fired upon), and a red flag hoisted at the center target. When the red flag is displayed, the officer in charge of the firing line will command "Ready," when the safety lock will be turned to the ready and the position of "Ready" standing assumed, with the sling, if used, on the arm. The officer in charge of the firing line will then call so that all may hear. "Ready on the right; ready on the left." When the officer in charge calls out "Ready on the right," etc., anyone who is not ready must call out, "Not ready on target —." If any soldier fails to so call, it will be assumed that he is ready, and if he fails to fire when the target appears he will be given a total miss for that score.

The firing line being ready, the pit is signaled or telephoned, "Ready on the firing line." When this signal is received in the pit, the red flag is waved and lowered and five seconds thereafter the targets appear, remaining in sight one minute and then disappear. The soldier, without coming to the "Order," takes the kneeling or sitting position as soon as any part of the target appears, begins to fire and attempts to fire 10 shots, reloading with a full clip which is taken from the belt, and continues to fire until 10 shots are fired or until the target disappears.

Each unfired cartridge counts a miss.

In case of a defective cartridge or a disabled piece, or when more than 10 hits are made on a target, the practice is repeated.

At 300 yards the procedure is the same, except that the soldier assumes the prone position as soon as any part of the target appears, the time limit being 1 minute and 10 seconds.

At 500 yards the procedure is the same, except that the soldier is in the prone position, with the piece at the shoulder, before the target appears, the time limit being 1 minute and 20 seconds.

At all ranges, in rapid fire, firing is from a full clip, and the second clip must be loaded from the belt. In case a clip jams or breaks, cartridges may be loaded singly.

At the expiration of the time limit, the target is pulled down and marked, all hits being given their proper value. In case of more than 10 hits on a target, the target will not be marked but the firing line will be notified and the firing on that target repeated. In case a soldier fires on the wrong target, only such shots as he may have fired on his own target will be counted on his score. He will be given misses for the remainder of his score.

In firing rapid fire, if more than one target is used, the first order of men at the firing point will fire together, one man at each target, all targets being fired upon at one time.

113. Qualification Course—Record Practice. This is conducted as prescribed for instruction practice, the greatest care being taken to insure proper marking and scoring. The battle sight will be used at all ranges in rapid fire.

TABLE 4.—SLOW FIRE.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|-----------|--------------|----------|------------------------|
| 300 | No limit. | 10 | A | 5 sitting, 5 kneeling. |
| 500 | No limit. | 10 | B | Prone. |
| 600 | No limit. | 10 (2 S. S.) | B | Prone, sand-bag rest. |

TABLE 5.—TARGET D, RAPID FIRE.

| Range. | Time. | Shots. | Position. |
|--------|-----------------------|--------|------------------------------------|
| 200 | 1 minute. | 10 | Kneeling or sitting from standing. |
| 300 | 1 minute, 10 seconds. | 10 | Prone from standing. |
| 500 | 1 minute, 20 seconds. | 10 | Prone. |

114. Rifle practice for Engineer troops will be limited to known distance firing only. There will be neither combat practice nor proficiency test for Engineer troops.

115. Long-distance Practice. For sharpshooters and experts only.

TABLE 6.—TARGET C, SLOW FIRE.

[TO BE FIRED TWICE, BUT ON DIFFERENT DAYS.]

| Range. | Shots. | Position. |
|--------|--------|-----------|
| 800 | 10 | Prone. |
| 1,000 | 10 | Prone. |

After an organization has completed record firing, qualification course, those men in the grades of expert and sharpshooter will take the long-distance practice.

Although the long-distance practice will be shot twice but on different days, after an officer or enlisted man has once fired the complete long-distance course, practice at 800 yards may be omitted at the discretion of the company commander. The practice will be conducted as laid down for slow fire, qualification course. Every effort will be made to teach men the effect of wind, light, and temperature, and the value of small changes in elevation and windage at long ranges.

No report of this firing will be required, although a record of it will be kept in each company.

For the Engineers and Cavalry this practice will be held at the discretion of the battalion and regimental commanders, respectively.

Long-distance practice will not be held by Philippine Scouts.

116. Practice With Telescopic Sights (Targets B and C, slow fire). Distances: Up to and including 1,000 yards. No time limit.

117. Who Will Fire. After long-distance practice has been completed, the four best enlisted shots of the company will fire, using telescopic sights. The ammunition used will not exceed 40 rounds per man firing.

This practice is intended for long ranges only, but it may be found necessary, until the rifles are accurately sighted and the elevations known, to start at shorter ranges and work back, no range being left until the target can be hit at that range. This part of the practice will be at the discretion of the officer conducting the firing. Target B may be used if found necessary to fire at ranges shorter than 1,000 yards.

At 1,000 yards each man will fire 20 shots for record. No report of the firing will be required, although a record of it will be kept in the company. This record will show the number of the rifle with which the score was made, the elevation and the windage used at the various ranges, and the force and direction of the wind at the time of firing. The data will then be available when further practice is held with this particular rifle and sight. Practice may be held at 1,200 yards where a suitable range is available.

This practice will not be held by Philippine Scouts.

118. Summary of Practice Required for Different Grades of Shots in Known-Distance Firing.

(a) Recruits and those who in the last season of practice failed to qualify as marksmen or better will fire Tables 1 and 2 once through each, as prescribed, and Table 3 through twice, as prescribed, before firing record. Additional instruction practice will be given all the men in this category, or to as many as may need it, in the discretion of the company commander, to the extent of the amount of ammunition that may be made available for this purpose.

(b) Men in the grade of marksman will fire through Tables 1 and 2 once each and Table 3 twice and no more before firing record practice.

(c) Sharpshooters will fire in one season in instruction practice, qualification course, not exceeding 130 rounds of ammunition, at the discretion of the company commander, before firing record practice. Experts will fire for instruction not exceeding 100 rounds of ammunition, at the discretion of the company commander, and will not fire record practice.

(d) Soldiers of the grade of marksman or better who have been discharged and re-enlisted will begin the new enlistment period with the course of firing prescribed for marksman, the restrictions for this grade as to the expenditure of ammunition holding good.

(e) All qualified experts and sharpshooters will fire twice through the course laid down in Table 6. But after an officer or enlisted man has once fired the complete long-distance course, practice at 800 yards may be omitted at the discretion of the company commander.

(f) The four (4) best enlisted shots of a company, selected by the company commander, will be given practice with telescopic sights, as prescribed in paragraph 117.

CHAPTER VII.

SPECIAL COURSES.

119. Preliminary Drills. Special courses will be preceded by the required preliminary instruction and sighting drills.

SPECIAL COURSE A.

120. When Used. When a complete range is not provided and a range of 200 and 300 yards is available, practice may be conducted, if authorized by the department commander, as prescribed in the following special course A. This practice is also prescribed for the Coast Artillery Corps and for bands in the Philippine Islands when required to fire. The instruction practice, special course A, will be followed for the supplementary firing for recruits and others who join too late to fire in the regular season.

121. Special course A shall consist of instruction and record practice as follows:

Instruction Practice. Slow fire, target A; slow fire, target D; rapid fire, target D.

Record Practice. Slow fire, target A; rapid fire, target D.

The details of this practice are as prescribed in the tables given below, which have the force of written regulations.

INSTRUCTION PRACTICE.

TABLE 1.—SLOW FIRE, TARGET A.

| Range. | Time. | Shots. | Position. |
|--------|-----------|--------|--|
| 200 | No limit. | 15 | 5 prone. 5 kneeling. 5 standing. |
| 300 | No limit. | 10 | 5 prone. 5 sitting. |

TABLE 2.—SLOW FIRE, TARGET D.
[BATTLE SIGHT ONLY WILL BE USED.]

| Range. | Time. | Shots. | Position. |
|--------|-----------|--------|------------------------------|
| 200 | No limit. | 10 | { 5 kneeling. 5 standing. |
| 300 | No limit. | 10 | { 5 prone. 5 sitting. |

TABLE 3.—RAPID FIRE, TARGET D.
[BATTLE SIGHT ONLY WILL BE USED.]

| Range. | Time. | Shots. | Position. |
|--------|-----------------------|--------|------------------------------------|
| 200 | 1 minute. | 10 | Kneeling or sitting from standing. |
| 300 | 1 minute, 10 seconds. | 10 | Prone from standing. |

RECORD PRACTICE.

TABLE 4.—SLOW FIRE, TARGET A.

| Range. | Time. | Shots. | Position. |
|--------|-----------|--------|------------------------------|
| 200 | No limit. | 10 | { 5 kneeling. 5 standing. |
| 300 | No limit. | 10 | { 5 prone. 5 sitting. |

Rapid fire as given in Table 3.

All practice in special course A will be conducted according to the rules prescribed for the firing at the same ranges in the instruction and record firing in the qualification course.

For qualification see paragraph 242.

122. The courses for Organized Militia are prescribed in Part V.

123. Except as indicated in paragraphs 115 and 117 the Philippine Scouts will fire the course prescribed for the Regular Army, and will be subject to the same rules in regard to qualification and classification.

CHAPTER VIII.

ADVICE TO RIFLEMEN.

124. For purposes of instruction, all firing may be divided into three classes, viz.:

1. Slow fire at 600 yards and under.
2. Slow fire at ranges over 600 yards.
3. Rapid fire.

125. **Short-range Practice.** In the first class of fire, slight changes of wind, light, and temperature may be almost disregarded. The principal things to be learned are: Setting the sight properly at the beginning of a score; aiming properly; squeezing the trigger properly; holding the rifle. These constitute probably 90 per cent. of the work at ranges under 600 yards, and if the soldier performs these actions correctly with each shot, he will make a good score

regardless of small changes in the atmospheric conditions. It is very important that the piece be held firmly and sighted uniformly.

126. Long-range Practice. In the second class of firing (at distances greater than 600 yards) a large part of the work is in the holding, but changes of wind, temperature, and light must be studied in order to make good scores.

127. Wind. Wind is the most important factor to be considered in long-range known-distance practice. It is unnecessary to teach recruits and others who never shoot beyond 600 yards more than the adjustment of the wind gauge for a right or left wind and how to change the wind gauge when a hit is made.

The direction of the wind is shown by considering the range as a clock face, the firer being in the center and the target at 12 o'clock. The direction is then indicated as a 10 o'clock wind, 2 o'clock wind, etc.

The force of the wind is indicated in miles per hour and is shown accurately by the anemometer, and is estimated by observation of flags, by throwing up leaves, grass, or bits of paper, and by the "feel" of the wind on the hands or face.

At long-distance ranges, after firing a shot and before firing again, the firer should look carefully for any change in direction and force of the wind. A change of 4 miles in force or of one hour in direction will make a decided difference in the location of a hit.

Any wind deflects the bullet from its course in the direction the wind is blowing. The amount of deflection varies with the direction and force of the wind.

The wind gauge is graduated in points, and 1 point will move the bullet approximately 4 inches for each 100 yards of distance the firer is from the target and in the direction the movable base of the wind gauge is moved:

At 200 yards 1 point equals 8 inches.

At 600 yards 1 point equals 24 inches.

At 800 yards 1 point equals 32 inches.

At 1,000 yards 1 point equals 40 inches.

The amount of windage to be taken is determined by estimating the force and direction of the wind.

A simple rule for determining the approximate windage at any range is as follows:

$$\frac{\text{Range} \times \text{Velocity}}{10} \text{ equals quarter points required for 3 or 9 o'clock winds.}$$

Winds one hour away from 3 and 9 o'clock require only slightly less windage. Winds one hour away from 12 or 6 o'clock require half as much windage as 3 or 9 o'clock winds.

Example: Range 800 yards: 5-mile wind blowing from 9 o'clock. $\frac{8 \times 5}{10}$ equals 4 quarter points, or 1 point of windage.

128. Temperature. After the proper adjustment of the sight has been determined, it will rarely happen while firing a single, or even several consecutive scores, that such changes can occur in the temperature as to make further corrections necessary. If the first shot has been fired from a clean, cool gun, the subsequent fouling and heating of the barrel and the different vibrations of the latter, which are caused by the heating, will generally make necessary a slight increase in elevation for the second shot, and often an additional increase for the third shot. This should be followed, in some cases, where a number of shots are fired without cleaning or without any considerable interval, by a slight lowering of the elevation after additional shots.

A decided increase in the temperature will cause the bullet to strike high; a decided drop in temperature will cause the bullet to strike low.

129. Light. Changes of light do not affect the flight of the bullet; they do affect the manner in which the aim is taken. As all men are not affected alike by changes of light, each man must determine for himself how changes of light affect him.

Using the peep sight, the bull's-eye of a bright target is more clearly defined than the bull's-eye of a dark one, and the firer will usually hold closer to the bright bull's-eye than to a dark one. If the target changes from bright to dark, the next shot will usually go low.

With the open sight, as the light changes from bright to dark and the rear notch fills with shadow, more front sight is seen, and the shot goes high.

If occasional shadows drift across the face of the target, do not fire until the target is bright.

In a permanent change of light, let the eye accustom itself to the change before firing. Then the aim will be the same as before and there will be no change in the position of the hit.

In rapid firing with open sights, on very dark days shots seem to go high, due entirely to the firer taking more front sight than on bright days.

130. Mirage. This is the term applied in target practice to heated air in motion, as seen through telescopes or field glasses on clear days with winds of from 2 to 14 miles per hour. Through the telescope waves appear to be moving across the face of the target in the direction the wind is blowing.

These waves indicate the general direction and speed of the wind. As to direction, they indicate a right or left wind only, and not one from 11, 1, 5, or 7 o'clock.

In a light 6 o'clock wind or with no wind at all, the waves will go straight up or "boil."

With a light wind the mirage moves slowly across the face with a decided vertical motion, giving a saw-tooth appearance. As the wind increases, the vertical motion of the mirage decreases until, with a 12 to 14 mile wind, the waves seem nearly flat and run across the target with very little vertical motion.

On hot days, with no wind, or a very light wind from 6 o'clock, the mirage will rise straight from the bottom to the top of the target. This condition seldom lasts long, and in a very short time the mirage will run from one side to the other.

Never fire while the mirage is "boiling," for there is usually a slight drift toward one side or the other, invisible to the firer, and if a shot is fired with no windage in a "boil," it will usually be out of the bull's-eye. Wait for the mirage to move from one side.

131. Rapid Firing. Success in rapid firing depends upon catching a quick and accurate aim, holding the piece firmly and evenly and in squeezing the trigger without a jerk.

In order to give as much time as possible for aiming accurately, the soldier must practice taking position, loading with the clip, and working the bolt so that no time will be lost in these operations. With constant practice all these movements may be made quickly and without false motions.

When the bolt handle is raised it must be done with enough force to start the shell from the chamber; and when the bolt is pulled back it must be with sufficient force to throw the empty shell well away from the chamber, and far enough to engage the next cartridge.

In loading, use force enough to load each cartridge with one motion.

The aim must be caught quickly, and once caught must be held, and the trigger squeezed steadily. Rapid firing, as far as holding the aim and squeezing the trigger are concerned, should be done with all the precision of slow fire.

The gain in time should be in getting ready to fire, loading, and working the bolt.

Constant practice will increase the accuracy of aim, and any exercise that will strengthen arms and hands will enable one to hold better through a long string of shots.

132. Firing at Moving Targets. In firing at moving targets, the rifle must move with the target. If the target moves across the front, the aim must be a certain distance in front of it, depending on the distance of the target and its speed. If it moves toward the firer he must hold below it; if away from him, he must hold over it.

The following table shows the approximate distance necessary to aim ahead of the body of a man or horse moving across the range at various distances and various rates of speed:

| Distance (yards). | Man walking. | | Man double timing. | | Horse walking. | | Horse trotting. | | Horse running. | |
|----------------------|----------------|------------------|-----------------------|--------------|---------------------------------|-----------------------------------|-------------------------|---------------------------|---------------------------------|-----------------------------------|
| | Feet. Front | Inches. edge. | Feet. | Inches. 6 | Feet. Front edge of body. | Inches. Front edge of body. | Feet. Front of body. | Inches. Front of body. | Feet. Front edge of body. | Inches. Front edge of body. |
| 100 | | | | | | | | | | |
| 200 | ..... | 8 | 1 | 8 | Front edge of body. | | Front of body. | | 1 | 4 |
| 300 | 1 | 5 | 3 | ..... | Front of body. | | 1 | 6 | 3 | 10 |
| 400 | 2 | 2 | 4 | 5 | Front of body. | | 3 | 4 | 6 | 6 |
| 500 | 3 | 1 | 5 | 11 | 1 | ..... | 5 | 4 | 9 | 6 |
| 600 | 4 | ..... | 7 | 7 | 2 | ..... | 7 | 7 | 12 | 10 |

133. Firing with Rests. In the ordinary positions for firing with piece supported by hands, arms, and shoulder, the explosion of the powder charge sets up in the barrel of the rifle certain vibrations which become disturbed and altered somewhat when the rifle is fired with the additional support of a solid rest applied at some point of the barrel.

Using the same elevations and aiming point the effect of a rest is exhibited in a changed point of strike of the bullet.

The vertical vibrations of the barrel are the more pronounced, and as these are interfered with by a point of rest under the barrel this species of support will usually change the point of strike more than in the case of a side rest against a vertical surface. In the latter case the piece is steadied rather than rested.

With a rest beneath the balance, or near the point, the tendency is to shoot above and to the right of the point of strike that would be attained without a rest, using the same elevation and point of aim.

The tendency is the same and more pronounced when the rest is under a point near the muzzle. The change in the point of strike in any case is slight and insufficient to carry the shot off the target from the center of target D at 600 yards.

In order that the shooting may be uniform, the piece should always be rested at the same point.

A side rest will cause no appreciable change in the point of strike.

In firing with the bayonet fixed, usually a lower point on the target will be struck corresponding to a reduction in the range of about 50 yards.

134. Cleaning the Rifle. See paragraphs 37-52, p. 645, Instruction for the Care of Small Arms and Ordnance Equipment.

CHAPTER IX.

PISTOL AND REVOLVER PRACTICE; PRELIMINARY DRILLS; POSITION AND AIMING DRILLS.¹

135. Nomenclature and Care of the Weapon; Handling and Precautions against Accidents. The soldier will first be taught the nomenclature of those parts of the weapon necessary to an understanding of its action and use and the proper measures for its care and preservation. Ordnance pamphlets Nos. 1866 (description of the Colt's Automatic Pistol), 1919, and 1927 (descriptions of the Colt's revolver, calibers .38 and .45, respectively), contain full information on this subject and are furnished to organizations armed with these weapons.

Careless handling of the pistol or revolver is the cause of many accidents and results in broken parts of the mechanism. The following rules will, if followed, prevent much trouble of this character:

(a) On taking the pistol from the armrack or holster, take out the magazine and see that it is empty before replacing it; then draw back the slide and make sure that the piece is unloaded. Observe the same precaution after practice on the target range, and again before replacing the pistol in the holster or in the armrack. When taking the revolver from the armrack or holster and before returning it to the same, open the cylinder and eject empty shells and cartridges. Before beginning a drill and upon arriving on the range observe the same precaution.

(b) Neither load nor cock the weapon until the moment of firing, nor until a run in the mounted course is started.

(c) Always keep the pistol or revolver in the position of "Raise pistol" (par. 156, Cavalry Drill Regulations), except when it is pointed at the target. (The position of "Lower pistol" is authorized for mounted firing only.)

(d) Do not place the weapon on the ground where sand or earth can enter the bore or mechanism.

(e) Before loading the pistol, draw back the slide and look through the bore to see that it is free from obstruction. Before loading the revolver, open the cylinder and look through the bore to see that it is free from obstruction. When loading² the pistol for target practice place 5 cartridges in the magazine

¹ Whenever in these regulations the word "pistol" appears, the regulation applies with equal force to the revolver, if applicable to that weapon.

² To Load Pistol: Being at Raise Pistol (Right hand grasping stock at the height of and 6 inches in front of the point of the right shoulder, forefinger alongside barrel, barrel to the rear and inclined forward about 30°).

Without deranging position of the hand, rotate the pistol so the sights move to the left, the barrel pointing to the right front and up.

With the thumb and forefinger of the Left hand (thumb to the right), grasp the slide and pull it towards the body until it stops and then release it. The pistol is thus loaded, and the hammer at full cock.

If the pistol is to be kept in the hand and not to be fired at once, engage the safety lock with the thumb of the Right hand.

If the pistol is to be carried in the holster, remove safety lock, if on, and lower the hammer fully down.

and insert the magazine in the handle; draw back the slide and insert the first cartridge in the chamber and carefully lower² the hammer fully down.

In loading the revolver place 5 cartridges in the cylinder and let the hammer down on the empty chamber.

(f) Whenever the pistol is being loaded or unloaded, the muzzle must be kept up.

(g) Do not point the weapon in any direction where an accidental discharge might do harm.

(h) After loading do not cock the pistol or the revolver until ready to fire.

(i) Keep the working parts properly lubricated.

136. Position, Dismounted. Stand firmly on both feet, body perfectly balanced and erect and turned at such an angle as is most comfortable when the arm is extended toward the target; the feet far enough apart to insure firmness and steadiness of position (about 8 to 10 inches); weight of body borne equally upon both feet; right arm fully extended, left arm hanging naturally.

Remarks. The right arm may be slightly bent, although the difficulty of holding the pistol uniformly and of keeping it as well as the forearm in the same vertical plane makes this objectionable.

137. The Grip. Grasp the stock as high as possible with the thumb and last three fingers, the forefinger alongside the trigger guard, the thumb extended along the stock. The barrel, hand, and forearm should be as nearly in one line as possible when the weapon is pointed toward the target. The grasp should not be so tight as to cause tremors of the hand or arm to be communicated to the weapon, but should be firm enough to avoid losing the grip when the recoil takes place.

Remarks. The force of recoil of the pistol or revolver is exerted in a line above the hand which grasps the stock. The lower the stock is grasped the greater will be the movement or "jump" of the muzzle caused by the recoil. This not only results in a severe strain upon the wrist, but in loss of accuracy.

If the hand be placed so that the grasp is on one side of the stock, the recoil will cause a rotary movement of the weapon toward the opposite side.

The releasing of the sear causes a slight movement of the muzzle, generally to the left. The position of the thumb along the stock overcomes much of this movement. The soldier should be encouraged to practice this method of holding until it becomes natural.

To do uniform shooting the weapon must be held with exactly the same grip for each shot. Not only must the hand grasp the stock at the same point for each shot, but the tension of the grip must be uniform.

138. (a) The Trigger Squeeze. The trigger must be squeezed in the same manner as in rifle firing. (See pars. 44 and 46.) The pressure of the forefinger

²To Lower the Hammer: Being at the loading position at full cock.

I. Firmly seat thumb of Right hand on the hammer; insert forefinger inside trigger guard.

II. With thumb of Left hand exert a momentary pressure on the grip-safety to release hammer from sear.

III. At the same instant exert pressure on the trigger and carefully and slowly lower the hammer fully down.

IV. Remove finger from trigger.

V. Insert pistol in holster.

(Caution) The pistol must never be placed in the holster until hammer is fully down.

on the trigger should be steadily increased and should be straight back, not sideways. The pressure should continue to that point beyond which the slightest movement will release the sear. Then, when the aim is true, the additional pressure is applied and the pistol fired.

Only by much practice can the soldier become familiar with the trigger squeeze. This is essential to accurate shooting. It is the most important detail to master in pistol or revolver shooting.

(b) Self-cocking Action. The force required to squeeze the trigger of the revolver when the self-cocking device is used is considerably greater than with the single action. To accustom a soldier to the use of the self-cocking mechanism, and also to strengthen and develop the muscles of the hand, a few minutes' practice daily in holding the unloaded revolver on a mark and snapping it, using the self-cocking mechanism, is recommended. The use of the self-cocking device in firing is not recommended except in emergency. By practice in cocking the revolver the soldier can become sufficiently expert to fire very rapidly, using single action, while his accuracy will be greater than when using double action.

139. Aiming. Except when delivering rapid or quick fire, the rear and front sights of the pistol are used in the same manner as the rifle sights. The normal sight is habitually used (see Pl. VI), and the line of sight is directed upon a point just under the bull's-eye at "6 o'clock." The front sight must be seen through the middle of the rear-sight notch, the top being on a line with the top of the notch. Care must be taken not to cant the pistol to either side.*

If the principles of aiming have not been taught, the soldier's instruction will begin with sighting drills as prescribed for the rifle so far as they may be applicable. The sighting bar with open sight will be used to teach the normal sight and to demonstrate errors likely to be committed.

To construct a sighting rest for the pistol (see Pl. VI) take a piece of wood about 10 inches long, $1\frac{1}{4}$ inches wide, and $\frac{1}{16}$ inch thick. Shape one end so that it will fit snugly in the handle of the pistol when the magazine has been removed. Screw or nail this stick to the top of a post or other object at such an angle that the pistol when placed on the stick will be approximately horizontal. A suitable sighting rest for the revolver may be easily improvised.

140. (a) How to Cock the Pistol. The pistol should be cocked by the thumb of the right hand and with the least possible derangement of the grip. The forefinger should be clear of the trigger when cocking the pistol. Some men have difficulty at first in cocking the pistol with the right thumb. This can be overcome by a little practice. Jerking the pistol forward while holding the thumb on the hammer will not be permitted.

(b) How to Cock the Revolver. The revolver should be cocked by putting the thumb on the hammer at as nearly a right angle to the hammer as possible, and by the action of the thumb muscles alone bringing the hammer back to the position of full cock. Some men with large hands are able to cock the revolver with the thumb while holding it in the position of aim or raise pistol. Where the soldier's hand is small this can not be done, and in this case it assists the operation to give the revolver a slight tilt to the right and upward (to the right). Particular care should be taken that the fore-

*The instructor should take cognizance of the fact that the proper aiming point is often affected by the personal and fixed peculiarities of the firer, and if unable to correct such abnormalities, permit firer to direct sight at such point as promises effective results.

finger is clear of the trigger or the cylinder will not revolve. Jerking the revolver forward while holding the thumb on the hammer will not be permitted.

141. Position and Aiming Drills, Dismounted. For this instruction the squad will be formed with an interval of 1 pace between files. Black pasters to simulate bull's-eyes will be pasted opposite each man on the barrack or other wall, from which the squad is 10 paces distant.

The squad being formed as described above, the instructor gives the command, 1. **Raise.** 2. **PISTOL** (par. 156, Cavalry Drill Regulations) and cautions,

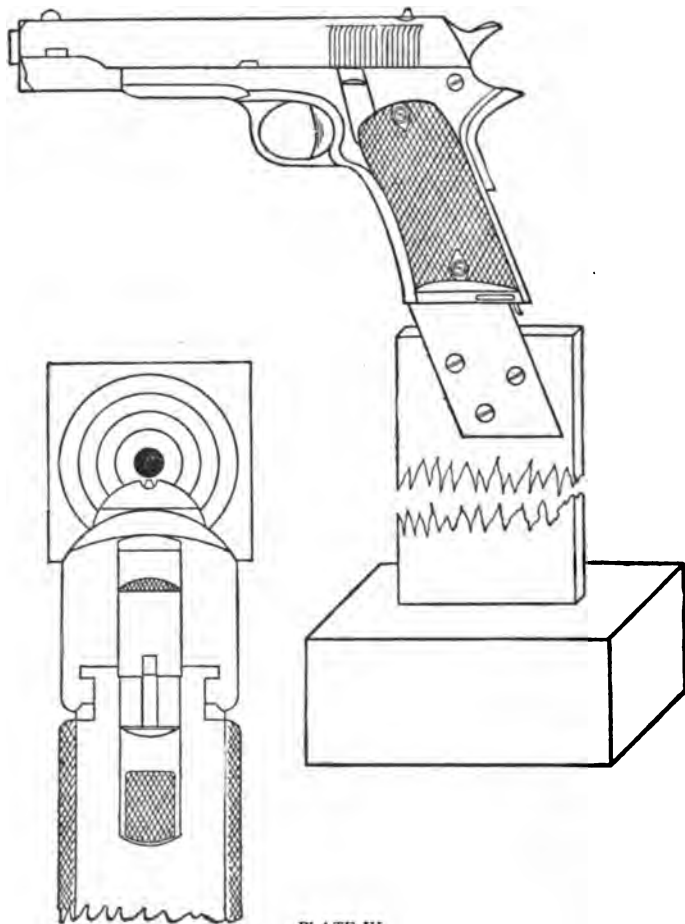


PLATE VI.

"Position and Aiming Drill, Dismounted." The men take the positions described in paragraph 136, except that the pistol is held at "Raise pistol."

The instructor cautions, "Trigger squeeze exercise." At the command "Ready," cock the weapon as described in paragraph 140. At the command, 1. **Squad**, 2. **FIRE**, slowly extend the arm till it is nearly horizontal, the pistol directed at a point about 6 inches below the bull's-eye. At the same time put the forefinger inside the trigger guard and gradually "feel" the trigger. Inhale enough air to comfortably fill the lungs and gradually raise the piece until the line of sight is directed at the point of aim, i.e., just below the bull's-eye at 6 o'clock. While the sights are directed upon the mark,

gradually increase the pressure on the trigger until it reaches that point where the slightest additional pressure will release the sear. Then, when the aim is true, the additional pressure necessary to fire the piece is given so smoothly as not to derange the alignment of the sights. The weapon will be held on the mark for an instant after the hammer falls and the soldier will observe what effect, if any, the squeezing of the trigger has had on his aim.

It is impossible to hold the arm perfectly still, but each time the line of sight is directed on the point of aim a slight additional pressure is applied to the trigger until the piece is finally discharged at one of the moments when the sights are correctly aligned upon the mark.

When the soldier has become proficient in taking the proper position, the trigger squeeze should be executed at will. The instructor prefaces the preparatory command by "At will" and gives the command "Halt" at the conclusion of the exercise, when the soldier will return to the position of "Raise pistol."

At first this exercise should be executed with deliberation, but gradually the soldier will be taught to catch the aim quickly and to lose no time in beginning the trigger squeeze and bringing it to the point where the slightest additional pressure will release the sear.

Remarks. In service few opportunities will be offered for slow aimed fire with the pistol or revolver, although use will be made of the weapon under circumstances when accurate pointing and rapid manipulation are of vital importance.

In delivering a rapid fire, the soldier must keep his eyes fixed upon the mark and, after each shot, begin a steadily increasing pressure on the trigger, trying at the same time to get the sights as nearly on the mark as possible before the hammer again falls. The great difficulty in quick firing with the pistol lies in the fact that when the front sight is brought upon the mark, the rear sight is often found to be outside the line joining the eye with the mark. This tendency to hold the pistol obliquely can be overcome only by a uniform manner of holding and pointing. This uniformity is to be attained only by acquiring a grip which can be taken with certainty each time the weapon is fired. It is this circumstance which makes the position and aiming drills so important. The soldier should constantly practice pointing the pistol until he acquires the ability to direct it on the mark in the briefest interval of time and practically without the aid of sights.

The soldier then repeats the exercises with the pistol in the left hand, the left side being turned toward the target.

142. To Draw and Fire Quickly—Snap Shooting. With the squad formed as described in paragraph 141 except that the pistol is in the holster and the flap, if any, buttoned, the instructor cautions "Quick fire exercise." And gives the command: **1. Squad, 2. FIRE.** At this command, each soldier, keeping his eye on the target, quickly draws his pistol, thrusts it toward the target, squeezes the trigger and at the instant the weapon is brought in line with the eye and the objective, increases the pressure, releasing the sear. To enable the soldier to note errors in pointing, the weapon will be momentarily held in position after the fall of the hammer. Efforts at deliberate aiming in this exercise must be discouraged.

Remarks under paragraph 141 are specially applicable also to this type of fire. When the soldier has become proficient in the details of this exercise, it should be repeated at will; the instructor cautions "At will; quick fire exercise." The exercise should be practiced until the mind, the eye, and trigger finger act in unison.

To simulate this type of fire mounted, the instructor places the squad so

that the simulated bull's-eyes are in turn, to the Right, to the Left, to the Right Front, to the Left Front, to the Right Rear. With the squad in one of these positions, the instructor cautions "Position and aiming drill, mounted." At this caution the right foot is carried 20 inches to the right and the left hand to the position of the bridle hand (par. 246, Cavalry Drill Regulations). The exercise is carried out as described for the exercise dismounted, using the commands and means laid down in paragraphs 161 to 168, inclusive, Cavalry Drill Regulations, for firing in the several directions. The exercise is to be executed at will when the squad has been sufficiently well instructed in detail.

When firing to the left the pistol hand will be about opposite the left shoulder and the shoulders turned about 45° to the left; when firing to the right rear the shoulders are turned about 45° to the right.

When the soldier is proficient in these exercises with the pistol in the right hand, they are repeated with the pistol in the left hand.

Paragraphs 143-146 have been omitted because they have no application to Infantry and pertain to the mounted course.

CHAPTER X.

REVOLVER OR PISTOL RANGE PRACTICE.

147. General Description. This practice includes the instruction of the soldier in firing with the service revolver or pistol, and is divided into two distinct courses, the dismounted course and the mounted course. The general scheme is as follows:

| | | | Num-ber of shots. | | | |
|------------------------------------|--|-----------------------|--|--------------|---|----|
| Revolver or pistol range practice. | Dismounted course. | Instruction practice. | Slow fire, at 15 and 25 yards, minimum of 2 scores (1 at each range)..... | 10 | | |
| | | | Rapid fire, at 15 and 25 yards, minimum of 4 scores (2 at each range)..... | 20 | | |
| | | Record practice. | Quick fire, at 15 and 25 yards, minimum of 4 scores (2 at each range)..... | 20 | | |
| | | | Rapid fire, at 25 yards, 2 scores..... | 10 | | |
| | | Expert test..... | Quick fire, at 15 and 25 yards, 2 scores at each range..... | 20 | | |
| | | | Rapid fire, at 50 yards, 1 score..... | 5 | | |
| | | | Quick fire, at 15 and 25 yards, 1 score at each range..... | 10 | | |
| | | Total..... | | | 95 | |
| | | Mounted course. | Instruction practice. | Dismounted.. | Slow fire, 15 yards, minimum of 2 scores.. | 10 |
| | | | | | Quick fire, 15 yards, minimum of 2 scores.. | 10 |
| Mounted..... | Halt, minimum of 2 scores..... | | | 10 | | |
| | Walk, minimum of 2 scores..... | | | 10 | | |
| | Gallop, minimum of 8 scores..... | | | 40 | | |
| Record practice. | Halt, 2 scores..... | | 10 | | | |
| | Gallop, 4 scores..... | | 20 | | | |
| | Halt, 1 score (targets at varying ranges)..... | | 5 | | | |
| Expert test | Gallop, 1 score (group targets)..... | | 5 | | | |
| | Gallop, extended, 2 scores (approaching targets firing to right and left)..... | | 10 | | | |
| Total..... | | | 130 | | | |

A score consists of five consecutive shots.

148. Practice Season. Revolver range practice will take place during the season for rifle firing (par. 88). During the supplementary season such practice, as time and amount of ammunition will allow, will be given to recruits who have not fired the record course, mounted, and to others requiring

it. Recruits joining within thirty days of the close of the supplementary season will be excused from the mounted firing therein.

149. Who Will Fire. The following table designates those who are required or authorized to fire at revolver-range practice and the courses to be followed:

| Arm or corps. | To fire. | Course. |
|--|--|-------------|
| 1. Cavalry..... | Squadron staff officers, troop officers, and all enlisted men except as noted below. ¹ | Mounted. |
| 2. Field Artillery..... | Battalion staff officers, battery officers, and all enlisted men. | Dismounted. |
| 3. Infantry and Battalions of Engineers, and Field and Telegraph Companies and Aero Squadrons of the Signal Corps. | Battalion staff officers, company officers, and all enlisted men armed with the revolver or pistol. | |
| 4. Coast Artillery..... | Company officers and all enlisted men armed with revolver or pistol. | |
| 5. Field and regimental staff officers of Cavalry. | Authorized but not required..... | Mounted. |
| 6. Staff departments or corps, except medical and chaplains. | All officers, except such Engineer officers as are noted above, and enlisted men authorized, but not required. | Dismounted. |
| 7. Regimental, field, and staff officers of Field Artillery and Infantry and field and staff officers of Coast Artillery.... | | |
| 8. Veterinarians..... | | |
| 9. Post noncommissioned staff.... | | |

All officers enumerated in the above table of over fifteen years' commissioned or commissioned and enlisted service, except officers of the Medical Corps and chaplains, are authorized but not required to fire, but, if firing, will follow the course prescribed for their department, corps, or arm of the service.

150. Allowance of Ammunition. As published annually.

151. Instruction Practice. In order to insure uniformity of instruction the order of procedure and a minimum number of shots are prescribed, but a certain percentage for proficiency at each stage is a requisite for advancement to the next succeeding stage. If this percentage is not attained, the judgment of the organization commander dictates the type of instruction which he deems best suited to the individual case. In order that the expenditure of ammunition may be fully under the control of the organization commander he may advance men who have fired during a preceding season without requiring them to fire the full number of shots prescribed as a minimum for any type of fire in instruction practice, provided that they fire at least one-half the minimum, and in so doing make a percentage at least as high as that required for advancement to the next succeeding stage. In the exercise of this privilege, however, the organization commander should guard against depriving the soldier of needed practice.

152. Record Practice. In all record practice, both for dismounted and mounted courses, scores will be kept and the record of firing prepared as prescribed for the rifle. The number of shots to be fired in record practice has been made no greater than barely sufficient to demonstrate the soldier's average shooting ability.

¹ Cavalry recruits, having no previous mounted service, who join within 30 days preceding the mounted course, will, in the regular practice season, fire dismounted only.

153. (a) Scoring in Rapid and Quick Fire. In timed, rapid, or quick fire, the scorer does not announce the name of the firer after the result of each shot has been signaled. As soon as the value of each hit on the target is signaled, it is announced; the number of misses, if any, is announced; the score is then entered; and finally the name of the firer with his total score is announced and the latter recorded.

(b) Firing on Wrong Target. In the case of two men firing in timed, rapid, or quick fire on the same target the resulting score will be rejected, the soldier at fault being credited only with such hits as he may have made on his own target, the other soldier repeating his score.

(c) Other Mishaps. Unfired shots due to fault of soldier count as misses. In case of defective cartridges or disabled weapon the entire score is not repeated, but the soldier fires only the necessary number of shots to complete the then unfinished score, and where the time element enters, the ratio between the full time per score and the time to be allowed will equal the ratio existing between a full score and the number of shots to be fired. For each shot fired before the commencement or after the close of the time limit the maximum possible per shot at the particular type of target being fired at will be deducted from the score. Prior to commencing range practice the instructor should thoroughly drill his command in the manipulation of the revolver or pistol.

In the mounted practice no trooper will leave the track except at the ends. If a cartridge misses fire or the weapon fails to work, he should continue to the end of the track, replace the defective cartridge or correct the trouble with the weapon, and take his place for another run.

If by reason of a defective cartridge one or more targets are not fired upon in any run, the trooper, in repeating the run, will fire only at those targets on which he did not fire.

154. Expert Test. All who in record practice have made the required percentage of the aggregate score possible in either course will fire the expert test prescribed for that course. If at any stage of the test the soldier's score is such that qualification is no longer possible, the test will be discontinued. Should the soldier make the required number of points before firing the full number of shots, he will not be required to continue firing.

155. Order of Procedure. Revolver and pistol firing commence with instruction practice in each course, and this practice is carried to completion for each soldier before proceeding to the next succeeding stage of record practice in the course being pursued. When instruction practice is completed, the soldier proceeds to record practice in the course he is required to fire, and follows this course to completion in accordance with the tables and regulations hereinafter laid down. The soldier may be thus advanced to record practice immediately after he has completed instruction practice without waiting for others less advanced. While engaged in record practice the soldier will do no other firing. In record practice the trooper will, so far as practicable, use the horse regularly assigned to him. In general, the regulations for known distance practice (pars. 87-110, body of text) will regulate where applicable revolver and pistol as well as rifle firing.

156. General Remarks. With the idea of inculcating in the soldier from the beginning the habit of firing by pointing, as distinguished from deliberate aiming, firing at the longer ranges has been removed from both courses and quick firing at bobbing targets has been added. Slow fire has been held at the lowest possible number of shots consistent with insuring safe handling of the weapon and a knowledge of its shooting qualities.

157. Preliminary Instruction. The importance of preliminary exercises can

not be overestimated, and a reasonable amount of pointing and snapping indulged in prior to range practice will be amply repaid by the results obtained when firing with ball cartridges.

158. The Gait. In all cases where the gait is a gallop the prescribed regulation maneuvering gallop is meant (par. 372, Cavalry Drill Regulations) unless otherwise stated. The canter will not be permitted.

159. Blank Cartridges (Revolver). Exercises with blank cartridges, circling to the right, left, etc., and firing at the silhouettes on the track, should be carried on previous to firing with ball cartridges.

160. Barriers. Barriers will be placed along the edge of and parallel to the track in front of the targets in order to preserve the prescribed distance from track to targets.

161. Systematic Instruction. All cavalry troops and all officers and enlisted men armed with the pistol or revolver will be instructed in its use. This instruction will be systematic and progressive, the controlling idea being accurate, rapid work.

162. Field Firing. Within the limits of the ammunition allowance remaining available after firing the prescribed courses, field practice of such nature as the skill and ingenuity of the organization commander may suggest and the availability of material and terrain render practicable will be held from time to time. Such field firing should be rendered as realistic as proper safeguarding from accident will permit. It should be borne in mind, however, that interest can be maintained only so long as results are evident, and exercises should therefore be devised with this end in view.

Since active service conditions can only be approximated and not actually arrived at in instruction, any type of firing which presents a feature of a fire problem that might exist has its value. Such targets as pendulum targets, glass balls, approaching or receding figures, while lacking any tactical significance, still test the skill of the firer in manipulation of the weapon and present to him an individual problem of value. In general, any means which may tend to develop the powers of quick drawing and accurate shooting, attributed to the early frontiersman, is of the utmost value in preserving the importance which national tradition attaches to the pistol.

163. Competitions. When organizations, armed with the revolver, participate in pistol competitions, the regulation automatic pistol, caliber .45, is prescribed. For purposes of competition and of practice in preparation therefor, the issue is authorized of six automatic pistols in addition to the revolvers on hand in such organization.

164. Ammunition. For each designated competitor, selected from an organization firing the revolver course, the organization commander is authorized to expend annually in addition to the ammunition fired in the regular revolver course, 300 rounds of ball cartridges, caliber .45 automatic pistol, in acquainting the selected competitor with this weapon and in preparation for the competition.

165. Modification of Course. Whenever the exigencies of the service do not permit of the firing of the prescribed course in full, the commanding general of a territorial department or a tactical division in the field is authorized to modify the course with a view to securing the maximum of training under such conditions, within the limits of the ammunition allowance; but neither officers nor enlisted personnel, who do not fire the course regularly prescribed in these regulations, shall be classified.

166. Tabulation. The details of practice in mounted and dismounted courses are given in tables (pars. 168, 173, 174, 179, 193, and 196), which have the force of written regulations.

CHAPTER XI.

DISMOUNTED COURSE.

167. Tabulation. The tables relate to the three divisions of the Dismounted Course and in the order to be followed in range practice, viz.: Instruction Practice, Record Practice, and Expert Test. Each table is followed by regulations applicable.

168. Instruction Practice.

| Slow fire. | | Rapid fire. | |
|--|--|--|--|
| Target L. | | Target L. | |
| 15 yards. | 25 yards. | 15 yards. | 25 yards. |
| Scores, minimum of 1. Time limit, none. | Scores, minimum of 1. Time limit, none. | Scores, minimum of 2. Time, 20 seconds per score. | Scores, minimum of 2. Time, 20 seconds per score. |

| Quick fire. | |
|--|--|
| Target E—Bobbing. | |
| 15 yards. | 25 yards. |
| Scores, minimum of 2. Time, 3 seconds per shot. | Scores, minimum of 2. Time, 4 seconds per shot. |

Time. Intervals of time are measured from the last note of the signal or the last word of the command "Commence firing" to the last note or word of "Cease firing." Commands will not be unduly prolonged.

169. Procedure. The course will be fired in the order set forth in the table, beginning at the shorter range and completing each type of fire before proceeding to the next, in the following order: Slow fire, rapid fire, and quick fire, with the proviso that 50 per cent of a possible score for any type of fire at any range is a necessary requisite for advancement to the next succeeding step in the course.

Should the soldier fail to make the 50 per cent necessary for advancement he will be required to repeat the type of firing at the range at which he failed.

If upon the second trial the soldier fails to make 50 per cent of a possible score, he will not be advanced to the next stage, but he may be required to continue such instruction practice as the judgment of the organization commander dictates and the state of the ammunition allowance permits.

No soldier will be advanced to record practice, dismounted course, who, in instruction practice, has failed to make 60 per cent of the aggregate possible score.

170. Slow Fire. The target is the target "L" bull's-eye and is used so that the kind and magnitude of the errors committed by the firer become at once evident to him. Abundant time is permitted in the firing to enable proper explanation of the causes and the remedies for such errors to be pointed out. It is designed as the elementary phase of instruction in the proper manipulation of the weapon and in determining and correcting the personal errors of the firer.

171. Rapid and Quick Fire. Targets: Target L for rapid; bobbing target E for quick fire.

172. Procedure. (a) **In Rapid Fire.** Time is taken at the firing stand by sand glass or watch. The target being up, the soldier stands with weapon at "Raise pistol." The revolver or pistol is loaded with five cartridges, as

prescribed in paragraph 135 (e). The command "Commence firing" is given and the soldier fires five shots within the prescribed limits of time, at the end of which the command "Cease firing" will have been given.

(b) **In Quick Fire.** The target is operated as a bobbing target. Three to five seconds after notice is received at the pit that all is ready at the firing point the target is alternately exposed to and turned from view of the firing point, exposures being of three to four seconds duration, depending upon the range, with an interval three to five seconds between exposures. The soldier stands at the firing point, and his revolver or pistol, loaded with five cartridges, is at "raise pistol" or "safe." Upon the first exposure of the target, the soldier fires one shot at the target before it disappears. The weapon is held between shots at "raise pistol." The soldier fires one shot at each reappearance of his target until five shots have been fired.

173. Record Practice.

| Rapid fire. | Quick fire. | |
|--|---|---|
| Target L. | Target E—Bobbing. | |
| 25 yards. | 15 yards. | 25 yards. |
| Scores, 2. Time limit, 20 seconds for each score. | Scores, 2. Time, 3 seconds per shot. | Scores, 2. Time, 4 seconds per shot. |

All who make 80 per cent of the aggregate possible score will fire the expert test. (Par. 174.)

174. Expert Test.

| Rapid fire. | Quick fire. | |
|---|---|---|
| Target L. | Target E—Bobbing. | |
| 50 yards. | 15 yards. | 25 yards. |
| Scores, 1. Time limit, 30 seconds per score. | Scores, 1. Time, 3 seconds per shot. | Scores, 1. Time, 4 seconds per shot. |

Aggregate possible, 60; necessary to qualify, 50.

175. Classification. All who are required or authorized to fire and who are on the rolls of the organization during any part of the practice season, or who are attached for practice by proper authority, will be classified, or rated as unclassified, according as they have met or failed to meet the requirements of classification.

Classification, in the absence of requalification, will terminate one year from the date upon which the individual qualified.

Requirements. (a) All who in record practice, dismounted course, make at least 80 per cent of the aggregate possible score will be classified as first-class men; (b) those who fail to qualify as first-class men, but who make not less than 60 per cent of the aggregate possible score, will be classified as second-class men; (c) all who fail as second-class men and those who for any reason did not fire the course and are not otherwise classified, will be rated as unqualified. (d) All first-class men who, in firing the expert course, make over 83 per cent of the aggregate possible score in that course, will be classified as expert pistol shots.

Paragraphs 176-199 have been omitted because they have no application to Infantry and pertain to the mounted course.

PART III.

COMBAT PRACTICE.

GENERAL SCHEME.

200. "The individual instruction is not everything. The maximum effect of a fire is obtained only by instructed and disciplined troops under a commander capable of directing their fire properly. * * * Only instructed and disciplined troops can deliver a fire that can be made use of intelligently * * * its effects become formidable when it is properly directed. When instruction has made of the troops a pliable and manageable instrument capable of understanding orders and executing them, they are in a position to develop all their power in hands that understand how to make a judicious use thereof. It remains to educate those that have to command them."

"In combat the platoon is the fire unit. From 20 to 35 rifles are as many as one leader can control effectively." (Par. 250, Infantry Drill Regulations.)

"When the company is large enough to be divided into platoons, it is impracticable for the captain to command it directly in combat. His efficiency in managing the firing line is measured by his ability to enforce his will through the platoon leaders." (Par. 248, Infantry Drill Regulations.)

The fire of the company, the battalion, the regiment, and larger units is nothing more than the combined fire of all the fire units. It is necessary, therefore, that the leaders of the fire units learn how to utilize the power of all the rifles under their command and to control the fire to suit the varied and numerous situations in which the tactical direction of their superiors may place them.

In action the situations vary greatly. They are frequently unforeseen, calling for quick decisions, and the prompt solution of such questions will arise in the mind only after long practice with numerous exercises in time of peace.

In the training of subordinate officers and leaders, to enable them to play their part intelligently, it is necessary to confront them with definite situations in such a manner as to appeal to their professional knowledge. By such means a judgment may be cultivated which will be equal to any emergency that may arise.

In the combat exercises prescribed in paragraph 357, Infantry Drill Regulations, all the tactical operations associated with the conduct of fire—initiative in opening fire, utilization of the ground, choice of targets, strength of the firing line, and kinds of fire to be employed—may be performed in an instructive manner, using simulated fire. It is important, however, in such exercises that a strict fire discipline be maintained and that the operations involved in the simulated adjustment of the fire be performed with the greatest care and exactness.

It remains to complete the instruction of the unit leaders by exercises with ball cartridges, the results obtained in hits on the targets providing a confirmation or proof of instruction which no other means can afford. Combat exercises, with real fire of the platoon and of the smaller units, the enemy being represented by figure targets and the firing coming as a culmination, provide the best means for this final instruction.

As required by paragraph 356, Infantry Drill Regulations, every combat exercise should be under an assumed tactical situation. In exercises with ball

cartridges, however, only portions of an episode or episodes of a combat should be represented. It is difficult to arrange the targets and apparatus so as to reproduce correctly all the phases of an offensive or defensive action. In such a case the results can not well be separated for analysis and proper criticism, so that much of the instructional value of the exercises will be lost.

A combat firing exercise will be conducted for the company. Such exercises may be conducted for the battalion or higher tactical units if the ammunition is available.

201. The Drill Regulations, Infantry, under the headings Fire and Combat give the rules for the conduct of fire which are applicable to all combat firing exercises. These rules are tactical. The technical phases of the question are included in the subjects, The Effect of Fire, The Influence of the Ground, The Adjustment of Fire, given herewith.

Following these subjects, rules are given for the conduct of the class of firing designated as instruction combat practice, held on the class "A" range immediately after the completion of the long range practice. This practice constitutes an intermediate step between range practice at rectangular targets and combat firing on the class "B" range. It marks the transition from individual marksmanship to collective marksmanship. Hence the exercises are purposely made formal and simple.

In addition to the rules for the preparation and conduct of combat firing exercises and rules for the proficiency test, statements are given of several typical firing exercises, including examples of demonstration firings, the subject being concluded by a critique of a hypothetical firing exercise.

CHAPTER I.

THE EFFECT OF FIRE.

202. **Ballistic Qualities of the Rifle.** The ballistic qualities of an arm are indicated by its accuracy, flatness of trajectory, and disabling power.

The accuracy of the United States rifle, caliber .30, model of 1903, is shown in the table of deviations in "Description and Rules for the Management of the United States Rifle, Caliber .30," which exhibits the mean vertical and mean horizontal deviations expressed in inches for the various ranges from 100 yards to 2,000 yards, inclusive. The same publication exhibits in the Table of Ordinates and Table of Fire, the form of the single trajectory. The striking energy or disabling power of the arm is indicated in the table showing the penetration of the bullet at various distances in different materials and substances.

The quality of flatness of trajectory is directly dependent upon the initial velocity and to some extent upon the form of the bullet, a given weight being assumed.

Two rifles of different type may possess the same accuracy, that is to say, the same dispersion, at any given range; but if one of the rifles gives a trajectory more curved than the other, an error in the setting of the sight due to an erroneous estimate of the range will cause a greater displacement from the aiming point of the center of impact of the diagram of hits than will be the case with the rifle with a flatter trajectory. A flat trajectory can not do away with the influence of errors in aiming, but this quality bestows an advantage in that with one sight a greater extent of ground may be held under fire and the target still be hit when it is not at the exact distance for which the sight is set.

The trajectory cuts the line of sight in two places, the first near the muzzle,

the second at the point aimed at (supposing the point to be struck); between these two points all portions of the trajectory are above the line of sight. If aim be taken at the lowest point or element of an object, it follows that if the highest ordinate of the trajectory corresponding to the range is equal to or less than the height of the object aimed at, the danger space for that object will be continuous. For example, the highest point of the trajectory corresponding to a range of 500 yards is 2 feet above the line of sight, so that for an object of that height, or greater, the danger space will be continuous provided aim is taken at the foot of the object. It is this circumstance which permits the adoption of a universal sight—the battle sight—adaptable to all the shorter ranges.

Owing to the fact that curvature of the trajectory increases with the range, the angle of fall for the longer ranges will be greater and the danger space for an object of a given height will be less, the falling branch only of the trajectory being considered. The increase in the distance also makes it more difficult to obtain a close estimate of the range.

203. The Cone of Dispersion and the Probabilities of Hitting. The causes which make for dispersion of shots as given in the table of deviations of the United States rifle are dependent upon variations in different parts of the rifle and imperfections in the ammunition alone.

In consequence of differences in sights, the variations in different parts of the rifle, and in the ammunition, and, to a much greater extent, individual errors made in aiming and firing, a series of shots fired by a body of soldiers with a common aiming point and the same sight setting, under uniform meteorological conditions, will not all follow the same path, but will be more or less separated.

The trajectories considered together make a horn-shaped figure called the cone of fire or cone of dispersion, owing to the resemblance to the geometrical figure of that name. The term "sheaf of bullets" is also used to express the same meaning, and all these are applied to a particular series of collective shots fired in practice, or in service.

If the shots so fired be intercepted by a vertical target in a position normal to the direction of the fire, a diagram of hits will be formed called the shot group. In the diagram of hits the shots appear as most thickly disposed about a point situated approximately in the center of the group, called the center of impact. From this point in all directions the density of the grouping decreases progressively—at first gradually, then more rapidly out to the limits of the group.

The arrangement of shots in the diagram of hits, apparently regardless of any rule, is in fact in conformity to a law which does not exhibit itself until after the delivery of a large number of shots. If measurements be made of a given shot group, the wild shots being disregarded, and the mean vertical and mean horizontal dispersion from the center of impact be found, these measurements will be in effect statements or indexes of the law of distribution of the hits for that particular group. A horizontal strip of the width of the mean vertical dispersion and symmetrically placed as to the center of impact will contain 50 per cent of the hits in the group.

It is well known that the dimensions of the cone of dispersion and of the shot group vary with the skill of those firing; good shots will make a small group and poor shots a large group. If the mean vertical and mean horizontal dispersions for riflemen of a certain grade of skill be determined for various ranges, a large number of shots being considered, means are provided by which, in connection with a table of probability factors, there may be computed the probable number of hits to be expected in collective firing by shots of the

same degree of skill at any range, at targets of any size. By this means a suitable standard may be constructed by which the results obtained in combat firing may be judged. A comparison of the efficiency shown in any firing exercise with that to be expected from average instructed shots with properly adjusted sights under favorable conditions will disclose if the results have fallen somewhat below the probable results; in which case a proper consideration of all the influences which adversely affect shooting under service conditions will enable a judgment to be formed as to why the results have fallen below the requirements. With a known standard of comparison and with a correct appreciation of adverse conditions, effective criticism, which is the basis of good instruction, may be realized.

The intersection of the cone of dispersion with the surface on which the object of the fire stands is called the beaten zone. On a horizontal surface the form of the beaten zone is somewhat that of an ellipse with its major axis in the direction of the line of fire. At short ranges the elliptical figure is very much elongated, and, as the range is increased, the greater axis becomes shorter. When the surface of impact is on ground rising with respect to the line of sight the longer axis is very much shortened, or, in other words, the depth of the beaten zone is very much diminished, as may be seen from the diagram below.

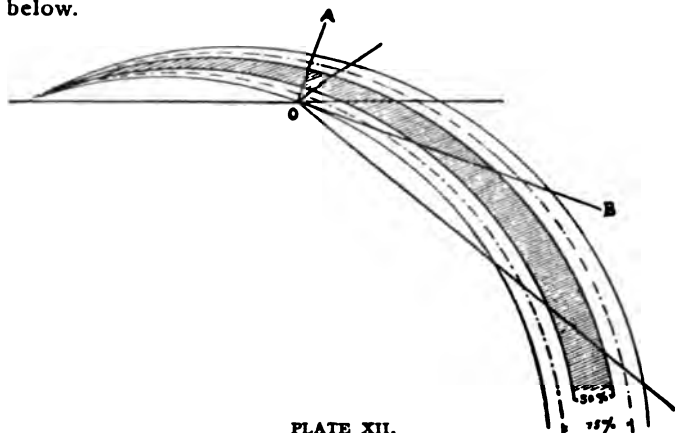


PLATE XII.

The grouping obtained on the surface of the ground by shots fired as a volley, or in a particular series of shots fired collectively, is sometimes referred to as the shot group.

The arrangement of hits in the beaten zone follows a law similar to that in the diagram of hits on a vertical target. The mean longitudinal dispersion on a horizontal surface in the direction of the fire bears a direct relation to the mean vertical dispersion, being the product of the latter by the cotangent of the angle of fall.

In addition to the 50 per cent zone corresponding to the lateral strip containing the best 50 per cent of the hits on the vertical target the area covered by the best 75 per cent of all the shots in the beaten zone, called herein the zone of effective fire, is considered, and the depth of this zone, as determined experimentally for average shots, forms the basis for certain rules laid down under the heading "Adjustment of Fire."

204. The table of dispersion below gives the measures of the mean vertical and mean lateral dispersions in feet and of the longitudinal dispersions in yards for various ranges, as determined by experimental trials at the Musketry School with average instructed shots, the surface of reception being assumed as horizontal.

TABLE OF DISPERSION—AVERAGE SHOTS.

| Range. | Mean vertical. | Mean lateral. | Mean longitudinal. | Longitudinal 75 per cent zone. |
|--------------------|----------------|---------------|---------------------|--------------------------------|
| <i>Yards.</i> | <i>Feet.</i> | <i>Feet.</i> | <i>Yards.</i> | <i>Yards.</i> |
| 100 | 1.07 | 0.97 | 308.04 ¹ | 423.00 ¹ |
| 200 | 2.03 | 1.77 | 398.21 | 308.00 ¹ |
| 300 | 2.87 | 2.41 | 348.79 | 592.00 |
| 400 | 3.59 | 2.90 | 282.04 | 479.00 |
| 500 | 4.21 | 3.26 | 219.91 | 373.00 |
| 600 | 4.88 | 3.75 | 185.37 | 315.00 |
| 700 | 5.62 | 4.40 | 156.66 | 266.00 |
| 800 | 6.44 | 5.23 | 135.28 | 229.00 |
| 900 | 7.33 | 6.21 | 118.57 | 201.00 |
| 1,000 | 8.29 | 7.37 | 105.89 | 180.00 |
| 1,000 ² | 9.33 | 7.71 | 96.35 | 163.80 |
| 1,200 | 10.52 | 8.69 | 89.71 | 152.51 |
| 1,300 | 11.79 | 9.74 | 84.50 | 143.66 |
| 1,400 | 13.12 | 10.84 | 80.14 | 136.23 |
| 1,500 | 14.50 | 11.98 | 76.00 | 129.00 |
| 2,000 | 22.71 | 18.76 | 64.00 | 109.00 |

From the table a conception may be gained of the form and dimensions of the cone of dispersion for average instructed shots.

It is seen from the table that as the range increases a less depth of ground is held under fire with a single sight setting, and if an error in sight setting be made, due to an incorrect estimate of the range, the center of impact will be misplaced and there will be a loss in effect in proportion to the amount of displacement, the loss in effect being greater as the beaten zone is less. Furthermore, the difficulty of exact range determination increases with the distance, the two influences combining to make long-range fire uncertain and usually ineffective.

A somewhat opposite condition prevails at the shorter ranges, where, owing to a very much flattened trajectory, a great depth of beaten zone may be held under fire with a single sight setting.

205. The scope of a single sight setting at the shorter ranges may be illustrated by taking the range of 500 yards and the dispersion for that range, from which may be computed the percentage of hits to be expected on strip targets of different vertical dimensions corresponding to the heights of various service targets, these being set up at ranges from 200 yards to 900 yards. The results of such a computation are shown in the table below.

PERCENTAGE OF HITS TO BE EXPECTED WITH AVERAGE SHOTS AT VARIOUS RANGES ON STRIP TARGETS OF DIFFERENT HEIGHTS WITH SIGHT SET AT 500 YARDS, AIM BEING TAKEN AT THE LOWEST LINE OR ELEMENT OF THE TARGET.

| | Height 1.33 feet, prone figure. | Height 1.83 feet, prone figure. | Height 3.5 feet, kneeling figure. | Height 5.67 feet, standing figure. | Height 8 feet, horse figure. |
|-----|---------------------------------|---------------------------------|-----------------------------------|------------------------------------|------------------------------|
| 200 | 25.2 | 38.3 | 59.0 | 88.7 | 89.37 |
| 300 | 20.3 | 29.3 | 68.4 | 78.3 | 82.57 |
| 400 | 18.9 | 26.2 | 48.4 | 64.7 | 69.39 |
| 500 | 16.4 | 21.9 | 36.8 | 46.5 | 49.45 |
| 600 | 10.0 | 13.0 | 19.8 | 23.7 | 24.77 |
| 700 | 3.2 | 4.1 | 5.8 | 6.7 | 6.80 |
| 800 | 0.43 | 0.78 | 0.78 | 0.78 | 0.78 |
| 900 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

¹ Measured from the muzzle in the direction of the line of fire.

² Dispersions beyond 1,000 yards have been calculated from those at the lesser ranges and were determined by experiment.

Low aiming, or the choice of the lowest point or element as an aiming point, which is required, as a rule, in all firing instruction, may be looked upon as the normal practice in service. With the average soldier the best performance to be expected in the heat of action is that he will aim at the foot or lowest element of the objective. While some may in the moments of excitement possess the coolness to estimate the range exactly and choose a higher or lower point according to their judgment, such exceptions can hardly influence to any great degree the general results which are dependent on the performance of the mass or great majority.

206. The Effectiveness of Fire. The effectiveness of fire under battle conditions and in combat firing exercises is dependent upon the three factors: The percentage of hits made, the number of targets hit, and the time of execution. The ultimate effect may be expressed synthetically by the number of enemies disabled or targets hit in a unit of time.

207. The percentage of hits is dependent upon the dispersion, and this is influenced by the precision of the arm, the distance from the target, the visibility of the target, the prevailing atmospheric conditions, the training and instruction of the troops, and upon their physical and normal state at the time.

The percentage of hits is also dependent upon the visibility of the objective, upon the character of the ground as favoring ricochet hits, upon the correct estimation of the distance or choice of sight, and designation of the target, these latter pertaining to fire control.

208. With a given accuracy, the number of targets hit or the distribution of fire may be affected by varying degrees of visibility, as men instinctively choose the more conspicuous marks as aiming points. Under any circumstances, an imperfect distribution of the hits made will be due to an absence of proper instructions from the leaders, or, in other words, to poor control, or else to a want of understanding or lack of obedience on the part of the men.

209. The time of execution is important in that the gaining of fire superiority is dependent less upon obtaining high percentages of hits than upon making an absolutely large number of hits in a unit of time. There is necessarily a limit to the rapidity of fire which, if exceeded, will result in some loss of accuracy. With targets of a fair degree of visibility, the following may be taken as standard rates of fire for troops who have been given suitable training in target practice.

| | | |
|-------------|---|-----------------------|
| 200 yards | } | 10 shots per minute. |
| 300 yards | | |
| 400 yards | | |
| 500 yards | } | 7.5 shots per minute. |
| 600 yards | | |
| 700 yards | | |
| 800 yards | } | 5 shots per minute. |
| 900 yards | | |
| 1,000 yards | | |

Greater ranges, 3 shots per minute.

The rates given should not exclude higher rates of fire in the case of large and conspicuous targets. On the other hand, when objectives, or marks used as aiming points, are very indistinct, the requirement of correct aiming imposes rates of fire somewhat lower than the standard rates given even for well-

instructed men. With imperfectly trained men who have not fully acquired the habit of using aimed fire only, and who are lacking in the manual dexterity required for executing the standard rates of fire, the maximum rate can not well exceed six shots per minute without incurring the danger of lapsing into unaimed fire. Fatigue and exhaustion, the results of marches or prolonged firing, have a detrimental influence and tend to lower the rates of effective fire.

210. The results obtained in collective firing exercises in time of peace give but a slight basis for estimating the results to be expected in time of war. The somewhat inferior training of units mobilized to war strength, the emotions to which even disciplined men are subject in action, and the physical impairment incident to service conditions are influences which combine to greatly lessen the effects which peace-time experiments give, this lowering in effects being due to increased dispersions, the latter, under the doctrine of chances, giving lesser probabilities of hitting in proportion to the increase in dispersion.

It has been estimated that war-time dispersions will vary according to the training, morale, and physical condition of the troops from twice to four times, or more, the peace dispersions. This is not a condition to be desired or sought, but one to be understood and reckoned with.

CHAPTER II.

THE INFLUENCE OF GROUND.

211. **Defilade.** An obstacle of sufficient thickness to prevent the penetration of the bullet will protect from fire the space extending from its foot to the point where the bullet, which grazes its crest, meets the ground. The space which is thus protected from fire is called the "defiladed space." Its extent will depend on the height of the shelter, the curvature of the trajectory and the slope of the ground behind the shelter.

In the illustration the distance A-T will represent the defiladed space for the

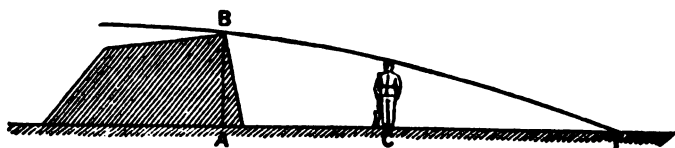


PLATE XIII.

trajectory B-T and an obstacle the height of A-B. A soldier beyond T would be struck with bullets passing a slight distance over the crest B; he would be partially sheltered between T and C (the danger space for this trajectory); and would be completely protected throughout the distance A-C.

If the height of the shelter be less than that of a man standing, only a partial protection will be afforded, and to obtain complete shelter it will be necessary for the soldier to assume the kneeling or prone positions. By cover is meant effective defilade from the enemy's fire. Concealment means a screening from view but not necessarily protection from fire.

212. **Rising and Falling Ground.** The influence of the ground upon the effect of fire manifests itself in the depth of the beaten zone. This depth is decreased if the surface of reception rises with respect to the line of sight; it increases, on the other hand, if the surface of reception falls with respect to the line of sight.

The effect of different slopes on the depth of beaten zones for various ranges, based upon the dispersion of average shots, is shown in the table below.

MEAN (50 PER CENT) BEATEN ZONE ON SLOPES—AVERAGE SHOTS.
[ZONE GIVEN IN YARDS.]

| Range. | Rising. | | | | | | | | | | Level. | Falling. | | | | | |
|--------|---------|-----|-----|-----|----|----|----|----|----|-----|--------|----------|-----|-----|-----|-----|---------------------------------|
| | 25° | 20° | 15° | 10° | 5° | 4° | 3° | 2° | 1° | 0° | | -1° | -2° | -3° | -4° | -5° | |
| 600 | 3 | 4 | | 9 | 17 | 20 | 26 | 37 | 61 | 185 | | | | | | | Defiladed angle of fall 0° 30'. |
| 700 | 4 | 5 | 7 | 10 | 19 | 23 | 29 | 40 | 63 | 156 | | | | | | | Defiladed angle of fall 0° 41'. |
| 800 | 5 | 6 | 8 | 11 | 21 | 25 | 31 | 41 | 64 | 135 | | | | | | | Defiladed angle of fall 0° 54'. |
| 900 | 6 | 7 | 9 | 13 | 23 | 27 | 34 | 44 | 64 | 118 | 708 | | | | | | Defiladed angle of fall 1° 10'. |
| 1,000 | 6 | 7 | 9 | 14 | 24 | 29 | 35 | 45 | 63 | 105 | 315 | | | | | | Defiladed angle of fall 1° 29'. |
| 1,500 | 9 | 11 | 14 | 20 | 32 | 36 | 41 | 49 | 59 | 76 | 105 | 171 | 456 | | | | Defiladed angle of fall 3° 37'. |
| 2,000 | 13 | 16 | 19 | 26 | 37 | 40 | 44 | 49 | 54 | 64 | 75 | 91 | 116 | 159 | 252 | | Defiladed angle of fall 6° 46'. |

Note: a = Angle of fall. b = Beaten zone on level ground. s = Angle of slope; then $\frac{ab}{a-s}$ = beaten zone on falling ground and $\frac{ab}{a+s}$ = beaten zone on rising ground. These are von Rohne's formulæ, from which the attached tables are computed. These are found in Balck's "Tactics," vol. i (Krueger translation). See footnotes, page 180.

It should be remembered that, assuming a proper adjustment of the fire, depth of beaten zone can affect only targets which have depth. On a lineal target the depth of the beaten zone has no effect one way or the other. If this target is backed up by supports and reserves, the effect upon them will depend upon their position with respect to the firing line which forms the

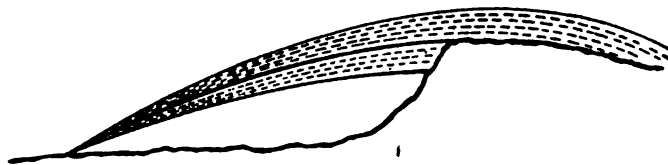


Fig. 1

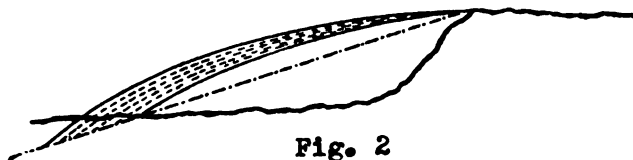


Fig. 2

PLATE XIV.

objective or aiming point and upon the depth of the beaten zone. The beaten zone, as has been shown, is influenced by the lay of the ground, whether rising or falling, with respect to the line of sight.

An example of the shortening of the beaten zone is seen in the case of fire delivered from a height at a target situated on a horizontal plane beneath. (See Fig. 2, Pl. XIV.)

An example of increasing the depth of beaten zone is seen in the case of

fire delivered from low ground at a visible target situated at the edge of a plateau or crest of a ridge from which the ground slopes to the rear. (See Fig. 1, Pl. XIV.)

Shots which pass over a crest with an angle of fall conforming to the inclination of the surface of the ground beyond the edge of crest, or nearly so, are called grazing shots and fire so delivered is called grazing fire. (See Fig. 1, Pl. XIV.)

The diminution or increase in fire effect for average shots due to rising and falling ground is shown in the diagram below, following an idea borrowed from the works of Gen. von Rohne.

A 2° rising slope and a 1° falling slope are assumed. The targets which form the objective are assumed to be at "A." With average shots firing, the figure shows relatively the influence of the ground on the efficacy of the fire on targets similar to those at "A" and placed at different distances in rear thereof.

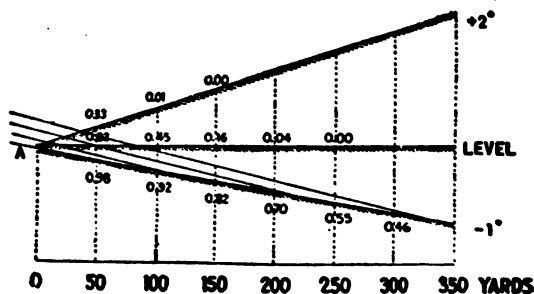


PLATE XV.

For better illustration the angles are exaggerated in the drawing. The range is taken as 1,000 yards and the figures expressing effect at different distances in rear of "A" on rising ground, level ground, and falling ground, are ratios, the effect of "A" being unity.

It is seen from Plate XV how rapidly the effect disappears on rising ground and how the effect is better maintained on falling ground.

When the ground slopes upward to the rear from a firing line, the supports may be placed closer without increasing the danger from fire aimed at the firing line. On the same sort of ground it is shown that a column target, or one which has depth, is more vulnerable than a lineal target.

When the ground slopes down and to the rear from the firing line, the supports must be posted at a greater distance in rear, unless the slope is so much greater than the angle of fall of the hostile bullets that a deflated space is created in which no bullets strike. On falling ground, however, opposite conditions prevail as to vulnerability from those stated above. Making the allowable assumption that the fire is equally distributed along the crest, the column target behind the crest and invisible from the firing point will receive hits only in proportion to its width.

It may be said, therefore, that on ground rising with respect to the line of sight, column targets, as those having depth, will suffer the greater losses; on ground falling in respect to the line of sight, the reverse slope of hills or the level grounds of plateaus, line targets will suffer the greater losses.

When the ground falls away to the rear at a greater angle than the angle of fall of the projectile, deflated spaces are created, which enable bringing the supports close to the crest. With the service rifle and ammunition it is well to remember that an angle of fall of 1° corresponds to a range of about 900 yards, an angle of fall of 5° to a range of about 1,800 yards.

Through a judicious choice of ground, the measurement of slopes, the placement of targets, and the selection of firing points, the possibilities of the species of indirect fire known as grazing fire may be demonstrated; but the mere possibility of inflicting damage on invisible enemies must not create a false impression as to the use of this class of fire.

213. Ricochet Shots. Bullets which ricochet usually tumble after striking, and jacketed bullets, on striking a hard, rough surface become altered in form more or less, the jackets sometimes becoming separated from the lead core. Wounds inflicted by ricochet hits are, therefore, as a rule, severe.

The most favorable ground for ricochets is a smooth, hard, horizontal surface. Bullets also ricochet on water and, to a lesser extent on plowed ground, wet clay, wet turf, or swampy ground. The chance of ricochet in sand is very slight. Bullets which ricochet are often deflected laterally and the amount of deflection influences the range of the rebound. The maximum angle of deflection is about 30° and it is usually to the right. The range will be greater as the point of strike is nearer the point from which the piece is fired. A smooth, hard surface so inclined as to give an acute angle of fall to the bullet produces the maximum range of rebound, which is about 2,500 yards or a little more.

While various results may be quoted, it is probably correct to say that the maximum number of ricochet hits to be expected is about 20 per cent of the hits scored.

214. The Occupation of Ground. The question presents two aspects, as follows:

First. What firing positions may be chosen which will tend to increase the losses of the enemy?

Second. What positions may be chosen and formations adopted to minimize our own losses?

Where other conditions admit, it is obvious that a defensive position well down a slope is preferable to a position higher up, on or near the crest, as by this arrangement the depth of the beaten zone for fire delivered therefrom is increased and the upper portion of the cone of shots will include the supports and reserves advancing to reinforce the firing line of the attacking force. This course also tends to eliminate dead spaces, which might otherwise exist at the foot of the slope.

On the other hand, a defensive position near the crest, besides favoring observation of the enemy, lends itself to a ready withdrawal of the firing line should a falling back be necessary, or else to its prompt reinforcement by the supports advancing from behind the crest. The decision as to choice of ground to be occupied in any particular case must therefore be dependent upon judgment as to the relative value of the ballistic and tactical considerations involved.

Consideration must also be given to the conditions of the action so far as neighboring troops are concerned.

For troops on the defensive there will frequently be no choice of a position. In such cases it will be necessary for them to accept that which circumstances offer. The defense itself will usually be restricted in its choice by the necessities of neighboring troops.

From the point of view of avoiding losses, all gentle reverse slopes are dangerous and are to be avoided when possible. When necessary to traverse or to occupy such ground, precautions must be taken to protect the reserves or other bodies of troops by placing them on the flanks; by disposing them in formations with a narrow front; by causing them to lie down; by the construction of suitable shelter; and by avoiding useless movements. Finally by placing the firing line, which will be the visible target and at which the enemy's fire will be directed, as well down the slope from the crest as tactical considera-

tions will admit, the high ground will interpose as a defilade and intercept the upper portion of the collective cone which might otherwise take effect on objects behind the crest.

It is thus seen that the principal lessons to be learned concerning the influence of the ground consists in finding out the things which are to be avoided.

CHAPTER III.

THE ADJUSTMENT OF FIRE.

215. Fire at Stationary Targets. The correct adjustment of infantry fire is attained by causing the center of impact of the collective group to fall on the center of the target, this placement of the group under the law of probabilities insuring the greatest number of hits. This is the problem constantly presented in combat firing and in service.

Two distinct and independent elements enter, which may supplement or counteract each other—the influence of the troops and that of the commander. When a body of troops has aimed correctly at the indicated objective with the elevation ordered and has fired with steadiness, it has done all that can be expected of it; but this is not sufficient. It is the duty of the commander to bring the shot group into proper relationship with the target. If the correct elevation be given, a maximum result will be obtained; if a mistake is made, the result may be nothing.

It is known that good shots make a small group and poor shots a large group, average shots making a group of intermediate size. The maximum effect is obtained if the shots are of the highest grade and if the center of impact is correctly placed. But if the center of impact of the group made by good shots is displaced, the effect falls off very rapidly compared to the other grades of shots, and if the displacement is very great, it may be sufficient to insure that the good shots will make no hits at all, while, with the same displacement of the center of impact, the fire of the poorer grades of shots will continue to have some effect. In other words, the fire of a thoroughly trained body of troops may be less effective than that of much poorer shots if, through a lack of appreciation of the range, the center of impact of its shot group be displaced. These statements are illustrated by the diagram.

Normally, battle-field targets are lineal targets, and hence a lateral displacement is of slight consequence, as shots aimed at one element or section of the hostile line may take effect in some other element or section of the same front. Owing to the slight depth of service targets and to the form of the trajectory, the longitudinal placement of the center of impact is more difficult.

The point of strike of the bullet is determined by the angle of elevation given the axis of the bore when the piece is fired, and the adjustable slide of the rear sight, with the scale of the leaf graduated to yards, is a device for giving the elevation necessary to reach any point within the range of the arm. If the range to a target is known exactly, under average conditions a perfect adjustment of the fire will be obtained by having each man of the firing detachment set his sight for the indicated range, the mean trajectory of the cone of dispersion approximating closely to the normal trajectory for the range indicated.

The question resolves itself therefore into the question of finding the range, which, as a rule, in combat firing and in service, will be known only approximately. The result obtained will be in proportion to the accuracy of the means and appliances available for determining the range.

With soldiers who have had some instruction the average error in the estimation of ranges by the eye, for distance between 600 and 1,200 yards, is approximately 15 per cent. The average error of a well-instructed class is about 12½ per cent. The best instrumental range finders will give results with an error not exceeding 5 per cent of the range. The mean estimate of a given range by several trained estimators may be expected under peace conditions to approximate closely the results obtained with a good instrumental range finder. Owing to the fact that, as a rule, the overestimates and underestimates counterbalance each other to some extent, the means of several estimates will give

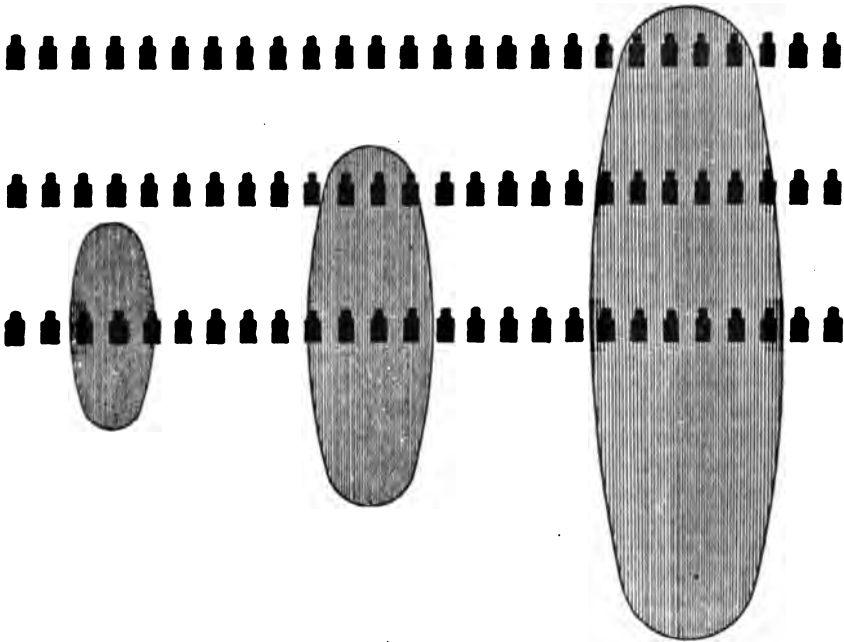


PLATE XVI.

a better result than the average estimate of the same men expressed in percentage. By the use of such means it may be expected that the error made will be between 5 per cent and 10 per cent, the latter being more probable in time of war. Some error must always be expected, and the question is one of lessening it or minimizing its effects.

216. Rear-Sight Corrections Through Observations of Signs of Impact. When the surface on which the objective stands is such as to give visible signs of the impact of bullets, a supplementary means is provided by which rear-sight settings may be corrected. When the ground is favorable, the simultaneous strike of a number of shots fired with the same rear-sight setting gives a better indication of the location of the shot group than the same number of shots would provide if fired at the will of the individuals of the platoon or detachment.

In order to be able to recognize the center of impact on the various surfaces ordinarily met with in service, it is necessary to be acquainted with the form and dimensions of the beaten zone as it will be exhibited thereon. A rising surface of reception produces a shortening effect on the beaten zone. This

is shown graphically in Plate XII and more specifically in figures in the table given with paragraph 212. As a rule, surfaces which afford good signs of impact visible at the firing point will have a rise of 1 degree or more.

When the existence of favorable ground allows the strike of the shots of a trial volley to be plainly seen, the correct placement of the center of impact may be made by a series of approximations. Not more than three trial volleys should be required for a good fire adjustment, and this once attained, a change should be made at once to "Fire at will," at a rate suited to the range and the visibility of the objective. In making rear-sight corrections it is necessary to make positive changes, rarely less than 50 yards at a time. It is an insufficient and faulty procedure to endeavor to correct a wrong adjustment through vague instructions, such as enjoining the men to aim a "little higher" or a "little lower." Where indications of impact are sufficient to form a basis of judgment, it may be stated as a rough rule that the fire will be properly adjusted when about one-third of the shots of a trial volley appear to strike in front and two-thirds in rear, it being remembered that the direct hits will pass through and strike in rear of the target.

As a rule, a perfect condition will not be realized. The ground may be wet or covered with turf, sod, tall grass, or brush, in which cases the indications may be entirely lacking or else so slight as to form no basis of judgment. Indications will be only partial when the objective is along the crest of a ridge, the upper portion of the cone of dispersion going over the crest and giving no indications. The same will be true when the objective occupies the near edge of a body of woods or is along a hedge which completely screens from view the ground in rear of it.

However partial or imperfect the signs of impact, close observation should be resorted to in every case, as slight indications may sometimes furnish a basis for rear-sight corrections. For observing the effect of fire good field glasses are indispensable, and the necessary skill in their use, through which correct conclusions may be drawn, is to be acquired only through practice. An objective is difficult to adjust upon when it occupies one of a succession of parallel ridges alternating with depressions, the ground appearing from the firing point as a continuous surface. In such cases the only indications will come from shots which strike the ridges, those falling in the depressions being lost. From such indications wrong conclusions may be drawn unless the lay of the ground is discovered through close observation with field glasses.

In noting the strike of shots it should be remembered that the dust will be seen somewhat above the actual point of impact and to the right or left, depending upon the direction of the wind. The best position from which to observe the effects of fire is behind and, if possible, above the party firing, but in this position it must be remembered that bullets which fall short will be most easily seen and consequently will appear to strike farther from the objective than bullets which strike an equal distance beyond. To an observer on or beyond a flank of a party firing, shots which pass over the objective will appear to fall toward the side on which he is posted, and those which fall short toward the opposite side.

When the surface of the ground is such as not to furnish any indication to an observer at the firing point of the effects of fire, the correctness of the rear-sight elevation may sometimes be inferred by careful observation of the actions or movements of the enemy.

Habitual practice on favorable ground may tend to cultivate too great a dependence on signs of impact in making rear-sight corrections, and this is to be guarded against. It should be remembered that even on favorable ground,

if a large number of troops be engaged, it will usually be difficult, if not impossible, for commanders and leaders to distinguish indications of their own fire from that of other troops.

217. Combined Sights. When means of exact determination are not available and indications of impact are lacking or insufficient and the range can not be learned from the artillery or neighboring troops, some error in the range must be expected. In such a case, through the expedient of combined sights, a greater depth of beaten zone may be created, giving an assurance of effect which might not otherwise be obtained. Such a fire loses in concentration, and this must be compensated for by the employment of a larger number of rifles. The most common application of combined sights will be in executing fire of position. The expedient will not usually be employed by bodies of less strength than a battalion.

The approximate ranges for combined sights and the number of sights to be employed in any case are questions which depend upon the depth of the beaten zone and the probable error in the estimation of the range. Both these factors vary between certain limits. The depth of the beaten zone varies inversely with the range. It will also be greater in time of war than in time of peace, but in view of the circumstances under which the fire of position will usually be executed, a very great dispersion need not be looked for. The greatest probable error will be about 15 per cent of the range. When a good instrumental range finder is available the error should not exceed 5 per cent of the range. In the majority of cases the error to be expected will lie between these two extremes.

Taking the 75 per cent zone as being sufficient, if the probable error is such that it does not exceed one-half the zone considered, then it is certain that the objective will lie somewhere within the beaten zone created with a single sight setting. The normal depth of beaten zone for a single sight setting will be sufficient up to the point where the expected error is about equal to 75 per cent zone. Beyond this point it will be necessary to use two sight settings, one above and the other below the estimated range and differing from each other by the depth of the beaten zone at that range. As the normal beaten zone decreases in depth with the range, and as the expected error measured in yards increases with the range, a point will be reached where two sight settings will be insufficient and it will be necessary to resort to three settings of the rear sight, one being set at the estimated range, one over, and the third under, the difference being equal to the normal depth of zone at that range.

The table below exhibits the ranges where it is necessary to resort to combined sights with various assumed errors. The table is given, not as establishing any rigid rule to be followed implicitly, but as a guide in determining in the first place when combined sights should be used and in the next place how they should be used.

218. Auxiliary Aiming Points and Target Designation. Through invisibility and the practice of concealment it will frequently occur in service that individual enemies or deployed bodies of the enemy will be too inconspicuous to provide in themselves a good aiming point. In such case it is necessary to select well-defined marks or objects in the immediate vicinity upon which to direct the fire, these being so chosen and the rear sight so adjusted that the objective will lie at the center of the resulting beaten zone.

When natural and artificial features are numerous enough to make a confusion of forms or when the surface is of a monotonous character, unbroken by marks which might serve as aiming points or points of reference, target designation is difficult. It is necessary that indications be given in clear and

precise terms, and that the men in ranks have the capacity to understand what is said. A lack of understanding may cause the fire to be delivered in quite another direction from that intended.

It is frequently advantageous to make use of the clock notation in indicating the direction of a target. For this purpose a well-defined object in front is announced and considered as being at 12 o'clock, the objective being indicated by the usual clock designations according to the difference from the point of reference. Angular differences between the target and reference points may be indicated by finger breadths. The field glass is an important accessory, and the passing of field glasses to the men in ranks will often facilitate target designations, besides tending to allay nervousness or excitement.

219. Fire at Moving Targets. The adjustment of fire on moving objectives is subject to certain special considerations in that, due to changes of position

TABLE OF COMBINED SIGHTS BASED ON PEACE DISPERSION OF AVERAGE SHOTS, THE 75 PER CENT BEATEN ZONE, AND VARIOUS ERRORS IN THE ESTIMATION OF RANGES.

| Range. | 75 per cent zone. | 5 per cent error. | | | 10 per cent error. | | | 12½ per cent error. | | | 15 per cent error. | | |
|---------------|-------------------|---------------------------------------|---------------------------|------------------------------|---------------------------------------|---------------------------|------------------------------|---------------------------------------|---------------------------|------------------------------|---------------------------------------|---------------------------|------------------------------|
| | | Zone to be covered (twice the error). | Number of sight readings. | Difference between readings. | Zone to be covered (twice the error). | Number of sight readings. | Difference between readings. | Zone to be covered (twice the error). | Number of sight readings. | Difference between readings. | Zone to be covered (twice the error). | Number of sight readings. | Difference between readings. |
| <i>Yards.</i> | <i>Yards.</i> | | | <i>Yards.</i> | | | <i>Yards.</i> | | | <i>Yards.</i> | | | <i>Yards.</i> |
| 800 | 229 | 80 | 1 | ..... | 160 | 1 | ..... | 200 | 1 | ..... | 240 | 2 | 150 |
| 900 | 201 | 90 | 1 | ..... | 180 | 1 | ..... | 225 | 2 | 150 | 270 | 2 | 150 |
| 1,000 | 180 | 100 | 1 | ..... | 200 | 2 | 150 | 250 | 2 | 150 | 300 | 2 | 150 |
| 1,100 | 170 | 110 | 1 | ..... | 220 | 2 | 150 | 275 | 2 | 150 | 330 | 2 | 150 |
| 1,200 | 160 | 120 | 1 | ..... | 240 | 2 | 150 | 300 | 2 | 150 | 360 | 3 | 150 |
| 1,300 | 150 | 130 | 1 | ..... | 260 | 2 | 150 | 325 | 3 | 125 | 390 | 3 | 150 |
| 1,400 | 139 | 140 | 1 | ..... | 280 | 2 | 150 | 350 | 3 | 125 | 420 | 4 | 125 |
| 1,500 | 129 | 150 | 2 | 125 | 300 | 3 | 125 | 375 | 3 | 125 | 450 | 4 | 125 |
| 1,600 | 124 | 160 | 2 | 125 | 320 | 3 | 125 | 400 | 4 | 125 | 480 | 4 | 125 |
| 1,700 | 120 | 170 | 2 | 125 | 340 | 3 | 125 | 425 | 4 | 125 | 510 | 4 | 125 |
| 1,800 | 116 | 180 | 2 | 100 | 360 | 4 | 100 | 450 | 4 | 125 | 540 | 5 | 125 |
| 1,900 | 112 | 190 | 2 | 100 | 380 | 4 | 100 | 475 | 5 | 100 | 570 | 5 | 100 |
| 2,000 | 109 | 200 | 2 | 100 | 400 | 4 | 100 | 500 | 5 | 100 | 600 | 6 | 100 |

of the target, it is not possible with a certain sight setting to maintain a perfect adjustment of the fire. Changes in sight setting are necessary to conform to the changes in the position of the target, and the two questions naturally arise, what original sight setting should be adopted upon first opening fire and what changes in it should be made as the action progresses.

It is obvious that if a beaten zone be established immediately in front of an enemy, his forward movement into the beaten zone will complete the adjustment of the fire. Due to the chance of overestimating the range, it is necessary to adopt a rear sight setting well under the estimated range, in order to insure that the beaten zone will be in advance of the enemy. When the fire becomes effective, as may be judged by the actions and movements of the enemy, the rate of fire should be quickened in order to increase the effect of the fire. When the target continues to advance till it has passed entirely through the zone of effective fire (75 per cent zone), a lower sight setting will be required so as to again bring the center of the beaten zone in front of the target. Frequent changes of sight cause a loss of time, besides multiplying chances of error in sight setting.

In accordance with these ideas, against infantry advancing, a sight setting 200 yards less than the estimated range should first be used. When the enemy has passed through the zone of effective fire, the sight should be lowered 200 yards and the operation repeated till the battle-sight zone is reached, in which no sight manipulation is required other than throwing down the leaf. Against skirmish lines which advance by rushes the sight setting should not be changed during a rush. This should be done at the halts so that the greater vulnerability of the targets presented during the rush may be taken advantage of.

Against attacking cavalry, due to the rapidity of the advance, there will not usually be time for sight manipulation other than throwing down the leaf of the rear sight, so that the battle sight should be resorted to at all ranges.

Against retreating targets fire should be opened with the sight corresponding to the estimated range, and when the target appears to have passed beyond the zone of effective fire 200 yards should be added to the sight.

In firing at a target moving across the line of fire it is desirable, on account of the confusion caused thereby, to hit the head of the column. It is necessary therefore to hold to the front a distance sufficient to allow for the time of flight and the rate of march. This will be accomplished by the observance of the following rough rules:

Against infantry it is sufficient to hold against the head of the marching column.

In the case of mounted troops at a trot, hold to the front 1 yard for every 100 yards of range; and at a gallop, 2 yards to every 100 yards of range.

220. Indirect Fire. The proper adjustment of fire on an objective which is screened from the view of the observer at the firing point by an intervening obstacle is dependent upon the conjunction of favorable circumstances not usually met with in service. The height of the obstacle and the range must be such that the objective is not defiladed from fire, and besides determining the range, the position of the objective must be known so that the proper lateral direction to the pieces may be given. For this purpose intermediate auxiliary aiming points will be necessary to mark the direction of the fire. In siege operations opportunities may arise for the employment of this kind of fire, in which case material may usually be found for constructing rests for rifles so that fire delivered therefrom will reach important stationary objectives.

221. Night Firing. The invisibility afforded by darkness neutralizes the power of the rifle to a great extent by making it impossible to employ the ordinary means of fire adjustment.

In night attacks the purpose of the offensive is to gain rapidly and quietly a position where the issue may be decided in a hand to hand encounter or a position from which the superiority of fire may be gained at daylight. For the offensive, therefore, fire action is a subordinate consideration.

On the defensive, when a night attack is apprehended, preparations should be made to sweep with fire the ground immediately in front over which the assailant must advance. Special arrangements may sometimes be made for resting rifles on the parapet, so that the ground in front will be suitably covered. A solid support is necessary for maintaining the proper direction of the pieces during firing. For this purpose notched boards or timbers are convenient. The arrangements should be such that the operations of loading and firing may be performed without removing the rifles from the support. Searchlight illumination may reveal the position and movements of the enemy sufficiently well to permit the use of the sights. In night operations of small parties fire may be well directed when a bright, well-defined light, such as a camp fire, is presented as an aiming point. In such a case a slight illumination of the front sight is required.

CHAPTER IV.

INSTRUCTION COMBAT PRACTICE.

222. This course of firing, which will be held on a class "A" range, follows the long distance practice prescribed for men in the grades of expert and sharpshooter, and is intended as a preliminary to the combat firing held on the class "B" range.

There will be one firing exercise for each sergeant and the first sergeant of a company and one for each lieutenant not in command of a company. In the firing exercises designated for sergeants the firing will be executed by a platoon consisting of two full squads. In the exercises for lieutenants the platoons will consist of three full squads.

The targets will consist of a row of kneeling figures at intervals of one yard from edge to edge, the number of figures being equal to the number of men firing. The targets will be set up in the open without any special attempt at concealment.

In the exercise for sergeants the firing will take place at a convenient range between 600 and 800 yards; in the exercise for lieutenants the firing will be at a range between 800 and 1,000 yards.

There will be but one firing point for any one series, for which 10 rounds per man will be issued and fired. The firing will be executed by the commands and means prescribed in the Drill Regulations. This firing will be under the immediate supervision of the captain, who will use every effort, through criticism and the correction of faults, to make these exercises instructive for his subordinates.

The best possible use should be made of field glasses in observing the effect of the fire, with the view of getting better results and of giving additional instruction in the use of glasses. Accordingly, in this practice noncommissioned officers, musicians, and others whom it may be desirable to instruct, should be required in turn to act as observers to assist the platoon leader.

A record will be made in each case of the number of hits made, the number of figures hit, and the time of execution, these results being compared with the established standard.

These records form a part of the company record for the season.

COMBAT PRACTICE.

223. Rules. (a) Combat practice will follow the instruction combat practice and will be held on a class "B" range during the period announced for the field training of the troops.

(b) All who are required to fire in range practice will take part in the combat exercises. Sergeants, musicians, and trumpeters will not fire, and corporals will fire only when their squads form a part of the firing line of a larger unit.

(c) Each lieutenant not commanding a company (except battalion staff officers) will exercise command in at least one exercise, the number of men firing being equivalent to a platoon at war strength.

Each sergeant of a company will exercise command in at least one firing exercise, the number of men firing being appropriate to the grade of sergeant.

So far as the ammunition allowance will permit, each corporal will be required to exercise command in combat exercises involving one or more squads.

Following the exercises prescribed for lieutenants, sergeants, and corporals, there will be one firing exercise for the company, the company commander exercising command.

(d) Each man will be required to participate in one combat firing exercise

wearing the full field equipment. On other occasions the complete equipment except the pack will be carried.

(e) Should it be impracticable to obtain a class "B" range, the exercises prescribed will be carried out on a class "A" range. While distances will be well known on class "A" ranges and an important element will thus be absent, firing exercises containing some unexpected feature may be devised which will be instructive for those taking part. So far as practicable, their preparation and conduct should be governed by the rules given for other combat exercises.

(f) When different exercises are prepared for the several fire units, each exercise will, when practicable, be carried out in the presence of the other units in order that the maximum amount of instruction may be derived therefrom.

224. Preparation of Exercises and Their Conduct—Rules. In the preparation and conduct of combat exercises, the following rules should govern:

(a) Every exercise should involve a tactical idea, although only portions of an episode or episodes of a combat should be represented.

(b) The position of the targets and the interval between targets should conform to service conditions. The number of targets exposed should, as a rule, be equal to the number of men in the firing line.

(c) The position of the targets and the ranges thereto should be unknown to those participating. If practicable, the exercise should be on unknown ground.

(d) Exercises should be simple in their arrangement, but each should involve some feature which is unexpected to those taking part. Gradually those who have shown themselves proficient may be confronted with more difficult exercises.

(e) The number of cartridges issued to each man should admit of a full illustration of the idea involved in the exercise, and no more. In the simpler exercises, with one group of targets exposed and a single firing point, not less than five rounds per man should be issued. Where changes of the objective are called for or where there is more than one firing point, five rounds per man for each objective and each firing point should be issued.

(f) At the beginning of each exercise the commander of the unit taking part will be informed as to the tactical idea involved and as to the general procedure to be followed. Once begun, the exercise should be allowed to take its course free from interruption unless it becomes necessary to interfere to prevent accidents; and as every combat exercise is designed to represent a tactical idea, it will be conducted by means of the prescribed commands and signals and in accordance with the rules laid down in the Drill Regulations under the headings "Fire" and "Combat," these being supplemented by the principles and rules given herein under the heading "Adjustment of Fire."

225. Supervision. Every combat firing exercise will be supervised by an officer whose duty will be to note the conduct of the exercise, to compare the results obtained with the standard of judgment, and to point out the faults committed. He should have two assistants to record the time, compute the number of hits to be expected under the conditions of the exercise, make notes, etc.

As a rule the captain will supervise the exercises for fractions of his own company. The major will retain the general supervision of the firing exercises of his battalion and will be the supervisor in all cases involving a company. He may, in his discretion, retain supervision in the case of smaller units.

226. Records. A record of each exercise will be made which will contain the following data:

- (1) Place, date, designation of organization.

(2) Nature of exercise, number of men firing, number and kind of targets with arrangement and intervals.

(3) Number of rounds fired.

(4) Number of hits expected and number made, number of targets hit.

(5) Time of execution.

(6) Atmospheric conditions.

(7) Remarks as to the preparation, fire discipline, and fire control.

These records will be filed until the close of the next target season, when they may be destroyed.

227. The Critique. Intelligent criticism is the basis of good instruction and insures progress. Hence, to realize the full benefits of the exercises in combat firing a careful analysis will be made by the supervisor as soon as the results of each firing are known, and on the ground on which the exercise was held. A discriminating judgment is required on the part of the officer charged with this duty, and it is important that not only the errors committed but the means of correcting or avoiding them should be carefully explained.

The rules for judgment are those prescribed in the War Department publication "Regulations Prescribing Standard for Field Firing," prepared at the Musketry School.

228. Range Regulations. A suitable range party will be detailed by the officer supervising the firing consisting of an officer as range officer and a sufficient number of men to act as target and signal men and range guards.

The duties of the range officer are to prepare the targets, to superintend their placing and manipulation, to see that the range is safe, and where necessary to post range guards to prevent persons from entering the area of fire; to record and report the results of the firing.

Every precaution will be taken to provide for the safety of markers, target men, and others whose duties require them to be anywhere within or near the area of fire. When it appears to be necessary, a point which will be continually in view of the officer or noncommissioned officer in charge of the firing line throughout the exercise will be selected from which to display the danger signal. This point will be known to all engaged in the firing. No firing of any kind will be done while the danger signal is displayed. Should the danger signal appear while an exercise is in progress, the command will be halted and all firing and movement will cease. When the danger signal is removed the exercise will be resumed.

Reports. Reports of the results of combat exercises will be submitted as prescribed in paragraph 255.

228½. Except during the regular practice season, there will be held monthly, if practicable, such combat practice as the regimental commander may prescribe.

Where local or other conditions prevent the use of ball ammunition, such exercises will be conducted with blank ammunition.

This instruction will include company, battalion, and regimental combat firing exercises. A record of such combat practice will be kept and a report showing the nature of the exercises, with copies of the problems, if any, will be submitted monthly to the department commander.

CHAPTER V.

PROFICIENCY TEST.

229. To determine the proficiency attained in collective marksmanship, courses in firing suitable as tests and adapted to the firing grounds available will be prepared by the regimental commander for the companies or troops of his

regiment. These tests will follow the combat practice and will be held near the end of the practice season or later—they must be held during the period announced for the field training of the troops. They are designated as a further and more formal proof or test of instruction than is furnished by the results obtained in the known-distance practice and the combat exercises.

230. Range Used. Whenever practicable, the proficiency test will be held on a class "B" range. Courses in firing may consist of a single firing exercise for the company, or one exercise for the company and one for each of the platoons thereof, or an exercise for each of the platoons only. In any case not more than 40 rounds per man will be expended in the entire test.

231. Rules. The arrangement of these exercises and their conduct will be governed by the rules prescribed for combat firing so far as they may be applicable, and they will be judged in the same manner. In addition, special rules to suit local conditions may be issued by the commanding officer. The firing will be with the full field equipment as prescribed for the arm of the service.

232. Who Will Fire. All enlisted men who are required to fire through the known-distance course, except sergeants and musicians and trumpeters, and who are borne on the rolls of an organization at the time of taking the test, will fire throughout the test unless excused by the regimental commander; but no one will be excused until the company commander shall have shown in each case that it will be impracticable for the soldier to be present. A soldier absent through his own fault, or who is not excused by the proper authority, will be considered as present and firing throughout the test.

If the company is not stationed with regimental headquarters and there is not sufficient time to obtain the regimental commander's authority to excuse a soldier, the post commander is authorized to do so, provided so much of the first sentence of the preceding paragraph as refers to the company commander is complied with.

In courses where the test consists of an exercise for the company and an exercise for each of the platoons thereof, a soldier will be allowed to fire in but one platoon in the platoon exercises.

A soldier who has fired in the test for the target season with one organization and becomes, through transfer or reenlistment, a member of an organization which has not yet fired the test, will take part in this firing with his new organization.

233. Procedure. The test will be fired under the direction and personal supervision of the regimental commander. If the company is not stationed with regimental headquarters the test will be fired under the supervision of the post commander or an experienced officer of suitable rank specially selected by the post commander. No information in regard to the course which any organization will be required to fire will be given out before the date set for the test.

234. Results. The results obtained will be recorded as prescribed for combat firing exercises and a judgment rendered as to whether the entire performance was satisfactory or unsatisfactory, as the results may warrant these characterizations.

It may be said, however, that a collective firing exercise is too complex an operation to have its results expressed by a number, a single word or even by a phrase. In the best performance some mistakes will probably have been made to which, in the interests of good instruction, attention should be called. With those who have not done so well and whose merit may be doubtful, it is all the more necessary to analyze all the operations involved in the test so

that the faults committed may be discovered and the responsibility for any deficiency fixed.

In any case, therefore, this test will be followed by a critique by the officer supervising the test, to be delivered as soon as the results of the firing are known. Mere comparisons between organizations may mean nothing. On the other hand, careful supervision and effective criticism insure progress in any branch of instruction.

235. Officers Responsible for Deficiency of Organization to be Reported. Should the results obtained in the annual proficiency test for any organization be such as to warrant a judgment of unsatisfactory, a presumption of deficiency for the entire organization will have been established. This, however, is not entirely sufficient. In case the apparent deficiency is manifestly not due to defective leadership, further inquiry should be made into the state of individual marksmanship and fire discipline of the organization as exhibited in the range and combat practice.

Should the presumption of deficient instruction be sustained and the examination establish a proof of the incapacity of the company or troop commander as an instructor, or should the deficiency be owing to the defective leadership, or should both these conditions exist, the name of the officer responsible will be reported to the department commander at the time reports of target practice are rendered.

236. Reporting Results. The rating (satisfactory or unsatisfactory) obtained by organizations required to fire the annual proficiency test will be entered on the Report of Combat Practice.

CHAPTER VI.

EXAMPLES OF EXERCISES, WITH SUGGESTIONS CONCERNING THE ARRANGEMENT OF TARGETS.

237. Targets, Buzzers, etc. With the field targets and apparatus furnished by the Ordnance Department, a stationary target may be represented by lines or groups of silhouette figures on staves, targets "E" and "F." With target "G"—falling target—enemies which fall when struck may be represented. When there are pits of suitable depth, target "H," in the hands of pitmen, may be used to represent enemies which appear and quickly disappear, and are called bobbing targets. The same effect may be obtained with lines of figures, either kneeling or prone, placed on the beam apparatus, the latter being operated by men in an adjacent pit. Moving effects with field targets are obtained with target "K."

When a line or group of stationary figures is used as an objective it should be so placed as to be out of sight in the beginning, the targets to come into view as the firing party advances. Targets may be so placed as to be entirely invisible to the naked eye, but visible with field glasses in the hands of the leader, necessitating good judgment in the choice of an aiming point. Pistol shots fired from the position of the targets or from a point in rear of the firing party provide an effectual means of indicating that the simulated enemy has opened fire.

When field buzzers form part of the signal equipment of a post, their use greatly facilitates a communication between the firing point and the different target pits. When these have not been supplied, communication must be by means of a code of signals.

238. Examples of Exercises. The specific statement of a tactical situation is dependent upon the lay of the ground involved. Hence, owing to the variety in ground to be met with, complete models of firing exercises suitable to different localities can not be stated. No more can be done than to give suggestions which may serve as guides. With those here given and the rules for arrangement that have been stated, it may be expected that firing exercises may be drawn up which will carry out in a good measure the purposes of this class of instruction.

In the case of a company a useful exercise may be framed by having the objective for the company composed of two or three distinct groups of targets, one for each of the platoons of the company, so placed or operated as to call for somewhat different conduct on the part of the platoon leaders. By placing the objectives for the platoons on separate disappearing apparatus, the groups may be made to appear and disappear at different times.

EXERCISE NO. 1.

Object. To teach men the value of concealment and the use of cover, to pick up obscure targets, and to estimate the range thereto.

Situation. A single man, a member of an outpost, is informed that a small party of the enemy is in observation in the vicinity of a certain point which is pointed out from a concealed position.

Action. The soldier is directed to advance, without exposing himself to the enemy, to a point from which fire may be opened with better effect, and to then fire on the enemy.

Targets. Three figures—one kneeling and two prone, the latter falling targets—so placed among trees or shrubs as to require some search to be found. The range at which the firing takes place should be from about 350 to 600 yards, the initial point of the movement being such that a good line of advance under cover to the best firing point is open to the soldier—but this should not be indicated to him.

Remarks. This exercise may also be used for two men acting together.

EXERCISE NO. 2.

Object. To illustrate the location of obscure objectives, quick estimation of distances, the use of natural features of the terrain for concealment, and the exercise of fire control over a dispersed squad.

Situation. A small patrol under a noncommissioned officer is sent out under the following orders:

“A small party of hostile infantry has been reported in the vicinity of—. Locate and drive them back.”

Action. The patrol will advance in the indicated direction. The formation will be in conformity with the requirements of the terrain.

When the targets representing the enemy have been located by the patrol, fire will be opened promptly but only as directed by the patrol commander. In case any member of the patrol exposes himself so that he would be in plain sight from the targets, blank cartridges will be fired from the pit to indicate that the patrol is under fire. This will be done only on notification by phone from the range officer.

The time for the preparation will be taken from the moment the patrol locates the targets, or the first blank cartridge is fired from the pit—whichever occurs first—to the time the first shot is fired.

Upon completion of the action the patrol commander will send a written report thereof to his company commander.

Targets. An irregular group consisting of one standing, two prone falling targets, and three prone bobbing targets. (This to be modified so that the total number of figures in the target will equal the number of individuals of the patrol.)

Bobbing targets will appear for periods of 10 seconds, with an interval of 10 seconds between appearances, the first appearance to be immediately after the first shot is fired at the falling targets.

Equipment. In addition to the authorized equipment, the patrol commander is supplied with a pad of the regulation message blanks. His report will be submitted on this form.

Time. As provided under "Action" and "Targets" above.

EXERCISE NO. 3.

Object. Collective exercise in which fire discipline and fire control are illustrated. No shots will be fired except by direction of the outguard commander.

Situation. An outguard consisting of a noncommissioned officer and six or seven men is given a specific sector of observation. It establishes a double sentry post. The location of the sentries and the remainder of the outguard will be in conformity with the requirements of the terrain.

Action. Upon the first appearance of the enemy, as represented by the targets, the sentries will endeavor to locate them and will notify the outguard commander at once as to the nature of the targets, etc. The outguard commander then makes the proper disposition of the outguard to open and maintain a vigorous fire upon the enemy.

Targets. Six or eight kneeling silhouettes on disappearing apparatus (target "I"). These will be made to appear for periods of 30 seconds each with intervals of 30 seconds between appearances. The first appearance will be indicated by the firing of blank cartridges from the pit. Range 400 to 700 yards.

Time. As provided under "Targets" above.

EXERCISE NO. 4.

Object. To illustrate the location of obscure objectives, quick estimation of distances, use of natural features of the terrain for concealment, and the exercise of fire control.

Situation. A strong patrol is sent out under the following orders:

"1. Small parties of the enemy are reported about half a mile from our present position, and in the direction of ———.

"2. You will locate the enemy and, by attacking, determine his dispositions."

Action. The patrol will advance in an indicated direction, the formation being in conformity with requirements of the terrain.

When the targets representing the enemy have been located by the patrol fire will be promptly opened, but only as directed by the patrol commander.

In case any member of the patrol exposes himself so that he would be in plain sight from the targets, blank cartridges will be fired from the pit to indicate that the patrol is under fire. This is done only upon notification by phone from the range officer.

Upon the completion of the action the patrol commander will send a written report of same to the commanding officer Company "A," from whom he is assumed to have received his orders.

Target. Eight kneeling silhouettes on a beam, 1 yard edge to edge, and two prone falling targets. The beam target will appear for 30 seconds and at 30-second intervals.

Time. The time for the preparation will be taken from the moment the patrol locates the target, or the first blank cartridge is fired from the pit—whichever occurs first—to the time the first shot is fired.

EXERCISE NO. 5.

Object. To illustrate fire control and the use of the battle sight.

Situation. A platoon of two squads is ordered to attack the enemy in a certain position. The general location of the main objective is indicated to the platoon commander. While advancing, the platoon encounters an outpost of the enemy.

Action. The platoon is assigned certain lateral limits within which the advance is to be confined.

At the first firing point, which will be designated, five rounds per man will be fired and the advance will be resumed under the assumption that fire superiority has been gained. While the platoon is advancing a second target appears. The platoon is halted and fire opened on the nearer group, the battle sight being used.

The main objective is outside of battle sight range; the second target is within battle sight range.

Targets. The distinct target, or main objective, will consist of eight kneeling silhouettes with intervals of 1 yard from edge to edge. The second target will consist of eight prone silhouettes on disappearing apparatus. The second target will appear for periods of 30 seconds each with intervals of 30 seconds between appearances. The first appearance will be controlled by phone.

Time. As provided under "Targets" above.

Remarks. This exercise may be used for a larger platoon.

EXERCISE NO. 6.

Object. To illustrate the locating and firing upon distant targets and the utility of the battle sight when it is a question of opening promptly a rapid fire on a fleeting objective.

Situation. A platoon of two squads is ordered to attack the enemy. The general location of the targets is indicated to the platoon commander. While advancing, the platoon is assailed by another party of the enemy which moves rapidly as though endeavoring to make a flank attack.

Action. The platoon is advancing in skirmish order when the firing of blank cartridges from the pit will indicate that the enemy has opened fire. The platoon is halted and opens fire, the disappearance of the targets indicating that fire superiority has been gained and that the advance may be resumed. When the second objective is discovered the platoon is again halted and fire opened on the moving target with the greatest possible effect.

Targets. The distant target, or main objective, will consist of eight kneeling silhouettes, 1 yard edge to edge, on beam disappearing apparatus. This target will be raised at the time blank cartridges are fired from the pit and will remain in sight such length of time—not exceeding one minute—as will insure that not more than five rounds per man are expended on it. This time will be regulated from the firing point by phone.

Second objectives, eight kneeling silhouettes on sled (target "K").

Remarks. This exercise may be used for a larger platoon.

EXERCISE NO. 7.

Object. To illustrate the use of the intrenching tool and range finder, firing from shelter with a rest for the rifle, fire discipline, fire control, and a maximum rapidity of effective fire under the most favorable conditions.

Situation. A platoon of two squads is assigned a portion of a defensive position. They are ordered to intrench and drive back an enemy who is expected to advance and come into view 10 minutes after the position is first occupied.

Action. One end of the trench location is pointed out to the officer, and the direction from which the attack may be expected is indicated. The platoon commander then lays out his trench and proceeds to construction without delay. While the work of construction is going on, the officer will make use of his range finder in determining the range to prominent points in his front.

At the expiration of 10 minutes he will be prepared to immediately fire upon any targets that come into view.

Targets. No. 1. Kneeling silhouettes 1 yard apart on beam disappearing apparatus; range, yards.

No. 2. Kneeling silhouettes 1 yard apart on disappearing apparatus; range, yards.

No. 3. Kneeling silhouettes 1 yard apart on disappearing apparatus; range, yards.

No. 4. Prone silhouettes 1 yard apart on disappearing apparatus; range, yards.

The longest range should not be much in excess of 900 yards, the shortest about 250 yards.

The targets appear in succession, representing an advancing enemy. Each target will be exposed one minute. One minute will elapse between the disappearance of one group and the appearance of the next.

The number of rounds fired at each group will be ascertained between appearances of the target by the officer supervising the exercise.

The construction called for should be with the prescribed field intrenching tools.

Time. As provided under "Action" and "Targets" above.

The shelter here referred to is the hasty cover defined in the Infantry Drill Regulations. The same exercise may be carried out with the fire trench, sufficient time for construction being allowed. Three or two groups of figures may be operated instead of four.

EXERCISE NO. 8.

Object. To illustrate the direction and control of fire, fire discipline, range finding, observation of fire, adjustment of fire, and the use of combined sights on a distant objective.

Situation. A company is ordered to occupy a certain position and fire on a distant objective which is indicated to the company commander.

Action. There will be two or more firing points at each of which two series of firings of ten rounds per man will be made.

In the first series the company commander will attempt to adjust the fire by means of one or two ranging volleys, and will then fire the balance of his ten rounds "At will."

Another officer who has not been present during the first firing, will be designated to command the company during the second series.

In the second series adjustment of fire will not be attempted, but recourse will be had to combined sights, two or more readings of the rear sights being used, depending on the range.

Targets. The target will consist of four rows of kneeling silhouettes arranged in column, 16 targets in each row placed with intervals of 1 yard from edge to edge. The distance between rows will be 10 yards.

EXERCISE NO. 9.

Object. Dismounted action for cavalry against superior hostile cavalry.

Situation. A platoon, while reconnoitering, is driven back by two troops, gallops to suitable cover, dismounts, and holds the enemy by fire action.

Action. Scouts report a considerable body of the enemy's cavalry approaching. At revolver fire the platoon retires at the gallop to ground suitable for fire action, and the scouts, clearing the front, take up a position to watch the flanks. The platoon dismounts, the led horses are placed under cover, and three minutes after the revolver shot the target appears in front at a distance of about 800 yards and moves rapidly by the flank for 200 yards. The leader opens fire and continues firing until the target stops or disappears.

Target. Target "K."

EXERCISE NO. 10.

Object. Dismounted action for troop of cavalry illustrating mutual support of platoons in retirement.

Action. A troop of cavalry is forced back by superior infantry. The platoons in alternation take up successive firing positions to cover the retirement of the other platoons, which fall back at the gallop.

Target. For each firing position there will be a corresponding target, target "K" with 16 kneeling figures, the arrangement being such that each platoon will fire once.

EXERCISE NO. 11 (DEMONSTRATION).

Object. To illustrate the effect of incorrect estimates of the range.

Action. Place row of kneeling figures, from 20 to 40, according to number of men firing, at range of 1,000 yards. With a detachment the strength of a platoon, fire a series of shots in succession at 800, 900, 1,000, 1,100, and 1,200 yards, and compare the results made at different ranges. Not less than 5 rounds per man should be fired in each series, and 10 rounds per man will illustrate the point better.

EXERCISE NO. 12 (DEMONSTRATION).

Object. To illustrate the relative efficiency of different rates of fire.

Action. Place a row of prone figures, from 20 to 40 in number, according to number of men firing, at a range of 500 yards. Require a detachment the strength of a platoon to fire a series of 10 shots in about 1 minute. When results have been scored, require the same detachment to fire the same number of rounds at the same targets in 2 minutes' time or longer, the additional time being taken up in a more prolonged aim.

Reduce results in the two cases to hits made per minute and compare them.

EXERCISE NO. 13 (DEMONSTRATION).

Object. To illustrate the influence of rising ground on the depth of beaten zone and to demonstrate also the scope of a single sight setting at short range when the ground is favorable.

Action. Select as a firing station a point with an elevation of 50 or 100 feet overlooking a level stretch below on which are placed as targets in a column formation equal rows of kneeling silhouette figures at ranges of 500, 600, and

700 yards from the firing point, giving a surface of reception which is rising with respect to the line of sight.

With a detachment the strength of a platoon, fire is executed in a series of 10 shots per man, aim being taken only at the first row of figures. The results being scored, with the same arrangement of targets and the same distances, a lower firing point is chosen so that the line of sight is nearly parallel with the surface on which the row of targets stand. The firing is executed as before, aim being taken only at the first row of figures.

The illustration is afforded by the excess in the number of hits made on the second and third rows of figures in the second series over the number made on the same targets in the first instance.

EXERCISE NO. 14 (DEMONSTRATION).

Object. To illustrate the influence on the beaten zone of ground which is falling with reference to the line of sight.

Action. In this case a line of figures is placed along a crest or edge of a plateau, from which the ground falls away from the line of sight. The line of figures so placed is the visible target at which the fire is directed. The point to illustrate is the effect on different targets placed in rear of the edge or crest by fire aimed at the visible objective. Two distinct conditions may here arise:

1. If the inclination of the reverse slope is less than the angle of fall, the dispersion in depth will be increased and the number of hits on the rear rows of figures will decrease more slowly than would be the case if the firing took place on a plain.

2. If the reverse slope is steeper than the angle of fall, targets placed on this slope will be partially or fully defiladed from the shots which clear the crest.

It is therefore necessary to determine beforehand the angle of the reverse slope and choose the firing point accordingly. If it is desired to demonstrate that the ground in rear may be effectually swept by bullets, it is necessary to choose a firing point such that the angle of fall will be greater than the inclination of the slope.

To demonstrate how dead spaces may be created on the reverse slope the firing detachment may be moved forward two or three hundred yards and the firing repeated.

Hits made on line targets and column targets placed on a reverse slope and subjected to indirect fire may be compared to show the greater vulnerability of the former.

239. In addition to the above, the following is given as a typical example of analyzing and criticizing a firing exercise:

Situation. A platoon has been designated as the support of a company acting alone and which is engaged in an attack on a position. The balance of the company is imaginary.

It is assumed that the firing line has reached a certain point and that it has met with such stubborn resistance from the enemy that reinforcement is required in order to gain superiority of fire. The support is in such position and formation as the terrain demands and its commander is cognizant of the general location of the enemy's position. He received from the company commander the following order:

"Advance with your platoon to the firing line, take position on the left of the line, and open a vigorous fire." (The left flank of the imaginary firing line should be indicated by silhouettes or suitable marker.)

Targets. A line normal to the plane of fire and consisting of 25 prone silhouettes with intervals of 1 yard from edge to edge. Range 700 yards.

Ammunition. Fifteen rounds per man.

Action. When the commander of the platoon receives his orders to advance, he makes a reconnaissance to determine the best route to take in order to arrive on the firing line with the fewest losses consistent with celerity, and then proceeds to advance his platoon by the route selected.

When he arrives on the firing line, the platoon commander estimates the range to be 900 yards. He indicates the objective to his platoon and gives the commands for opening fire at will at 900 yards and seeks a position whence he can best observe the effect of the fire. He soon notices a number of shots striking low and causes the elevation to be raised to 1,000 yards, and the firing is thus completed.

Critique. The results of the firing in hits, distribution of hits, and time of execution are announced to be 2 hits on 2 figures in 5 minutes' time. Referring to the standard of judgment as given in "Regulations Prescribing Standard for Field Firing," it is seen that 12 hits should have been made on 8 figures in 2 minutes' time. This comparison warrants a judgment "Unsatisfactory" for this exercise.

In order to make plain the errors committed and to show why the results have fallen below what they should have been, the platoon is assembled at a point overlooking the ground on which the exercise was held and the officer charged with the supervision delivers the following critique:

"Your disposition of the support, before the advance, was very good. The reconnaissance was altogether too deliberate and much valuable time was thus wasted. The route that you finally selected for your advance afforded you plenty of concealment, but would probably have been swept by the fire of the enemy directed on the firing line in your front. This shows you that concealment does not necessarily mean defilade.

"The use of cover by your platoon was good, with the exception of yourself when you were seeking an observation point.

"Your fire was too deliberate. In this exercise average shots should have obtained 12 hits on 8 figures and should have finished their firing within two minutes. You obtained 2 hits on 2 targets in five minutes. Your few hits may be ascribed to the error of 200 and later 300 yards in the estimation of the range, which was, in fact, 700 yards.

"Your designation of the objective and its location was not definite and some of your men fired all their ammunition without knowing just where the target was. It was probably the low shots of these men that caused you to raise the elevation from 900 to 1,000 yards."

PART IV.

MISCELLANEOUS.

CHAPTER I.

CLASSIFICATION, EXTRA COMPENSATION, INSIGNIA, AND TELESCOPIC SIGHTS.

CLASSIFICATION RIFLE FIRING.

240. Requirements. The requirements for the qualification in the several grades of marksmanship are given in the following table:

TABLE OF CLASSIFICATION.

| Grade. | Rifle firing. Points. |
|--------------------------------|--------------------------|
| Expert rifleman..... | 253 |
| Sharpshooter..... | 238 |
| Marksmanship..... | 202 |
| First-class man..... | 177 |
| Second-class man..... | 152 |
| Unqualified ¹ | |

The soldier having attained the grade of marksman or better will retain that classification during his current enlistment unless in subsequent firing he attains a higher grade. The officer having attained the grade of marksman or better will retain that classification and be authorized to wear the badge for three years from date of qualification unless in subsequent firing he attains a higher grade. Requalification by officers with a view to obtaining authorized bars can be made only after three years from date of first qualification or from date of last requalification for a bar.

The soldier who has completed the course of known distance practice and is transferred thereafter, or who is discharged and reenlists, will not be given a second opportunity in the same target year to qualify.

A soldier who is discharged and reenlists within three months will retain his last qualification for one year from date of reenlistment unless in the meantime he shall have fired the record-practice qualification course. As soon as he fires the record-practice qualification course his previous classification ceases and he is classified according to the scores he may make in that course.

In case the soldier has not, at the time of transfer, completed his known distance practice for that year, his company commander will complete his individual record sheet to date and attach it to the descriptive list which accompanies him, and the soldier will complete his known distance firing with the organization to which transferred, unless in that organization known distance practice for that year has been completed.

For regulations concerning additional pay for enlisted men qualifying as marksmen or better, see paragraph 1345, Army Regulations.

¹ All who fail to qualify as second-class men or better and those who for any reason did not fire the course and are not otherwise classified.

241. Who Will Be Classified. All who fire and who are borne on the rolls of the organization during any part of the practice season, or who are attached for practice by proper authority, will be classified.

Bandsmen who fire in the Philippines will not be classified.

For Coast Artillery, see special course "A."

242. Special Classification. A special classification is provided for all those who fire special course "A," as follows:

TABLE OF CLASSIFICATION, SPECIAL COURSE "A."

| Grade. | Points. |
|--------------------------------|---------|
| Marksman..... | 150 |
| First-class man..... | 120 |
| Second-class man..... | 100 |
| Unqualified ³ | |

243. TABLE OF CLASSIFICATION, PISTOL AND REVOLVER.

| All who are authorized or required to fire the dismounted course. | | All who are authorized or required to fire the mounted course. | |
|---|--|--|--|
| Grade. | Percentages at least. | Grade. | Percentages at least. |
| Expert pistol shot... | { 80 in record course. 83 in expert course. | Expert pistol shot... | { 70 in record course. 65 in expert course. |
| First-class man..... | 80 in record course. | First-class man..... | 70 in record course. |
| Second-class man..... | 60 in record course. | Second-class man... | 50 in record course. |
| Unqualified. ³ | | Unqualified. ⁴ | |

244. Extra Compensation. The soldier will receive such extra compensation for qualification in rifle firing as may be authorized by law and regulations; provided, however, that the qualification of marksman in special course "A" will not entitle the soldier to increased pay.

Immediately after the close of the record practice, qualification course, the names of men who qualify in the various grades for which extra compensation is awarded will be published in orders.

These orders will be issued by commanders empowered by regulations to issue orders for the appointment and promotion of noncommissioned officers, or in exceptional cases by higher commanders, upon receipt of properly authenticated evidence as to qualification, and will show the date of actual qualification from which the soldier is entitled to additional pay.

INSIGNIA.

245. Classes. To each officer and soldier qualifying for the first time as expert riflemen, sharpshooter, marksman, expert pistol shot, and first-class pistol shot certain insignia, indicating their skill in marksmanship, will be issued. In case of loss or damage new issue may be made as provided for in paragraph 250.

246. Rifleman's Insignia. (a) Marksman's Pin. To marksmen, when first qualifying as such, will be issued a marksman's pin. A soldier, having quali-

³ All who fail to qualify as second-class men or better, and those who for any reason did not fire the course and are not otherwise classified.

⁴ See par. 175.

⁵ See par. 199.

fied as a marksman, may wear this pin as long as he continues to draw the increased pay for that qualification.

(b) **Sharpshooter's Badge.** To the sharpshooter a silver badge will be issued. For the first qualification in this grade the badge will consist of a pin and cross; the soldier having once qualified as a sharpshooter may wear the badge while he is entitled to draw the increased pay for that qualification. To those who have qualified as sharpshooters for three years, not necessarily consecutive years, nor, in the case of enlisted men, in the same enlistment, a silver bar will be issued, on which the three years of their qualifications will be indicated, and this will be attached to the badge, between the pin and the cross. For each additional three years of qualification an additional bar will be issued, and each in succession attached below the one previously supplied and above the cross.

(c) **Expert Rifleman's Badge.** To the expert rifleman will be issued a silver badge. The soldier having qualified as an expert rifleman may wear the badge while he is entitled to draw the increased pay for that qualification. To those who have qualified as expert riflemen for three years, not necessarily consecutive years, nor, in the case of enlisted men, in the same enlistment, a silver bar will be issued, on which the three years of their qualifications will be indicated, and this will be attached to the badge below the pin. For each additional three years of qualification an additional bar will be issued, and each in succession attached below the one previously supplied.

247. Marksman's Pin, Special Course "A." To marksmen, when first qualifying as such in special course "A," will be issued a special marksman's pin. If qualification is renewed in the succeeding season the pin may be worn another year, and so on for further seasons, but if the grade of marksman is not reached the pin will not be worn.

This pin will be issued upon the certificate of the company commander that the soldier has qualified under the regulations as a marksman in special course "A."

248. Expert Pistol Shot's Badge. To the expert pistol shot, officer or enlisted man, a silver badge will be issued, which may be worn for three years from the date of qualification or requalification. Requalification by officers and enlisted men can be made only after three years from date of first qualification or from date of last requalification. For each requalification, a silver bar will be issued, which will specify the year of requalification and will be attached to the badge immediately below the pin.

249. First-Class Pistol Shot's Pin. To the first-class pistol shot will be issued a pin, which may be worn for one year from the date of qualification and thereafter for one year from the date of each subsequent qualification.

250. Duplicates. These insignia will become the property of the persons to whom issued. If they are lost by the owner or in transmission to him, or if they become unsightly from long wear, they may be replaced without cost to the owner. But in all cases the official certificate of the company commander to the effect that he has investigated the circumstances of the loss or damage and finds that no negligence can be imputed to the soldier will be required as evidence upon which to make the new issues. In case of loss, claim must be made within 60 days from date of loss. Duplicates, if desired for use on separate coats, will be sold to those entitled to wear the insignia.

251. How Obtained. Immediately after the close of the practice season the company commander will report by letter to the commanding officer the names of men in his organization who have made a new or renewed qualification. With this letter the company commander will submit a requisition for the required number of badges and bars. This requisition will be disposed of as any other special ordnance requisition.

252. The insignia earned by members of the Organized Militia for qualification under the rules in the grades which in the Regular Army are entitled to insignia are procured by the State authorities as provided in the last paragraph of paragraph 288, Regulations Organized Militia.

253. Telescopic Sights. To properly equip a special class of shots who, in action, may be employed as sharpshooters the telescopic sight is adopted. These sights are supplied by the Ordnance Department at the rate of two to each company. They will be assigned to the enlisted men found best qualified to use them, and may, in the discretion of the company commander, be carried by them at inspection under arms.

Not less than four men of each company will be given a suitable amount of practice with these sights.

CHAPTER II.

RECORDS AND REPORTS.

254. Records. The company target record consists of three parts:

- (a) The individual record of known-distance rifle firing.
- (b) The individual record of pistol firing.
- (c) The record of the company combat firing and proficiency test.

The sheets forming these records will be bound by the loose-leaf system. By this means the books will be at all times live records. All entries in these records will be made in ink.

During the regular practice season and until paragraph 255 has been complied with the company target record will be kept in the possession of the company commander.

For companies of Coast Artillery the record will contain the record of firing special course "A," the same individual sheets being used.

The record of an officer attached to a company for practice will be duly attested and transmitted to the officer.

The records of an enlisted man attached to a company for practice will be similarly attested and transmitted to the officer charged with the custody of the soldier's descriptive list and account of pay and clothing.

255. Reports. All reports of rifle and pistol firing will be submitted to the proper headquarters as soon as possible after the completion of the firing. The reports to be rendered are as follows:

1. Report of individual classification in rifle practice (annual, company, excepting companies of Coast Artillery).¹
2. Report of individual classification of firing under special course "A" (annual for companies of Coast Artillery).
3. Battalion commander's report of combat firing (annual).
4. Report of individual classification in pistol practice (annual, company, for all armed with the pistol).
5. Consolidated regimental report of classification, rifle practice.
6. Consolidated regimental report of classification, pistol practice.
7. Regimental commander's report of combat firing and the results of the proficiency tests.

With the exception of the battalion commander's report of combat firing and the regimental commander's report on combat firing and the results of the proficiency test, these reports will be rendered on prescribed forms furnished by the Adjutant General of the Army.

¹ Casuals attached to a company for practice will be noted in red ink on the company report of individual classification.

Commissioned officers will be reported on the annual company reports.

Organizations of Engineers, Field Artillery, Coast Artillery Corps, and Infantry will render the report of individual classification, pistol practice, so far as such firing is required.

How Transmitted. As soon as possible after the close of the practice season the battalion commander will forward to the regimental commander the reports of individual classification in rifle and pistol practice of the companies of his battalion. With these he will submit a report of the combat exercises and of the results of the proficiency test when these tests were not supervised by the regimental commander. This report will be in letter form and will set forth briefly when and where the exercises were held, the suitability of the ground for the purpose, the number and general character of the exercises and whether or not proficiency was attained therein according to the established standard of judgment, the number of men in each company participating, and the average number of rounds per man expended in this practice. He will certify that he has personally supervised the known-distance firing of the organizations and that the reports of individual classification agree with the company records. Also that the number of combat exercises prescribed by these regulations were duly held, and that the rules for their conduct were complied with.

If the battalion is serving away from regimental headquarters but in the same territorial department, these reports will be forwarded through the post commander; if serving in a different territorial department, duplicates of all these reports will be forwarded to department headquarters through the post commander.

The regimental commander will transmit to the department commander, with the regimental consolidated reports of classification in rifle and pistol firing, a brief narrative report of the combat firing and results of the proficiency tests of the companies of his regiment. (No data concerning companies serving away from headquarters of the regiment and in a different department therefrom will be included in this report.) This report will be based on the battalion commanders' reports, but should contain any additional information bearing on instruction in rifle and pistol practice necessary or desirable to the department commander.

An annual report of the small-arms firing by the Organized Militia of each State will be rendered as soon as practicable after the close of firing to the Chief of the Division of Militia Affairs.

256. In addition to the reports required by paragraph 255, department commanders will include in their annual reports a statement of the progress made in small-arms practice within their respective commands. This will include a tabulated statement of the number of men of each regiment qualifying in the various grades in rifle and pistol firing, and a report of the combat firing held, with the proficiency attained therein.

CHAPTER III.

TARGETS AND RANGES.

TARGETS.

257. Targets are divided into four classes:

- (a) Known-distance targets (for rifle).
- (b) Field targets (for rifle).
- (c) Pistol targets.
- (d) Miniature targets (for gallery practice).

258. Known-distance Targets. Target A. The short-range target, used for 200 and 300 yards, is a rectangle 6 feet high 4 feet wide. Black circular bull's-eye 8 inches in diameter, value of hit, 5; center ring, 26 inches in diameter, value of hit, 4; inner ring, 46 inches in diameter, value of hit, 3; outer, remainder of target, value of hit, 2.

Target B. The mid-range target, used for 500 and 600 yards, is a square 6 feet on a side, black circular bull's-eye 20 inches in diameter; center ring, 37 inches in diameter; inner ring, 53 inches in diameter; outer, remainder of target. Value of hits, same as on target "A."

Target C. The long-range target, used for 800 and 1,000 yards. It is a rectangle 6 feet high and 10 feet wide. Black circular bull's-eye 36 inches in diameter; center ring, 54 inches in diameter; inner space outside of center ring bounded by vertical lines 2 feet from each end of target; outer, remainder of target. Value of hits, same as on target "A."

Target D. The rapid-fire target. A black silhouette representing a soldier in the prone position placed in the middle of a rectangular target 6 by 6 feet. Value of hits in the figure 5; in the space (within parallels to figure, 4 inches in width above and at sides of figure, 14 inches below figure) immediately outside the figure, 4; in the space immediately outside the 4 space, 3; remainder of the target, 2.

FIELD TARGETS.

259. Target E. A drab silhouette about the height of a soldier in the kneeling position, made of bookbinders' board or other similar material. Hits on all field targets count 1, and any shot cutting the edge of a silhouette is a hit.

Target F. A drab silhouette about the height of a soldier in the prone position made of bookbinder's board or other similar material. The life of targets E and F can be materially prolonged by pasting on fresh paper silhouettes when the figure becomes too much damaged by shots. These targets are used as stationary targets as well as on the moving and disappearing appliances. When necessary these targets are fastened to wooden staves with tacks and tin washers.

Target G. Falling target. The target is made of soft wood about the shape, size, and color of the prone silhouette F. These targets should be placed in small pits (1 by 2 feet), so that about 9 or 10 inches of vertical protection is given the base and mechanism; only the face of the target should show to the front. If the wooden figure becomes unserviceable it may be repaired at the post.

Target H. Targets E or F inserted in a slit at the end of a marking disk staff or pole and fastened with wooden pegs. The staffs are held in the hands of markers or in brackets on the inside of the crest of the pit. The targets are held faced to the front. When struck they are turned rapidly so as to show the white side, and then back to the original position.

Target I. Beam disappearing target. The visible target represents a line of prone or kneeling figures at suitable intervals. In close order 8 figures are mounted on each beam. The figures are targets E and F, mounted on the regulation staves, which are modified by having the points cut off, so that but 6 inches project below the bottom of the figures.

The beam itself is made up of one piece of 2 by 6 inches by 20 feet long, one piece 1 by 6 inches by 20 feet long, and 1 by 6 by 20 inch sections fitted between them, as shown in plate. In the sockets left the staves are fitted.

The beam is laid in a shallow trench, targets horizontal, and a stake is driven in front of the beam at each end. The ropes from the operating standard

lead to the pit (direct and via the rear ring stake) and the beam is turned through 90°, exposing and lowering the targets by pulling on the appropriate ropes. The rope system is in duplicate, so that if one rope is cut by a bullet the target can still be worked. Two or more beams can be coupled together and the whole operated from the center. There should be two end stakes for each beam. The operating standard should be painted a neutral color, have earth rubbed on it or have bundles of vegetation tied to it. The ropes should also be of a neutral color.

This apparatus requires but one man for its operation, even if two beams are coupled together. The pit should be deep enough to give protection, and the earth therefrom should be spread out into a low embankment and concealed by grass or brush.

Target K. Sled target. The disappearing target beam (target I), is lashed lengthwise to two sleds. A rope from 200 to 300 yards long is used to pull this target and an escort wagon and team has been found to be the best motive power. The rope can be run through a snatch block and the team concealed by inequalities of the ground. If no cover can be found for hiding the sled before it starts, it can be easily masked with brush, grass, etc., which will fall when the targets start.

PISTOL TARGETS.

260. Target L. A rectangle 6 feet high and 4 feet wide, with black circular bull's-eye 5 inches in diameter. Value of hit therein, 10. Seven rings with diameters as follows:

| | Value of hits. |
|--------------------------------------|----------------|
| (1) 8½ inches | 9 |
| (2) 12 inches | 8 |
| (3) 15½ inches | 7 |
| (4) 19 inches | 6 |
| (5) 22½ inches | 5 |
| (6) 26 inches | 4 |
| (7) 46 inches | 3 |
| (8) Outer, remainder of target | 2 |

Target M. Silhouette, representing standing figure, of which upper part is Target E and lower part a trapezoidal piece whose upper edge is placed closely against lower edge target E. Hits count 1.

Bobbing Targets. Targets E and M, arranged to be fully exposed to firer for limited time. Edge of target toward firer when target is not exposed.

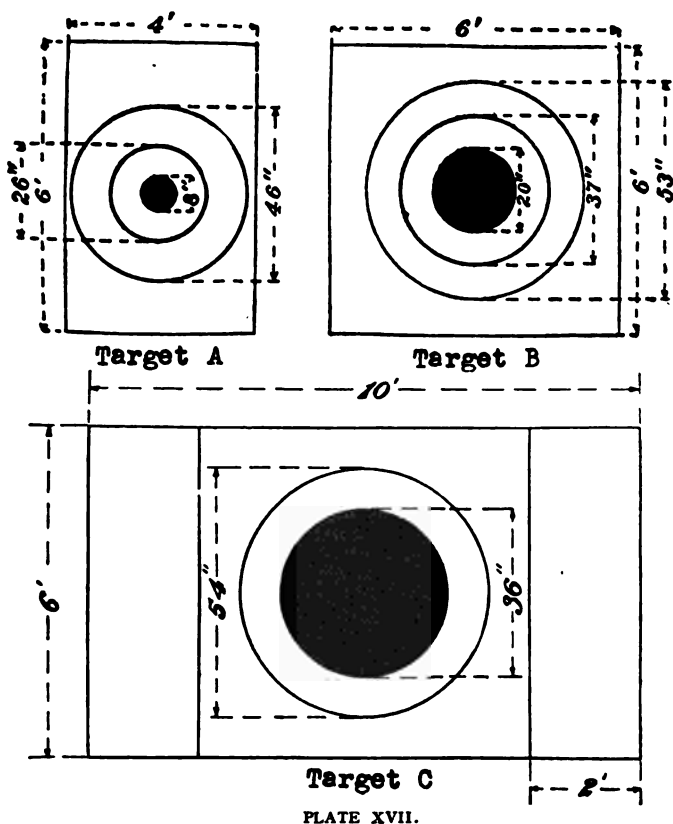
261. Miniature Targets. For use in Special Course for Volunteer Recruits, Appendix II, and in gallery practice.

Target X. Used in gallery practice. Is a rectangular paper target 8 by 12 inches. Black circular bull's-eye, 1½ inches diameter; center ring, 4½ inches diameter; inner ring, 7½ inches diameter; outer, remainder of target. Value of hits same as on target A.

Target Y. A rectangular paper target, 4 by 6 inches. Black circular bull's-eye ¾ inch diameter; center ring, 2⅞ inches diameter; inner ring, 3⅞ inches diameter; outer, remainder of target. Value of hits same as on target A.

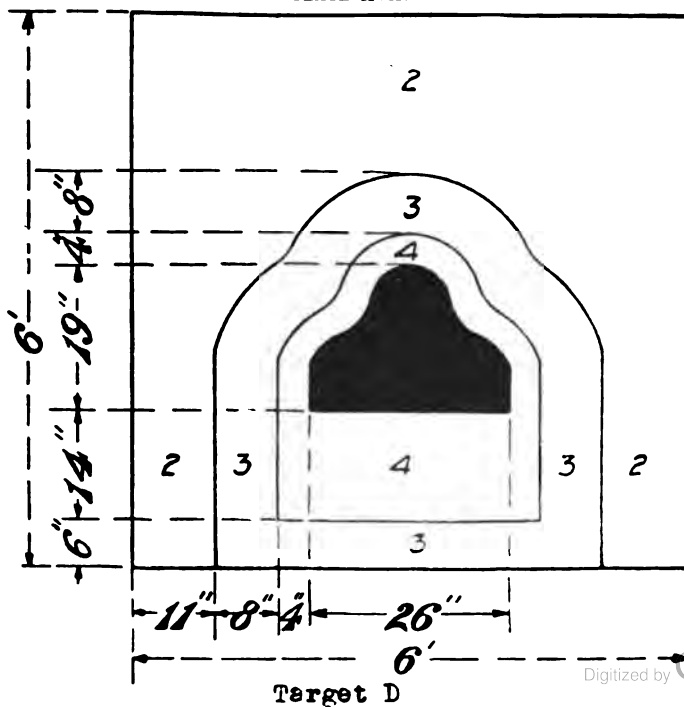
Target Z. A rectangular paper target, 2⅓ by 4 inches. Black circular bull's-eye ¼ inch diameter; center ring, 1¼ inches diameter; inner ring 2¼ inches diameter; outer, remainder of target. Value of hits same as on target A.

The Iron Gallery Target. As issued by the Ordnance Department.



Target C

PLATE XVII.



Target D

PLATE XVIII.

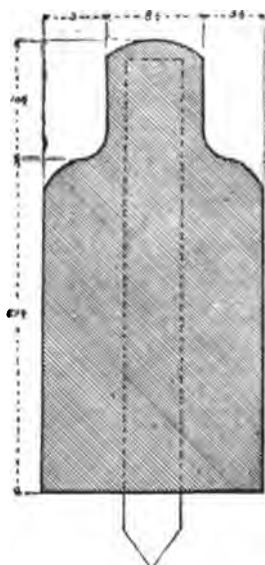
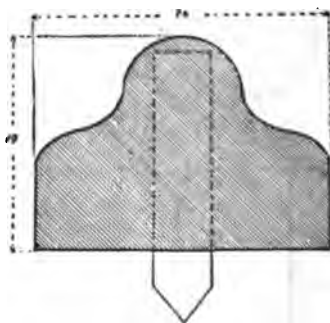
**Target E****Target F**

PLATE XIX.

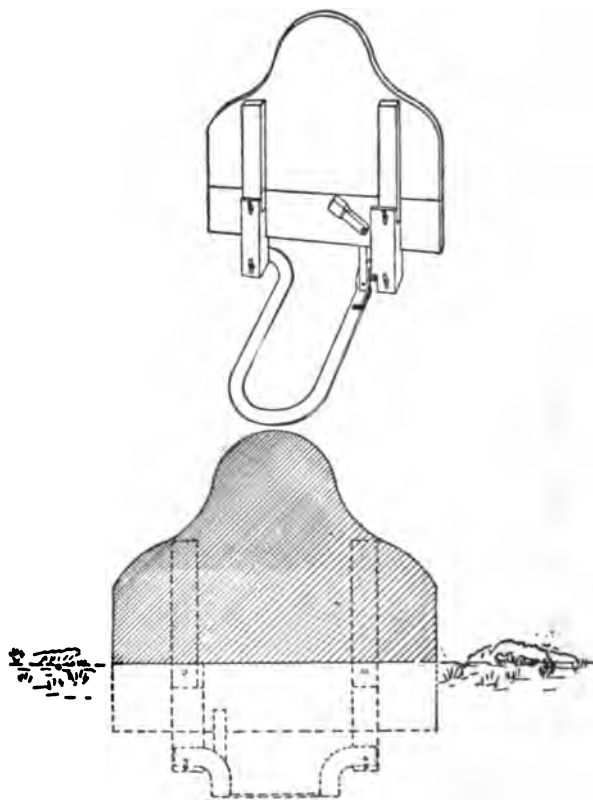
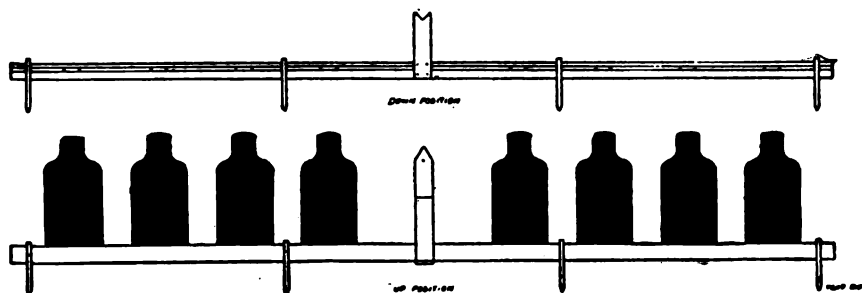
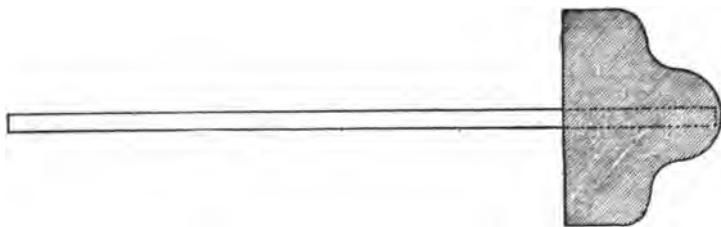
**Target G**

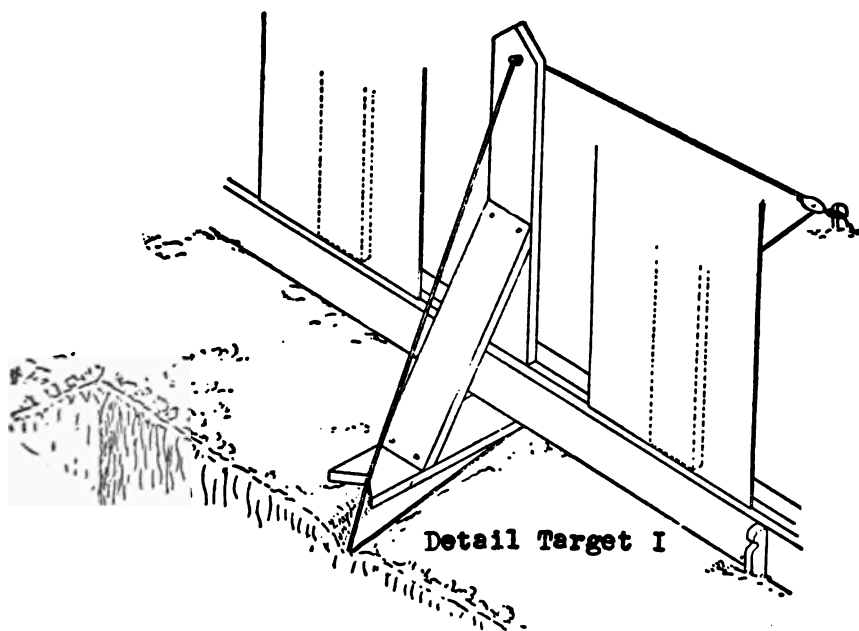
PLATE XX.

Target H



Target I

PLATE XXI.



Detail Target I

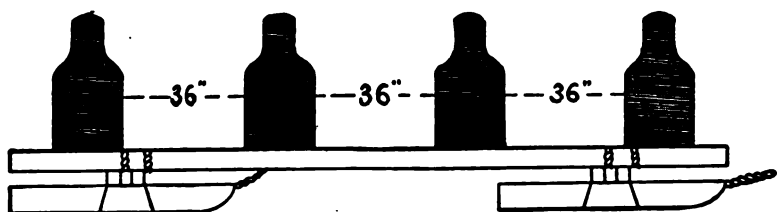
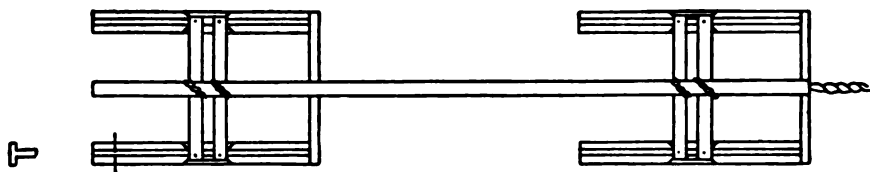
**Target K**

PLATE XXIII.

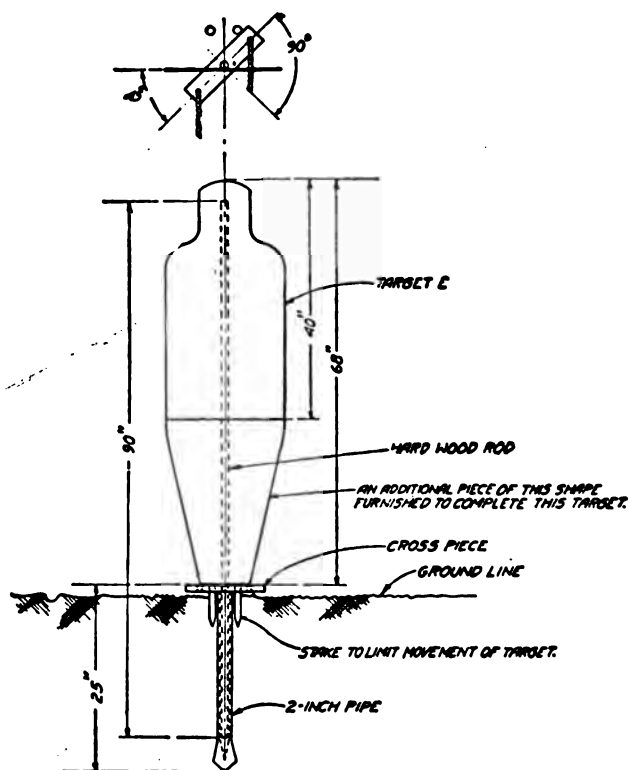
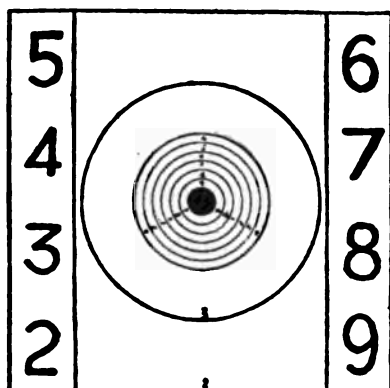
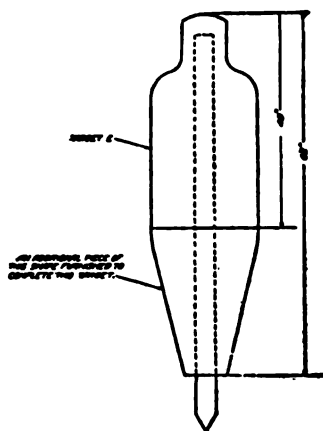
**BOBBING TARGET**
REVOLVER OR PISTOL RANGE PRACTICE

PLATE XXIV.

SMALL-ARMS FIRING MANUAL.

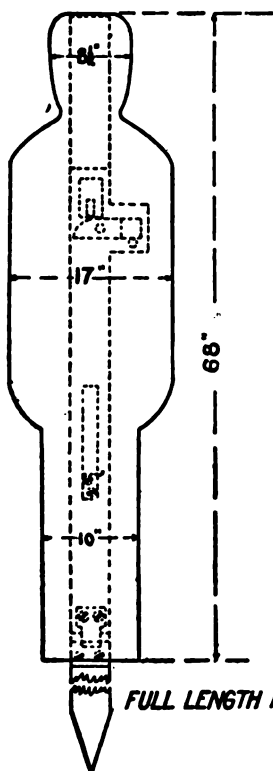


Target L



Target M

PLATE XXV.



FULL LENGTH FALLING TARGET



PLATE XXVI.

RANGES.

262. Classes. There are two classes of ranges: Class "A" ranges, which are more or less limited in extent and which are equipped for known distance practice; class "B" ranges, which are of extended area and diversified terrain, and which are used for combat firing.

CLASS "A" RANGES.

263. Rules for Selection. As the nature and extent of the ground available for target practice and also the general climatic conditions are often widely dissimilar for different military posts, it will not be possible to prescribe any particular rules governing the selection of ranges, but only to express certain general conditions to which ranges should be made to conform as far as may be practicable. In view of the extreme range and penetration of the bullet of the United States rifle, model 1903, it will be found necessary in the case of many posts to have target practice conducted at a distance of several miles from the post, necessitating the establishment of a camp on or near the range. The target practice can then be conducted uninterrupted by the routine of post duties.

Security Necessary. For posts situated in thickly settled localities, where the extent of the military reservation is limited, the first condition to be fulfilled is that of security for those living or laboring near or passing by the range. This requirement can be secured for class "A" range by selecting ground where a natural butt is available or by making an artificial butt sufficiently extensive to stop wild shots. For complete security there should be no road, building, or cultivated ground on either flank of the range nearer than 300 yards nor in the rear of it within the extreme range of the rifle. This condition can rarely be secured unless a natural butt of large extent exists.

264. Direction of the Range. If possible, a range should be so located that the firing is toward or slightly to the east of north. This gives a good light on the face of the targets during the greater part of the day. However, security and suitable ground are more important than direction.

265. Best Ground for Class A Range. Smooth, level ground, or ground with only a very moderate slope, is best adapted for a range. If possible, the targets should be on the same level with the firer, or only slightly above him. Firing downhill should, if practicable, be avoided.

266. Size of Range. The size of the range is determined by its plan and by the number of troops that will fire over it at a time. There are two general plans used in range construction—one with a single target pit and firing points for each range, the other with its firing points on one continuous line, the target pits for the various ranges being in echelon. The latter type requires more ground but admits of firing at different ranges at the same time.

267. Intervals Between Targets. To reduce to a minimum the amount of labor required in preparing the range, the targets should be no farther apart than is necessary to obviate the probability of a shot being fired on the wrong target. At all ranges the width between the targets need not exceed the width of the targets themselves—that is, at short and mid range, 6 feet; at long range, 12 feet.

268. Protection for Markers. On all ranges protection must be provided for the pit details. This is done by excavating a pit for the targets or by constructing a parapet in front of them, or by a combination of these methods.

Where there are several targets in a row, the shelter should be continuous. It must be high enough to protect the markers and the target not being fired upon. The parapet may be of earth, with a timber or concrete revetment, of

sufficient thickness to stop bullets, and from 7½ to 8 feet high above the ground or platform on which the markers stand.

269. Artificial Butts. If an artificial butt is constructed as a bullet stop, it should be of earth not less than 30 feet high and with a slope of not less than 45°. It should be extended about 5 yards beyond the outside targets and should be placed as close behind the targets as possible. The slopes should be sodded.

270. Hills as Butts. A natural hill to form an effective butt should have a slope of not less than 45°; if originally more gradual it should be cut into steps, the face of each step having that slope. As a temporary expedient the face of the hill may be plowed perpendicularly to the range, but as the bullets soon cut down the furrows this measure must be frequently repeated to prevent the danger of ricochets.

271. Numbering of Targets. Each target should be designated by a number. The numbers for ranges up to 600 yards should be at least 6 feet in height and should be painted black on a white background. The Arabic is preferable to the Roman notation, being more readily comprehended by the soldiers; if made of the size suggested, they will always be quickly recognized. They should be placed on the butt behind each target, but not so far above as to prevent the soldier seeing the number when aiming at the target.

272. Measuring the Range. The range should be carefully measured and marked with stakes at each 100 yards in front of each target. The stakes should be about 12 inches above the ground, painted white, and lettered in black, with the number of the corresponding target and its distance. These stakes will then designate the firing points for each target at the different distances. Particular care should be taken that each range thus marked out is perpendicular to the face of its own target.

273. Ranges Parallel. The different ranges for the same distance should all be parallel, so that similar conditions with respect to wind and light may exist.

It is not essential, however, that the ranges employed for long-distance shooting should be parallel to those used for the ordinary company practice.

274. Firing Mounds. If it becomes necessary to raise a firing point on account of low ground, a low mound of earth no higher than absolutely required should be made. The mound should be not less than 8 feet square, level, and sodded. If the entire firing line is raised, the firing mound must be not less than 8 feet wide on top, level, and sodded if possible.

275. Pit Shed. A small house or shed should be built in or near the target pit, in which the marking disks and signal flags and spare parts of the target frames for making immediate repairs should be stored. It should be sufficiently large to afford a shelter for the markers in case of a sudden storm.

276. Danger Signals. A socket for the staff of the danger signals should be placed on the marker's shelter in front of each target and so inclined that the flag will always fall clear of the staff and be readily seen. This flag will always be displayed when the target is in place and not in use. In addition to the danger signals at the targets one or more danger signals will be displayed near the range to warn passers-by when firing is in progress. These signals will not be placed in such a position as to serve as streamers for judging wind on the range. They should be placed on the roads or on the crest of the hill where they can be plainly seen by those passing.

277. Range House. On large ranges where competitive firing is held a house containing a storeroom and several office rooms should be erected in some central place, off the range, but in its immediate vicinity. Such facilities as will enable visitors to satisfactorily witness the firing should also be provided.

278. Telephone Service. When practicable, ranges should be equipped with a telephone system, connecting the target pit with each firing point, the range

house, and the post. When a large number of targets are installed, the range should be equipped with the annunciator buzzer system.

279. Covered Ways Between Pits. Where the pits are in echelon, covered ways or tunnels should be provided between the various pits. This will allow the pit details to be shifted with safety without interrupting the firing.

280. Scorers' Tables. The range should be provided with scorers' tables and benches.

CLASS "B" RANGES.

281. Class B Range. Certain extensive reservations in the United States and the Philippine Islands will furnish ample and suitable ground for combat firing. At times extensive tracts of unoccupied land or land from which the crops have been harvested may be rented near the post. At other points where leased tracts are at the disposal of the garrison for purposes of target practice or maneuvers facilities for combat firing can probably be found. Any ground suitable for maneuvers will also be suitable for combat firing, if the safety of the neighboring inhabitants be taken into consideration and provided for.

Tracts that have been set aside as permanent Class "B" ranges may be improved by the construction of permanent shelters for the markers and pitmen, which should be made inconspicuous. Otherwise, these ranges should be kept in the natural state, but changes made to facilitate the practice or to save labor from year to year should be such as not to provide assistance to those under instruction.

CHAPTER IV.

COMPETITIONS.

282. Competitions exist for the purposes of fostering interest in target practice, of furnishing the means for the exchange of ideas among those who excel in small-arms firing, and of classifying the best shots according to merit shown under similar conditions.

In every alternate year, or when directed by the Secretary of War, the following competitions will be held:

1. Department rifle competitions.
2. Department pistol competitions.

These competitions will be held at such places and times as may be designated by the respective department commanders.

A department rifle competition for Philippine Scouts will be held in every alternate year, commencing with the year 1916.

DEPARTMENT RIFLE COMPETITIONS.

283. Selection of Competitors. (a) Officers. Each regimental commander will report to the department commander the names of any commissioned officers of his regiment who may desire to enter the competition and whom he can recommend for that purpose, further stating, where more than one officer is recommended, the comparative proficiency as rifle shots of those reported. From these reports, or from such additional reports as he may require, the department commander will select one officer as competitor from each regiment of Cavalry, Infantry and Engineers and one from each battalion of mounted Engineers and Philippine Scouts in his command, and in addition such officers

of the General Staff and the different staff departments or corps, except the medical department and chaplains, in his department, as he may deem proper.

In case a regiment is divided between two or more departments, the final selection of officers from such a regiment will lie with the Secretary of War.

The Coast Artillery Corps may be represented, at the discretion of the department commander, in the ratio of 1 officer to 12 companies.

(b) **Enlisted Men.** The commanding officer of each company of Infantry and Engineers and each troop of Cavalry will select from the enlisted men of his organization the most suitable soldier, due regard being paid to excellence of shooting with the rifle, as well as to steadiness and good soldierly habits and conduct, and report the name of the man so chosen to the regimental commander or, in case of mounted Engineers, to the battalion commander.

The post, regimental, and battalion noncommissioned staff will not be represented.

Enlisted men of the Coast Artillery may be permitted but not required to compete, and will be selected by company commanders as in the case of Infantry organizations.

The names of the men selected will be reported to the department commander, who will order them sent to the competition at the proper time.

283½. For the department rifle competition for Philippine Scouts, officers and enlisted men will be reported and selected as prescribed for officers and enlisted men of Engineer battalions in sections (a) and (b), paragraph 283.

284. Assembly. The officers and enlisted men thus selected will be assembled at some convenient place, and, after the completion of the prescribed preliminary practice, the enlisted men will compete for places on the team.

The officers will also compete at the same time with each other, not for places on the team but for medals.

285. Preliminary Practice. First: Ten shots, slow fire, at 300, 500, and 600 yards each, conducted as in record practice, qualification course, except that at 300 yards the firing will be either from the sitting or kneeling position at the option of the competitor, and no sighting shots will be allowed at 600 yards. At 300 yards target "A" will be used; at 500 and 600 yards target "B" will be used.

Second: Ten shots, slow fire, at 1,000 yards, at target "C," conducted according to paragraph 115, except that no coaching will be allowed. The firing will not be preceded by sighting shots.

Third: Ten shots, rapid fire, at 200, 300, and 500 yards each, at target "D," conducted according to paragraph 112.

In all firing—preliminary practice and the competition proper—either the open or peep sight may be used.

286. Competition Proper. The competition proper will consist for each competitor of the practice prescribed for preliminary practice, except that each firing at 600 and 1,000 yards will be preceded by 2 sighting shots, and the course will be fired through twice, making a total of 140 shots for record; the order of sequence in firing being determined by the officer in charge of the competition.

287. Department Team. The strength of the department team will be in direct proportion to the number of enlisted competitors engaged in the competition, the ratio being fixed at 1 member of the team to 5 competitors, fractions not considered. The team will be composed of those enlisted competitors making the highest aggregate scores for the entire competition proper.

288. Prizes. To the members of the team thus selected the following gold,

silver, and bronze medals will be awarded according to order of merit and in the ratios indicated:

| Competitors. | Team. | Gold. | Silver. | Bronze. |
|-----------------|-------|-------|---------|---------|
| 30 or more..... | 6 | 1 | 2 | 3 |
| 35..... | 7 | 1 | 2 | 4 |
| 40..... | 8 | 1 | 2 | 5 |
| 45..... | 9 | 1 | 3 | 5 |
| 50..... | 10 | 2 | 3 | 5 |
| 55..... | 11 | 2 | 3 | 6 |
| 60..... | 12 | 2 | 4 | 6 |
| 65..... | 13 | 2 | 4 | 7 |
| 70..... | 14 | 2 | 4 | 8 |
| 75..... | 15 | 2 | 5 | 8 |
| 80..... | 16 | 2 | 5 | 9 |
| 85..... | 17 | 2 | 5 | 10 |
| 90..... | 18 | 2 | 6 | 10 |
| 95..... | 19 | 3 | 6 | 10 |
| 100..... | 20 | 3 | 6 | 11 |
| 105..... | 21 | 3 | 7 | 11 |
| 110..... | 22 | 3 | 7 | 12 |
| 115..... | 23 | 3 | 7 | 13 |
| 120..... | 24 | 3 | 8 | 13 |
| 125..... | 25 | 3 | 8 | 14 |
| 130..... | 26 | 3 | 8 | 15 |
| 135..... | 27 | 3 | 9 | 15 |
| 140..... | 28 | 4 | 9 | 15 |
| 145..... | 29 | 4 | 9 | 16 |
| 150..... | 30 | 4 | 10 | 16 |
| 155..... | 31 | 4 | 10 | 17 |
| 160..... | 32 | 4 | 10 | 18 |
| 165..... | 33 | 4 | 11 | 18 |
| 170..... | 34 | 4 | 11 | 19 |
| 175..... | 35 | 4 | 11 | 20 |
| 180..... | 36 | 4 | 12 | 20 |

and so on according to the principle illustrated in the above table; that is, for each 45 men or fraction, one gold medal; for each 15 men, disregarding fraction, one silver medal; the remainder bronze medals.

Any commissioned competitor (except distinguished marksmen) making a score equal to that of any member of the team will receive a medal like that awarded to such member of the team.

289. Presentation of Prizes. The presentation of competition prizes will be made, when practicable, at the conclusion of the contest, and will be conducted with the ceremony and formality warranted by the importance of the occasion.

Timely requisition should be made for the prizes required.

Winners of medals in rifle or pistol competitions will not part with them without authority from the Secretary of War, but will hold them subject to inspection at any time.

DEPARTMENT PISTOL COMPETITIONS.

290. When Held. These competitions will be held at the same place as the department rifle competitions and will either precede or follow those competitions as the department commander may prescribe.

291. Selection of Competitors. (a) Officers. Each regimental commander will report to department headquarters the names of any commissioned officers of his regiment who may desire to enter the competition and whom he can recommend for that purpose, further stating, whenever more than one officer

is recommended, the comparative proficiency as pistol shots of those reported. From these reports, and such additional reports as he may require, the department commander will select one officer, as competitor, from each regiment of Cavalry, Infantry, Engineer, and Field Artillery in his command, one from each battalion of mounted Engineers and Philippine Scouts, and, in addition, such officers, except medical officers, from the department staff as he may deem proper. Not to exceed one officer of the Signal Corps may be selected in each department by the department commander.

In case a regiment is divided between two or more departments, the final selection of the officer therefrom will lie with the Secretary of War.

The Coast Artillery Corps may be represented, at the discretion of the department commander, in the ratio of one officer to twelve companies.

(b) Enlisted Men. The commanding officer of each troop of Cavalry and each battery of Field Artillery will select from the enlisted men of his organization the most suitable soldier, due regard being paid to excellence of shooting with the pistol, as well as to steadiness and good soldierly habits and conduct, and report the name of the man thus chosen to the post commander.

The post noncommissioned staff will not be represented.

Enlisted men of Engineers, Infantry, Coast Artillery Corps, and Signal Corps armed with the pistol may be represented as follows, viz.:

Engineers. Two competitors from each regiment to be selected by the regimental commander and one competitor from each battalion of mounted Engineers, to be selected by the battalion commander.

Infantry. Two competitors from each regiment, to be selected by the regimental commander.

Coast Artillery Corps. In the ratio of one competitor to six companies, to be selected by the department commander.

Signal Corps. One competitor from each company or aero squadron, to be selected by the organization commander.

The names so selected will be reported through military channels to the department commander, who will send the competitors so selected to the place of competition at the proper time.

292. Assembly. The officers and enlisted men thus selected will be assembled at times and places designated and, after the completion of the preliminary practice, will compete for places on the team.

293. Preliminary Practice. The preliminary practice will consist, for each competitor, of the following practice dismounted, in the following order:

SLOW FIRE (30 SECONDS PER SHOT).

| | Yards. |
|-------------------------------|--------|
| 2 scores (7 shots each) | 50 |
| 2 scores (7 shots each) | 75 |

RAPID FIRE (30 SECONDS PER SCORE).

| | |
|-------------------------------|----|
| 2 scores (7 shots each) | 25 |
| 2 scores (7 shots each) | 50 |

RAPID FIRE (15 SECONDS PER SCORE).

| | |
|-------------------------------|----|
| 2 scores (7 shots each) | 15 |
| 2 scores (7 shots each) | 25 |

Target "L" will be used for all firing.

294. Procedure. The procedure in all classes of firing will be as prescribed in the dismounted course in this manual and subject to regulations governing competitions.

295. Competition Proper. The competition proper will consist, for each competitor, of the firing prescribed for preliminary practice, except that the course will be fired through twice.

296. Department Pistol Team. The strength of the team will be in direct proportion to the number of enlisted competitors engaged in the competition, the ratio being fixed at one member of the team to five competitors, fractions not considered.

The team will be composed of those enlisted competitors making the highest aggregate scores for the entire competition proper.

297. To the members of the team thus selected, gold, silver, and bronze medals will be awarded, according to merit and in the same ratio as indicated in paragraph 288.

Any commissioned competitor making a score equal to or greater than that of any enlisted member of the team will receive a medal like that awarded to such member.

REGULATIONS FOR COMPETITIONS.

298. (a) Officer in Charge. The officer in charge will be an officer of experience, preferably a field officer.

He will have control of the range for the conduct of the competition and for the police and government of the range during the competition. He will prescribe the hours for preliminary practice, and for the competitions proper. His decision on such matters will be final.

(b) Assistant to Officer in Charge. An assistant to the officer in charge will report to and receive instructions from the officer in charge and will assist him in the management of the competition. He will also act as chief range officer. He will have immediate charge of the range and pit and all details pertaining thereto.

(c) The adjutant will discharge the duties of adjutant to the officer in charge, issue by direction of the officer in charge the necessary orders, and perform such other duties as may be assigned to him.

He will be in direct charge of the competitors, whether they are encamped or assigned to companies in barracks.

He will detail daily such range officers, scorers, markers, etc., as may be considered necessary to carry on the competition.

(d) Quartermaster. The quartermaster will have charge of quartering all competitors and arranging for the transportation of their baggage and property upon their arrival at the competition. If they encamp, he will lay out and put up the camp. He will provide all the property, including stationery and office supplies, other than ordnance and signal property, required for the competition and for the preparation and care of the range, and perform such other duties as may be assigned to him by the officer in charge.

(e) Statistical Officer. The statistical officer will assign the competitors to targets and order of firing by lot or by a scheme worked out prior to the competition. He will verify the additions of the scores as reported by the scorers, grade them in order of excellence, and prepare the result for official announcement. He will issue such bulletins from time to time as may be ordered by the officer in charge.

(f) Ordnance Officer. The ordnance officer will make timely requisition for all ammunition and ordnance stores needed in the matches, and during the matches supply these stores as required.

(g) Signal Officer. The signal officer will have charge of the electrical equipment of the range and procure on requisition such telephones, signal

stores, and field glasses as may be needed for the proper conduct of the competition.

(h) **Range Officers.** Under direction of, and as assistants to, the chief range officer are a number of range officers, not fewer than one to two targets in the pit and one to two firing points on the range. Their duties are to supervise the marking and scoring, to see that the firing is conducted according to the regulations, and to perform such other duties as required.

So far as practicable, officers experienced in range work will be selected for duty as range officers.

During the firing at all competitions a range officer will be detailed in charge of the pit at each distance. The officer in charge and chief range officer will formally assemble and instruct the range officers in their duties before the opening of the competition and place them on duty during the preliminary practice for their practical instruction.

299. Details of Enlisted Men. The officer in charge will apply for such details of enlisted men as he may consider necessary. These details will be permanent for the competition.

300. General Regulations. The rules governing every feature connected with range practice as prescribed in this manual will, as far as applicable, regulate the procedure in competitions.

301. Uniforms. Competitors will wear the service uniform and cartridge belt with cartridge belt suspenders. In firing, one suspender may be slipped from the shoulder. The shoulder and elbows of the coat or shirt may be padded. A pad may also be used on the knee upon which the firer kneels in firing kneeling.

302. Arms. In authorized competitions officers and men will use the rifle or pistol as issued or sold by the Ordnance Department. Rifles for telescopic sights will be used in competition for telescopic sights only. The fact that a rifle has been star gauged will not debar it from use in competitions.

Should a rifle be issued with a trigger pull under 3 pounds, the bolt may be changed in order to bring the piece up to the required standard.

303. Sights. No alteration of the service sights will be permitted except that the sight may be blackened and any authorized size of peep slide or slide cap used.

304. Trigger Pull. The trigger pull will always be at least 3 pounds for the rifle and 4 pounds for the pistol, and will be tested (holding the barrel vertically) by a range officer, before firing, each day and at each range. Competitors will submit their arms for further inspection whenever required.

305. Ammunition. The ammunition used will be the service cartridge for the arm as issued by the Ordnance Department, unless the use of other ammunition is authorized.

306. Changing Arms. No two competitors shall fire in any competition with the same rifle. No competitor shall change his rifle during any competition, unless his first piece has become unserviceable through accident, which must be verified by a range officer. This rule also applies to the pistol. Violation of this rule will be a just cause for exclusion from the competition, according to the discretion of the officer in charge.

307. Cleaning. Cleaning will be permitted between ranges only.

308. Shelter for Firer. Sheds or shelter for the firer will not be permitted at any range.

309. Punctuality. Competitors must be present at the firing point at the proper time and in the order stated on their score cards. No application on the part of a competitor for any alteration in his assignment will be entertained.

310. Order of Firing. In slow fire the competitors will place themselves at the firing point by twos, and will fire alternately, the odd number of each pair being on the right and firing first.

In rapid fire but one man at a time will be at the firing point of a target.

311. Loading Pieces. Pieces will not be loaded except by command or until position for firing has been taken.

312. Position in Pistol Competition. At the firing point, when not firing, the pistol will be held at "Raise pistol." While firing, the pistol will be held and supported by one hand only, the arm extended at will but free from the body and unsupported in any way.

313. Withdrawing Target Prematurely. In slow fire, if the target is withdrawn from the firing position just as the shot is fired, the scorer at that firing point will at once report the fact to the range officer in charge of the scoring on that target, who will investigate and, if satisfied that the case is as represented, will direct that the shot be not considered and that the competitor fire another shot.

314. Delay in Firing. In slow fire, competitors will not be hurried in firing but such slight delay permitted after each shot as they may desire, provided the time of firing the score does not exceed one minute per shot at 600 yards or less, one and one-half minutes per shot at ranges over 600 yards, and 30 seconds per shot in pistol firing.

If an accident to a target, or any other cause over which a soldier has no control, prevents him from completing his score within the time limit, he will be permitted such additional time as a range officer may decide.

315. Coaching. No coaching or unnecessary communication of any kind with those actually firing will be permitted.

316. Warming or Fouling Shots. No warming nor fouling shots will be allowed at any competition.

317. Order of Fire. The order of fire will be as prescribed in paragraph 285 and paragraph 293 and will not be changed.

318. Spectators. During the progress of a match or competition, no one except the officers on duty on the range, the competitors, and scorekeepers will be permitted within the ropes without special permission of the officer in charge.

319. Stations of Competitors Awaiting Turn to Fire. Competitors will be stationed 5 yards in rear of the firing point and will remain there until called to the firing point by the scorekeeper.

320. Expressions of Approbation, Etc. Expressions of approbation or disappointment on the part of the spectators or competitors must not be uttered loud enough to be heard at the firing point.

321. Protests. Protests and objections must be submitted to the range officer in charge of the target and not directly to the officer in charge. In case a competitor is not satisfied with the decision of the range officer, he may appeal to the officer in charge. Final appeals from decisions of the officer in charge must be made in writing and forwarded through that officer to the authority ordering the competition.

322. Signaling and Recording Hits. Hits in the different divisions of the targets, misses, and ricochets, slow and rapid fire, will be signaled and recorded as prescribed in this manual.

323. Misses. In all firing, before any miss is signaled, the target must be withdrawn from the firing position and carefully examined by a range officer. Whenever the target is reversed and a miss is signaled, it will be presumed

that this examination has been thoroughly made and no challenge of the value signaled will be entertained or resigning of the shot allowed.

324. Accidental Discharges. All shots fired by the soldier after he has taken his place at the firing point and it is his turn to fire—the target being ready—will be considered in his score even if his piece was not directed toward the target or is accidentally discharged.

325. Firing on Wrong Targets. Shots fired upon the wrong target will be entered upon the score of the man firing as a miss, no matter what the value of the hit upon the wrong target. In rapid fire the soldier at fault is credited with only such hits (if any) as he may have made on his own target. The other soldier repeats his score.

326. Two Shots on the Same Target. In slow fire, if two shots strike a target at the same time or nearly the same time both will be signaled; if a shot was just fired from the firing point assigned to that target, the hit having the highest of the two values signaled will be entered in the soldier's score and no record made of the other hit.

327. Numbering Competitors. At all competitions where a number of men engage in the same match or competition firing, the labor of the statistical officer will be greatly lightened and the prompt announcement of the scores facilitated by giving each competitor a number by which he is known throughout the firing.

328. Score Cards. Each competitor should be given a score card stating his target and orders of firing at each range and containing space for the record of shots fired and for the signature of the scorer and range officers. As scores are completed an officer detailed for the purpose should, without waiting for all firing to cease, collect the records of the score and transmit them to the statistical officer for entry upon the permanent records and bulletins.

329. Stations of Scorers. The scorers will be seated close to and in rear of the firing-point stakes and will record scores and announce results as required in paragraphs 102 and 103.

330. Competitors must pay attention to the score as announced and recorded so that any error may be promptly investigated. The recorded value of any shot will not be changed after the following shot has been fired unless some special message with reference to it is received from one of the range officers in the target pit. Any alteration of a score must be witnessed by the officer in charge of the firing point and indorsed with his initials.

331. Special Rules. Such special rules or directions as the officer in charge may give must be rigidly observed by competitors and all other persons upon the range.

PENALTIES.

332. Evading Rules. Any competitor who may be detected in an evasion of the conditions prescribed for any competition will be debarred from further competition.

333. Falsifying Scores. Any competitor who may be guilty of falsifying his score or being accessory thereto will be debarred from the competition.

334. Offering Bribes. Any competitor who offers a bribe of any kind to a scorer or marker will be debarred from the competition.

335. Disorderly Conduct, Intoxication, etc. Any competitor who refuses to obey the instructions of the officer in charge or his assistants, or who violates any of these regulations, or is guilty of disorderly conduct or intoxication, shall be debarred from the competition.

336. Report of Competitors Debarred. The officer in charge of the competition will, upon the completion of the competition, report to the department commander for the information of the War Department the names of any competitors debarred from the competition, stating the circumstances in each case, in order that the War Department may debar such competitors from all future competitions if such action is deemed advisable.

337. Interference. Any person, whether a competitor or not, interfering with any of the firing squads or annoying them in any way will be warned to desist, and if the offense is repeated he will be ordered off the range at once.

338. Acquaintance with Regulations. Competitors and all others connected with competitions must make themselves acquainted with the foregoing regulations as well as with the conditions of the competitive firing in which they may be participating, as the plea of ignorance of either of them will not be entertained.

TIES IN RIFLE COMPETITION.

339. Ties. Ties will be decided as follows:

1. By the highest aggregate score made in rapid fire. If still a tie, by the higher total score in rapid fire at 500 yards. If still a tie, by the highest total score in rapid fire at 300 yards. If still a tie, by the highest total score in rapid fire at 200 yards.

If still a tie:

2. By the fewest misses in rapid fire.
3. By the greatest number of hits in the figure in rapid fire.
4. By the fewest misses in slow fire.
5. By the fewest outers (twos) in slow fire.
6. By the fewest inners (threes) in slow fire.
7. By the shots in slow fire in inverse order.
8. If still a tie, by firing single shots, slow fire, at the longest range.

TIES IN PISTOL COMPETITION.

340. In Aggregate Scores. Upon completion of a pistol competition, ties found in aggregate scores will be decided as follows:

1. By the highest aggregate score made in rapid fire.

If still a tie, by the highest total score at 25 yards, rapid fire, 15 seconds per score.

If still a tie, by the highest total score at 15 yards, rapid fire, 15 seconds per score.

If still a tie, by the highest total score at 50 yards, rapid fire, 30 seconds per score.

If still a tie, by the highest total score at 25 yards, rapid fire, 30 seconds per score.

If still a tie, by the value of each shot at 75 yards, slow fire, in the inverse order.

If still a tie, by firing single shots at 75 yards, slow fire.

341. Post Competitions. To further the interest in target practice, post contests in small-arms practice are suggested. When practicable, post competitions should form a part of the exercises for field days. The program for these competitions is left to the discretion of the post commander. The firing should, as a rule, be team firing. The rules governing the division competition will, as far as applicable, regulate the procedure in post competitions.

DISTINGUISHED CLASSES OF MARKSMEN.

342. Requirements. Whenever a marksman has won three authorized medals in department rifle competitions, or in department pistol competitions, or as a member actually firing on a prize-winning team in the national team match, he will be announced by the War Department as belonging to a distinguished class, no longer eligible to enter department competitions with the arm in the use of which he is distinguished.

343. Designations. If the three medals were won in rifle competitions, the marksman will be designated a "distinguished marksman," and if in pistol competitions, a "distinguished pistol shot."

344. Badges. To distinguished marksmen and distinguished pistol shots appropriate badges will be issued, which after being received by the soldier, if lost, can be replaced by purchase only, for which authority must be obtained from the War Department.

PART V.

COURSES FOR ORGANIZED MILITIA.

The following courses in small-arms firing are prescribed for the Organized Militia:

GENERAL SCHEME.

345. The general scheme of instruction for the Organized Militia embraces: First, a certain amount of instruction in the preliminary drills and exercises, followed by gallery practice, with a prescribed test before the soldier can be advanced to practice on the target range; second, a definite course of instruction practice, under which, by selected scores of five shots each, a soldier must attain a certain proficiency before he can be advanced to fire the record practice, Organized Militia, or the qualification course, Regular Army; third, a definite test, either the qualification course, Organized Militia, or the qualification course, Regular Army, at the discretion of the State authorities, under which the soldier attains a certain grade in marksmanship; fourth, long-range practice.

CHAPTER I.

PRELIMINARY DRILLS AND INSTRUCTION.

346. (a) The period for indoor instruction will be determined by the State authorities and may extend into or include the entire range practice season: .

(b) The essentials of indoor instruction will include—

Nomenclature, covering the most important parts and elements.

Manipulation and use of the various working parts.

Care of the arm.

Sighting, aiming, positions, and trigger squeeze.

Gallery practice.

The course to be followed in indoor instruction is laid down in Part II, Chapters I, II, III, IV; but in the discretion of the State authorities, any course embracing the elements given above may be adopted and followed. The recording rifle rod outfit or any other suitable device may be used in such a course.

GALLERY PRACTICE.

347. The principal objects of gallery practice are to continue in a different manner the instruction in aiming, positions, and trigger squeeze, and to determine, in certain cases, whether or not the individual shall be advanced to range practice.

(a) The following course in gallery practice is prescribed:

TABLE 1.

| Range. | Targets. | Position. | Minimum number of shots. |
|--------------------|---|------------------------------|----------------------------------|
| <i>Feet.</i> 50 | The iron gallery target issued by the Ordnance Department or one similar thereto, or paper targets. | Prone..... | 10 |
| 50 | The iron gallery target issued by the Ordnance Department or one similar thereto, or paper targets. | (Sitting.... Kneeling...) | } 10 { 5 sitting. 5 kneeling. |
| 50 | The iron gallery target issued by the Ordnance Department or one similar thereto, or paper targets. | Standing... | |

Where it is impracticable to use ranges of 50 feet, gallery practice may be conducted at a greater distance at a target whose dimensions and divisions have been proportionately increased. Firing will be by scores of five consecutive shots. Except in case of accident, a score once begun will be completed.

QUALIFICATION IN GALLERY PRACTICE.

(b) No officer or enlisted man who has failed to qualify as first class or better in a previous season shall be advanced to range practice until he has attained at least 90 points out of a possible 150 in the gallery practice course, by selecting his two best scores of five shots at each range. If a gallery range be not available, the recording rifle rod outfit or subtarget gun machine may be used to determine eligibility for range practice, under similar conditions, when specially authorized by the State authorities.

CHAPTER II.

KNOWN DISTANCE FIRING.

348. The qualification course is divided into Instruction Practice and Record Practice.

(a) Instruction practice embraces:

1. A prescribed course in which a certain proficiency must be attained in certain cases, before qualification practice is undertaken; this course may be shot through as many times as is necessary to insure proper instruction.

2. Such further preliminary practice at any range as is considered necessary to prepare the individual for the Record Practice.

3. Firing for recruits may be held at 100 yards in any position except standing, but does not count in determining proficiency in the instruction practice.

(b) The instruction practice and the number of shots at each range, upon which eligibility to advance to record practice is determined, are given in the following tables:

INSTRUCTION PRACTICE.

TABLE 2.

| Range. | Kind of fire. | Time. | Shots. | Targets. | Position. | Possible. |
|--------|---------------|-----------|--------|----------|-------------|-----------|
| 200 | Slow fire. | No limit. | 10 | A | 5 sitting. | } 50 |
| 300 | Slow fire. | No limit. | 5 | A | 5 kneeling. | |
| 500 | Slow fire. | No limit. | 10 | B | Prone. | |
| | | | | | Prone. | 50 |

TABLE 3.—TARGET D.

(BATTLE SIGHT ONLY WILL BE USED WITH THIS TARGET.)

| Range. | Kind of fire. | Time. | Shots. | Targets. | Position. | Possible. |
|--------|---------------|-----------|--------|----------|------------------------------------|-----------|
| 200 | Slow. | No limit. | 5 | D | Kneeling. | 25 |
| 200 | Rapid. | 1 minute. | 5 | D | Kneeling or sitting from standing. | 25 |
| 300 | Slow. | No limit. | 5 | D | Prone. | 25 |
| 300 | Rapid. | 1 minute. | 5 | D | Prone from standing. | 25 |

Total, 255.

1. Each shot is marked in slow fire on target D. Rapid fire is conducted as prescribed in paragraph 110 except as to scores. At each range a total of 60 per cent of the possible must be attained before advancement to the next range.

2. After eligibility to fire-record practice has been determined according to the provisions of paragraphs (d) and (e), the record practice may be preceded by further preliminary practice in the discretion of the State authorities.

3. Firing in instruction practice will be by scores of five consecutive shots. A score once begun will be completed, unless accident or conditions of range weather interfere.

(c) The following grades of classification are obtained in instruction practice by selective scores of five consecutive shots each.

First-classman, 150; possible, 225.

Second-classman, 130; possible, 225.

Unqualified, below 130.

(d) No individual shall be advanced to record practice until he has attained the grade of first-classman, except as provided in paragraph (e).

(e) Instruction practice will be optional with the State authorities for all who have qualified as marksmen or better in the season immediately preceding.

RECORD PRACTICE.

349. After completing the instruction practice, those who qualify as first-classmen are eligible to fire record practice, Organized Militia, or the qualification course, Regular Army.

The choice of courses shall be determined by the State authorities. Both courses may be pursued in the same state in the same season, but the course in regiments or in separate smaller tactical units shall be uniform; provided that an individual, who qualifies in record practice, Organized Militia course, as sharpshooter or expert rifleman, may be permitted to fire the Regular Army qualification course and qualify therein at the discretion of the State authorities.

350. Qualification Course.

(a) TABLE 4.—SLOW FIRE.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|-----------|-----------------|----------|-----------------------------------|
| 300 | No limit. | 10 | A | Prone. |
| 500 | No limit. | 10 | B | Prone. |
| 600 | No limit. | 10 (2 s. s.) | B | Prone, sandbag rest. ¹ |

TABLE 5.—TARGET D, RAPID FIRE, BATTLE SIGHT.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|--------------|--------|----------|------------------------------------|
| 200 | 1 ½ minutes. | 10 | D | Kneeling or sitting from standing. |
| 300 | 2 minutes. | 10 | D | Prone from standing. |

This course may be fired three times in any target season, the individual's classification being determined by the best of his three trials, but this provision shall not be construed to permit the formation of a record based on scores

¹ In firing with sandbag rest, either rifle or back of hand must rest on sandbag.

selected from two or more trials—the basis of classification must be the result of one complete course in each case.

(b) Coaching is prohibited in record practice after the individual has taken his position at the firing point.

(c) Instruction and record practice may be fired on the same day, but record practice once begun must be completed without further instruction firing.

351. Qualification Course, Regular Army. The qualification course of the Regular Army shall be carried out by the Organized Militia with a strict adherence to all conditions and provisions required for the Regular Army, except that instruction and record practice may be fired on the same day, but record practice once begun must be completed without further instruction firing.

352. Practice for Coast Artillery Reserves. Special course "A," as described in paragraph 121, will be fired by coast artillery reserves of the Organized Militia, unless other courses be prescribed by the State authorities.

353. Long-Distance Practice. After the qualification course has been completed, those men who have qualified as experts and sharpshooters may be given long-distance practice, at the discretion of the State authorities.

Practice for record may be preceded by instruction practice. Record practice will consist of any selective score of 10 consecutive shots each. The practice will be conducted as set forth for slow fire known distance.

TABLE 6.—TARGET C.

| Range. | Shots. | Position. |
|--------|--------|-----------|
| 800 | 10 | Prone. |
| 1,000 | 10 | Prone. |

No one will be advanced to practice at 1,000 yards until he has attained a minimum total of 40 points at 800 yards in any score of 10 consecutive shots.

When an individual has attained a total of 85 points at 800 and 1,000 yards, including a minimum of 40 at 800 yards, by selective scores of 10 consecutive shots, he shall be considered to be qualified in long-distance practice but is not included in the table of classification nor in the computation of the figure of merit. He may be rewarded by suitable medals or other devices at the discretion of the State authorities.

354. Practice with Telescopic Sights. Practice with telescopic sights may be held at the discretion of the State authorities and, when held, will be conducted in accordance with paragraph 117.

355. Miscellaneous. (a) The conditions and requirements governing the conduct of target practice, except as modified in Part V, shall be the same for the Organized Militia as for the Regular Army.

(b) Dress and Equipment. The dress and equipment of officers and men participating in target practice shall be prescribed by the State authorities. The cartridge belt will be worn at all times.

(c) Marking. The provisions of these regulations governing marking which are impracticable for the Organized Militia may be modified by the State authorities except for the qualification course, Regular Army.

(d) Scoring. Such provisions of these regulations as are impracticable for the Organized Militia may be modified by the State authorities except for the qualification course, Regular Army.

(e) Estimating Distance. Estimating distance will not be required for the Organized Militia except when firing the Regular Army course, in which case

paragraph 85 will be complied with. State authorities may require commissioned officers to qualify in estimating distance in the qualification course, Organized Militia.

(f) Practice Season. The practice season will be determined by the State authorities.

(g) Who Will Fire.

REQUIRED TO FIRE.

1. Infantry, cavalry, and engineers:
Battalion and squadron staff officers, company and troop officers, inspectors small-arms practice, all enlisted men of companies and troops except cooks.
2. Coast artillery reserves:
Special course "A"—Company officers, all enlisted men of companies except cooks.

AUTHORIZED BUT NOT REQUIRED TO FIRE.

1. All other officers and enlisted men except those of the Medical Department and Chaplains.
2. All officers enumerated in the above table with more than 10 years' commissioned or commissioned and enlisted service.

(h) Amount of Fire. The amount of firing in one day for any individual is not restricted for the Organized Militia in any course.

(i) Qualification. Qualification will be based on the results obtained in either one of the qualification courses or in the instruction practice, as set forth in the following table:

TABLE 7.—POINTS REQUIRED IN QUALIFICATION.

| Courses. | Expert. | Sharpshooter. | Marksmen. | 1st class. | 2d class. | Unqualified. ¹ | Possible. | Insignia. |
|---|---------|---------------|-----------|------------|-----------|---------------------------|-----------|---------------|
| 1. Qualification course; instruction practice, Organized Militia. | ..... | ..... | ..... | 150 | 130 | { Below 130 } | 225 | None. |
| 2. Qualification course; record practice, Organized Militia. | 210 | 190 | 160 | ..... | ..... | ..... | 250 | Bronze. |
| 3. Qualification course; Regular Army. | 253 | 238 | 202 | 177 | 152 | ..... | 300 | Regular Army. |
| 4. Special course "A," coast artillery reserves. | ..... | ..... | 150 | 120 | 100 | ..... | 200 | Bronze. |

1. If in case authority is given to fire the qualification course, Regular Army, after a grade of qualification has been attained in the qualification course, Organized Militia, the higher qualification shall be used as the basis of record, and medals will be issued in each case.

2. If an individual fails to qualify as marksman or higher in firing the record practice, Organized Militia, his grading shall be first-class. In the Regular

¹ All who fire the qualification course, instruction practice, Organized Militia; the qualification course Regular Army; the special course "A," and who in any course fail to qualify as second class or better; and all who fail to complete a course, or fail to fire.

Army course and special course "A" the qualification shall be determined by the result of the firing in that course alone.

(j) **Holdover Qualifications.** Holdover qualifications for the Organized Militia in the qualification courses (Organized Militia and Regular Army) will be limited to expert riflemen. An individual having attained this grade will retain that qualification for three consecutive target years, including the target season in which qualification was made. An individual entitled to a holdover qualification as an expert rifleman may be authorized by the State authorities to fire the qualification courses, in which case he forfeits no rights to such holdover qualification. If during such subsequent firing he again qualifies as an expert rifleman, his holdover privileges will begin from his latest qualification.

(k) **Insignia.** For the qualification course, Organized Militia, bronze badges and pins.

For the qualification course, Regular Army, insignia similar to those issued to the Regular Army.

For special course "A," coast artillery reserves, bronze pins, marksmen only, when firing this course.

An individual qualifying as marksman, sharpshooter, or expert rifleman, will wear his badge or pin so long as he retains such a qualification.

(l) **Requalification Bars.** No requalification bars are issued for marksmen.

Sharpshooters. Requalification bars shall be issued at the rate of one bar for each three qualifications (not necessarily consecutive) as sharpshooter. The bar bears the last year of qualification.

Expert Riflemen. Requalification bars are issued at the rate of one bar for each three qualifications as expert rifleman, holdover qualifications included, provided that when an individual requalifies as expert rifleman during a holdover period he is entitled to a bar for each three years of actual requalification. The bar bears the last year of qualification.

(m) **Combat Practice.** Combat practice may be held by the Organized Militia whenever so directed by the State authorities. When held, it will be conducted in accordance with Part III, Small Arms Firing Manual.

(n) **Reports.** A report of target firing shall be forwarded to the chief, Division of Militia Affairs, as soon after the close of the practice season as practicable, but not later than March 31 of the following year.

(o) **Figure of Merit.** In each State there will be a company and regimental figure of merit to be calculated by the methods laid down by the Division of Militia Affairs. A proficiency test similar to that prescribed for the Regular Army is authorized at the discretion of the State authorities.

CHAPTER III. PISTOL PRACTICE.

356. Preliminary Drills. (a) All officers and enlisted men belonging to organizations armed with the revolver or pistol shall be instructed in the care, preservation, and use of these arms, following the provisions of paragraphs 135-146, modified only as existing circumstances demand, in any case, in the discretion of the State authorities.

(b) The following course in pistol range practice is prescribed for officers and men armed with the Colt's revolver cal. .38, or the Smith & Wesson, cal. .38, as issued by the Ordnance Department:

TABLE 8.

| Range (yards). | Instruction practice. | | | | | | Record practice. | | | |
|-------------------|-----------------------|-----------------------------|----------------------------------|-----------------------------|----------------------------------|-----------------------------|----------------------------------|---------|----------------------------------|---------|
| | Target L. | | | | Target L, rapid fire. | | Target L, rapid fire. | | Target L, rapid fire. | |
| | Slow fire. | | Rapid fire. | | | | | | | |
| | Time limit. | Scores. | Time limit per score in seconds. | Scores. | Time limit per score in seconds. | Scores. | Time limit per score in seconds. | Scores. | Time limit per score in seconds. | Scores. |
| 15 | No limit. | Minimum of 1 at each range. | 30 | Minimum of 2 at each range. | 15 | Minimum of 2 at each range. | ..... | ..... | ..... | ..... |
| 25 | | | 30 | | 15 | | 30 | 2 | ..... | ..... |
| 50 | | | 30 |  | ..... |  | 30 | 2 | ..... | ..... |

A score consists of five consecutive shots.

(c) Rapid fire shall be conducted as prescribed in paragraph 172.

(d) The dismounted course prescribed in paragraphs 167-175 will be substituted for that prescribed above for any organization or individual of the Organized Militia armed with the Colt automatic pistol, cal. .45. The course prescribed in paragraphs 176-199 is authorized but not required.

(f) Who Will Fire.

| Arm or corps. | To fire. | |
|--|--|------------|
| Cavalry..... | All officers and enlisted men armed with the pistol, except field officers for whom the course is authorized but not required. Authorized but not required..... | Dismounted |
| Field artillery..... | | |
| Infantry..... | | |
| Engineers..... | | |
| Coast artillery..... | | |
| Staff departments except medical and chaplain. | | |

(g) Qualification and Insignia. Qualification and insignia for firing the revolver course shall be as given in the following table:

TABLE 9.

| Grade. | Points. | Possible. | Insignia. |
|-------------------------|---------|-----------|-----------|
| Expert pistol shot..... | 320 | 400 | Bronze |
| First classman..... | 300 | 400 | Bronze |
| Second classman..... | 250 | 400 | Bronze |

The qualifications and insignia for firing the courses prescribed in paragraphs 167-175 or paragraphs 176-199 shall be as provided for in paragraphs 248 and 249.

(h) Reports. The number of officers and enlisted men taking pistol course will be reported on the report of small-arms firing.

¹ The record course will be fired but once.

APPENDIX I.

(See paragraph 162.)

The following illustrations are in the nature of suggestions for field firing with the pistol. Firing as actually carried out will be left to the discretion of the organization commander, under proper supervision by his superiors, who will report any specially noteworthy developments, with a view to publication to the service in War Department bulletins.

SUGGESTIONS FOR IMPROVISED TARGETS.

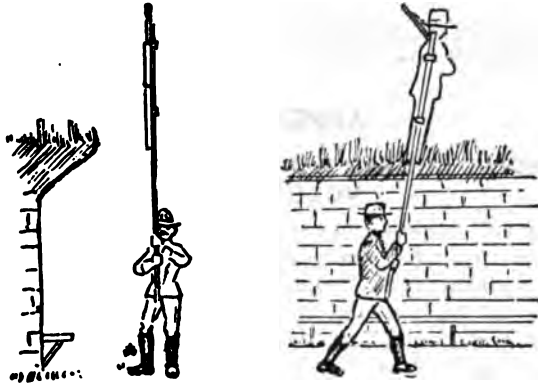


FIG. 1.—Figures on poles being worked in pit.



FIG. 2.—Figures as seen from firing point.

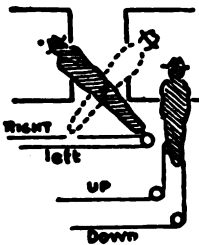


FIG. 3.—Plan of working disappearing figures in pit, around houses, windows, doors, hedges, stumps, trees, etc.

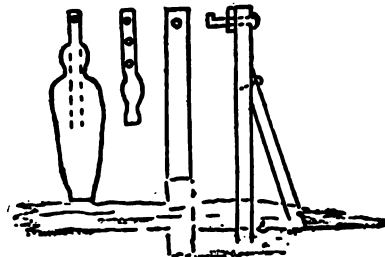


FIG. 4.—Plan of pendulum target.



FIG. 5.—Track for moving figures, reversible, advance, or retire.

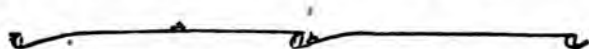


FIG. 6.—Combined series of tracks and pits. Tracks for movable figures with series of pits where figures can be marked, reversed, removed in part or whole, or others substituted.

APPENDIX II.

A. SPECIAL COURSE FOR ORGANIZED MILITIA AND VOLUNTEERS.

1. This course may be prescribed at the discretion of the State authority any organization which has not available for its use within 10 miles armory a range suitable for the Organized Militia Course.

2. The course will be preceded by the same preliminary practice, in gallery practice, and gallery practice qualification, for all who in a previous season have not qualified as first class or better, in the Organized Course.

3. The firing will be conducted with service charges. Each shot is made in slow fire. Rapid fire is conducted as prescribed in paragraph 110, except to scores. The order of firing positions will be adhered to.

TABLE 1.—TARGET A, SLOW FIRE.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|-----------|--------|----------|---------------------------------------|
| 200 | No limit. | 10 | A | Prone with sandbag rest. ¹ |
| 200 | No limit. | 10 | A | Prone. |
| 200 | No limit. | 10 | A | 5 kneeling, 5 sitting. |
| 200 | No limit. | 10 | A | Standing. |

TABLE 2.—TARGET D, RAPID FIRE, BATTLE SIGHT.

| Range. | Time. | Shots. | Targets. | Position. |
|--------|-----------|--------|----------|---|
| 200 | 1 minute. | 10 | D | Prone. |
| 200 | 1 minute. | 10 | D | Sitting or kneeling. |
| 200 | 1 minute. | 10 | D | Any position with rest, butt to the shoulder, rest for muzzle in front of forward grasp compulsory. |

4. In rapid fire the position may be assumed and cut-off turned to ready to the appearance of the target, provided that the butt of the rifle is not to the shoulder until the target appears.

¹ In firing with sandbag rest, either rifle or back of hand must rest on bag.

5. The course will be fired one or more times for instruction before proceeding to fire it for record. It may be fired for record three times in any target season, the individual classification being determined by the best three trials, but this provision shall not be construed to permit the formation of a record based on scores selected from two or more trials—the basis of classification must be the result of one complete course in each case.

6. In instruction practice, at each kind of fire in each position, a total of at least 30 points (60%) must be attained before advancing to the next kind of fire or position.

7. Instruction practice may be omitted for those who, in the last range practice season, qualified as marksman or better.

8. The following grades of classification are obtained in instruction practice:

First Classman: 210 points, possible 350.

Second Classman: 190 points, possible 350.

Unqualified: Below 190 points.

9. The following grades of qualification are obtained in record practice:

Marksman: 225 points, possible 350.

Sharpshooter: 250 points, possible 350.

Expert Rifleman: 300 points, possible 350.

10. Special insignia, containing the words "Short Range" stamped on bronze badges and pins for the qualification course, Organized Militia, paragraph 355 (k), will be issued for qualification in this course.

11. In all matters not prescribed above the regulations for the Organized Militia Course will govern.

B. SPECIAL COURSE FOR VOLUNTEER RECRUITS.

1. In time of war or when war is imminent and the course of target practice laid down in this manual is not practicable for the instruction of recruits, for the reason that ranges with proper facilities are lacking and time is short, this course may be used.

2. Preparatory to taking up this course, as much preliminary instruction as is practicable should be given in (a) Nomenclature and care of the rifle, (b) Sighting drills, (c) Position and aiming drills, (d) Deflection and elevation correction drills, (e) Gallery practice, and (f) Estimating distance drills. The estimating distance test for these recruits will cover distances from 550 to 800 yards. Proficiency will consist in making in five consecutive estimates an average degree of accuracy of 80 per cent.

3. Firing at miniature targets—service charges.

INSTRUCTION PRACTICE.

TABLE 1.—SLOW FIRE.

| Ranges (real) feet. | Ranges (simulated) yards. | Targets. | Time. | Shots. | Position. |
|---------------------------|---------------------------------|----------|---------------|--------|--|
| 50 | 200 | Y | No limit..... | 15 | { 5 prone. 5 kneeling. 5 standing. |
| 50 | 300 | Z | No limit..... | 20 | { 10 prone. 10 sitting. |

TABLE 2.—RAPID FIRE.
(BATTLE SIGHT ONLY WILL BE USED.)

| Ranges (real) feet. | Ranges (simulated) yards. | Targets. | Time. | Shots. | Position. |
|---------------------------|---------------------------------|----------|-----------------------------|--------|---------------------|
| 50 | 200 | Y | 1 minute..... | 10 | Kneeling from stand |
| 50 | 300 | Z | 1 minute and 10 seconds. | 10 | Prone from standing |

RECORD PRACTICE.

TABLE 3.—SLOW FIRE.

| Ranges (real) feet. | Ranges (simulated) yards. | Targets. | Time. | Shots. | Position. |
|---------------------------|---------------------------------|----------|---------------|--------|----------------------------|
| 50 | 200 | Y | No limit..... | 10 | 5 kneeling. 5 standing. |
| 50 | 300 | Z | No limit..... | 10 | 5 prone. 5 sitting. |

Rapid fire as given in Table 2.

DESCRIPTION OF SYSTEM.

4. Range. The range is 50 feet, which enables the firer to see the hit by the shot, and saves the time ordinarily taken in indicating the position of the hit.

5. Targets. The division of miniature targets X, Y, and Z (see "Targets," Chap. III, Part IV) are, respectively, one-sixth, one-twelfth, and one-eighth of the size of the divisions on the A target, and subtend the same visual angle as do those of the A target when at 100, 200, and 300 yards.

6. Course. The course is similar to Special Course A, using miniature target Y for 200 yards, and target Z for 300 yards firing. It is preceded by a gallery range, by such firing at target X as may be necessary.

7. Rescinded.

8. Back Stop. A back stop 10 feet high is, in point of safety, when at a distance of 50 feet, equivalent to a back stop of 60 feet at a distance of 100 yards, and of 120 feet at a distance of 200 yards. It is generally possible to find in the rear of the station or camp a perpendicular cut bank having a height of 10 feet or more. In case such a bank can not be found a suitable back stop will have to be constructed. Nine inches of sand or 18 inches of loam will be sufficient to stop the bullet.

9. Method of Firing. An instructed man is detailed to coach each recruit. The squad of recruits is drawn up facing the targets. At the command "Commence firing" the recruits, under the supervision of the experienced man detailed as coaches, fire slowly until 5 cartridges have been fired. The coach, standing by the recruit, corrects his fault of position or trigger squeezing, and points out the position of each shot, and in each case explains the cause of error. When 10 shots are fired the miniature targets are removed to serve as guides, and replaced by new targets, when the firing, if necessary, recommences. The disappearing target is not used in rapid fire in this course. In rapid fire the man takes position standing in front of the target assigned to him. The command "Load" is in charge of the line will command "Load." The magazine will be filled with one piece loaded with one cartridge therefrom, and the safety lock turned.

"Safe." When all are ready the officer in charge of the firing line will command "Ready," when the safety lock will be turned to the ready and the position of "Ready" standing assumed, with the sling, if used, on the arm. At the command or signal "commence firing," he takes the prescribed position, opens fire and endeavors to fire 5 shots. The command or signal "cease firing" is given at the expiration of the time limit, when all firing ceases.

10. Number of Men Shooting. From 1 to 100 men may fire at the same time, this depending on the number of coaches and the extent of the back stop. With 30 men shooting at the same time, 1,000 men may finish the course of firing in eighty hours.

By Order of the Secretary of War:

H. L. SCOTT,
Brigadier General, Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

EXTRACTS FROM GENERAL ORDERS, CIRCULARS AND BULLETINS OF THE WAR DEPARTMENT

**THE FOLLOWING EXTRACTS ARE FROM THE WAR
DEPARTMENT BULLETIN 3, 1914, G.O. 39, 1915, COM-
PILATION OF GENERAL ORDERS, 1881-1915, GENERAL
ORDERS, CIRCULARS AND BULLETINS, 1916, AND TO
INCLUDE GENERAL ORDERS 60 AND BULLETIN 28, 1917.**

THE HISTORY OF THE
CITY OF BOSTON
FROM 1630 TO 1880

By
JOHN H. COVINGTON
Author of "The History of the City of Boston"
and "The History of the City of New York"

EXTRACTS FROM GENERAL ORDERS, CIRCULARS AND BULLETINS OF THE WAR DEPARTMENT

General Orders
No. 39.

War Department,
Washington, June 24, 1915.

As amended by General Orders
Nos. 53 and 65, 1915, General Orders
Nos. 13, 58 and 72, 1916.

Note: Only the part pertaining to an infantry regiment at war strength is published.

The original order was based upon a regiment of 1890 men. At present, a regiment at war strength has 2002 men. Therefore it has been necessary to increase the supplies enumerated, proportionately.

The compilation, as given, was done by Regimental Supply Sergeant Joseph Furtherer, retired, 21st U. S. Infantry.

For definitions of equipment A, B, and C, see "Instruction Pertaining to Field Equipment," par. 319, p. 932.

REGIMENT OF INFANTRY AT WAR STRENGTH.

EQUIPMENT "A."

| Articles. | Appropriations. | Com- pany of a bat- talion. | Battalion head- quarters. | Total for one bat- talion. | Head- quarters com- pany. | Machine gun com- pany. | Supply com- pany. | Sanitary detach- ment. | Regi- mental head- quarters. | Total for regi- ment including sanitary detach- ment. | |
|--|-----------------|--------------------------------------|---------------------------------|----------------------------------|------------------------------------|---------------------------------|-------------------------|------------------------------|---------------------------------------|---|--|
| Strength: | | | | | | | | | | | |
| Officers..... | | 3 | 2 | 14 | 1 | 4 | 2 | 4 | 2 | 55 | |
| Enlisted men..... | | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Aggregate..... | | 153 | 2 | 614 | 59 | 78 | 39 | 37 | 2 | 2057 | |
| Axes and helvcs..... | C&E | 2 | 8 | 16 | 2 | 4 | 2 | 1 | | | See note 1. |
| Bags: | | | | | | | | | | | |
| Nose..... | SS&T | | | | | | 2 | 1 | | 3 | |
| Water sterilize..... | SS&T | 2 | | 8 | 2 | 2 | 2 | 1 | | 31 | |
| Bars, mosquito..... | C&E | 75 | | 300 | 29 | 37 | 19 | 17 | | 1002 | |
| Baton..... | C&E | | | | 1 | | | | | 1 | |
| Blankets: | | | | | | | | | | | |
| Olive drab..... | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Saddle..... | SS&T | | | | | | 2 | | | 2 | |
| Brassards, red..... | C&E | | | | 16 | 2 | | | | 18 | |
| Bridles, riding..... | SS&T | | | | | | 2 | | | 2 | |
| Brushes, horse..... | SS&T | | | | | | 2 | 1 | | 3 | |
| Buckets, G. Iron..... | SS&T | 3 | 1 | 13 | 2 | 2 | 2 | | 1 | 46 | |
| Bugles with sling..... | C&E | 2 | | 8 | 1 | 2 | | | | 27 | |
| Calks, toe, horse..... | SS&T | | | | | | | | | | |
| Candles..... | SS&T | | | | | | | | | | |
| Clothing: | | | | | | | | | | | Supplied when required. A. R. 1215. |
| Belts, waist..... | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Breeches, pairs..... | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Chevrons and other sleeve insignia service: | | | | | | | | | | | |
| Regt. Sergt. Maj..... | C&E | | | | 3 | | | | | 3 | 1 pr. for olive drab shirt, |
| Regt. Supply Sergts., prs..... | C&E | | | | | | 9 | | | 9 | 1 pr. for sweater, 1 |
| Regt. Color Sergts., prs..... | C&E | | | | 6 | | | | | 6 | overcoat. |

| Clothing—Continued: | | | | | | | | | |
|--|------|-----|------|-----|-----|----|----|---|------|
| Chevrons—Continued. | | | | | | | | | |
| Band Leader, prs..... | C&E | | | | | | | | 3 |
| Drum Maj., prs..... | C&E | | | | | | | | 3 |
| Asst. Band Leader..... | C&E | | | | | | | | 3 |
| Batt. Sergt. Maj.,..... | C&E | | | | | | | | 9 |
| First Sergt., prs..... | C&E | | 12 | | | | | 3 | 42 |
| Company Supply Sergt., prs..... | C&E | | 12 | | | | | 3 | 45 |
| Company Mess Sergt., prs..... | C&E | | 12 | | | | | 3 | 45 |
| Sergt. 1st Class Hosp. Corps..... | C&E | | | | | | | | 3 |
| Sergt. Hosp. Corps..... | C&E | | | | | | | | 9 |
| Sergts, prs..... | C&E | | 96 | | | | | | 321 |
| Corpls., prs..... | C&E | | 204 | | | | | | 651 |
| Stable Sergt., prs..... | C&E | | | | | | | | 9 |
| Horsehoe, prs..... | C&E | | | | | | | | 9 |
| Saddler, prs..... | C&E | | | | | | | | 3 |
| Mechanics, prs..... | C&E | | 24 | | | | | | 75 |
| Cooks, prs..... | C&E | | 36 | | | | | | 123 |
| Privates 1st Class, Inf., prs..... | C&E | | 336 | | | | | | 1056 |
| Privates 1st Class, H. C., prs..... | C&E | | | | | | | | 10 |
| Cords, Hat: | | | | | | | | | |
| Infantry..... | C&E | 150 | 600 | 58 | 74 | 37 | | | 1969 |
| Hosp. Corps..... | C&E | | | | | | 33 | | 33 |
| Drawers, prs..... | C&E | 300 | 1200 | 116 | 148 | 74 | 66 | | 4004 |
| Gloves, horsehide..... | C&E | | | | | | | | 74 |
| Gloves, riding..... | C&E | | | | | | | | 41 |
| Gloves, wool..... | C&E | 150 | | 20 | 6 | 7 | 8 | | 2002 |
| Hats, service with tying cords..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Laces, shoe, extra, prs..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Leggings, prs..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Shirt, olive drab..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Shoes, marching, prs..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Stockings, prs..... | C&E | 300 | 1200 | 116 | 148 | 74 | 66 | | 4004 |
| Tags, identification..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Tape for identification tags, yds..... | C&E | | | | | | | | 2002 |
| Undershirts..... | C&E | 150 | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Coal, smithing, lbs..... | SS&T | 300 | 1200 | 116 | 148 | 74 | 66 | | 4004 |
| | | | | | | 50 | | | 50 |

1 pr. for olive drab shirt,
1 pr. for sweater, 1
overcoat.

EQUIPMENT "A."—Continued.

| Articles. | Appropriations. | Com-pany of bat-talion. | Battalion head-quarters. | Total for one bat-talion. | Head-quarters com-pany. | Machine gun com-pany. | Supply com-pany. | Sanitary detach-ment. | Regi-mental head-quarters. | Total for regi-ment including sanitary detach-ment. |
|--|-----------------|-------------------------|--------------------------|---------------------------|-------------------------|-----------------------|------------------|-----------------------|----------------------------|---|
| Colors, with case, staff, cord, and tassels: | | | | | | | | | | |
| Inf. Regt., silk. | C&E | | | | | | | | 1 | 1 |
| Natl. silk. | C&E | | | | | | | | 1 | 1 |
| Natl. service. | C&E | | 1 | | | | | | | 3 |
| Combs, curry. | SS&T | | | | | | 2 | 1 | | 3 |
| Cooking utensils, march kit: | | | | | | | | | | |
| Cake turners. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Cans: | | | | | | | | | | |
| Water, large. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Water, small. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Dippers, large. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Containers, mineral oil. | SS&T | 1 | 1 | 5 | 1 | 1 | 2 | 1 | 1 | 21 |
| Cleavers, meat. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Forks, meat, large. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Knives, meat, large. | SS&T | 1 | | 5 | 1 | 1 | 1 | | | 15 |
| Fire iron set. | SS&T | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Kettles, camp, with covers. | SS&T | 6 | | 24 | 2 | 2 | 2 | | | 78 |
| Pans, bake. | SS&T | 8 | | 32 | 4 | 5 | 3 | | | 108 |
| Covers, mule blanket lined. | SS&T | | | | | | | | | |
| Desk, field, small. | C&E | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 3 | 21 |
| Farrier instrument, pocket case. | SS&T | | | | | | | | | |
| Gunions, ambulance, without staff. | C&E | | | | | | | | | |
| Globes, lantern. | SS&T | 2 | 1 | 9 | 2 | 2 | 2 | 2 | 2 | 35 |
| Halters and straps. | SS&T | | | | | | | | | |
| Handcuffs, prs. | SS&T | | 1 | 1 | 1 | | | 1 | 1 | 4 |
| Head nets, mosquito. | C&E | 14 | | 56 | 6 | 5 | 3 | 2 | | 184 |

1 wall tent fly without poles or pins, is issued with each march kit. See tentage, heavy.

Contents, note 2.
Contents, note 3.

| Horses, riding: For enlisted men. Officers. | HCA HCA | 25 | 5 | 5 | 8 | 43 | A. R. 1096. See note 11. |
|--|------------|------|-----|-----|-----|-------|--|
| Horseshoer emergency equipment | SS&T | | | | | 2 | |
| Instruments, band. | C&E | 28 | | 2 | | 28 | |
| Iron, bar, assorted sizes, lbs. | SS&T | | | 44 | | 44 | |
| Jacks, wagon. | SS&T | | | 1 | 1 | 1 | |
| Lantern frames, combination. | SS&T | 2 | 2 | 2 | 2 | 35 | |
| Leather, harness, black, lbs. | SS&T | | | 44 | | 44 | |
| Matches (issued as required) boxes | SS&T | 24 | 24 | 24 | 6 | 396 | 10 days' supply. |
| Medicine and dressings, veterinary, lbs. | SS&T | | | 31 | | 31 | See note 4. |
| Menders, harness. | SS&T | 1 | 1 | | | 3 | |
| Mules, draft. | SS&T | | | 112 | | 112 | |
| Mules, pack. | SS&T | | 24 | | 1 | 25 | |
| Mules, riding. | SS&T | | 2 | 4 | | 6 | |
| Nails, horseshoe, lbs. | SS&T | 4 | 6 | 8 | 3 | 53 | Includes allowance for officers' horses |
| Needles, harness: | | | | | | | |
| Glovers, papers. | SS&T | | | 2 | | 2 | |
| No. 2, papers. | SS&T | | | 4 | | 4 | |
| No. 3, papers. | SS&T | | | 4 | | 4 | |
| No. 4, papers. | SS&T | | | 4 | | 4 | |
| Oil: | | | | | | | |
| Mineral, issued as required, gals. | SS&T | 3 | 3 | 4 | 3 | 68 | 10 days' supply, includes supply for wagons. |
| Neatsfoot, issued as required, pts. | C&E | | | | | 54 | |
| Sperm, pts. | SS&T | 16 | 2 | 1 | 1 | 1 | |
| Overcoats. | C&E | 600 | 58 | 74 | 33 | 2002 | |
| Pannier, veterinary. | SS&T | | | 1 | | 1 | See note 4. |
| Pickaxes and helvcs. | C&E | 8 | 2 | 4 | | 57 | Carried in combat wagon. |
| Pins, tent, shelter. | C&E | 2995 | 315 | 370 | 195 | 10510 | Includes 500 for officers. |
| Poles, tent, shelter. | C&E | 24 | 42 | 55 | 39 | 257 | |
| Ponchos. | C&E | 600 | 32 | 71 | 25 | 1928 | |
| Pouches, music, olive drab. | C&E | | 28 | | | 28 | |
| Powder, hypochlorite of lime, tubes, issued as required. | SS&T | 200 | 50 | 50 | 30 | 760 | 10 days' supply. |
| Rakes, steel. | SS&T | | | 4 | 4 | 4 | |

EQUIPMENT "A"—Continued.

| Articles. | Appropriations. | Com- pany of a bat- talion. | Battalion head- quarters. | Total for one bat- talion. | Head- quarters com- pany. | Machine gun com- pany. | Supply com- pany. | Sanitary detach- ment. | Regi- mental head- quarters. | Total for regi- ment including sanitary detach- ment. | |
|--|-----------------|--------------------------------------|---------------------------------|----------------------------------|------------------------------------|---------------------------------|-------------------------|------------------------------|---------------------------------------|---|---|
| Rivets and burrs, copper: | SS&T | | | | | | | | | | Repairs to Q. M. harness. |
| No. 8, $1\frac{1}{4}$ " lbs. | SS&T | | | | | | 1 | | | 1 | |
| No. 9, $\frac{1}{2}$ " lb. | SS&T | | | | | | 1 | | | 1 | |
| No. 9, $1\frac{1}{2}$ " lb. | SS&T | | | | | | 1 | | | 1 | |
| No. 12, $\frac{1}{2}$ " lb. | SS&T | | | | | | 390 | | | 390 | |
| Rope, picket line, $\frac{1}{4}$ " ft. | SS&T | | | | | | 2 | | | 2 | |
| Saddles, riding. | SS&T | | | | | | 2 | | | 2 | |
| Saddlebags, prs. | SS&T | | | | | | | | | | |
| Shoes, horse and mule, fitted shoes: | | | | | | | | | | | |
| For draft mules, number. | SS&T | | | | | | 448 | | | 448 | 4 fitted shoes in wagons for each mule. |
| For mounts, number. | SS&T | | 6 | 6 | 52 | 18 | 14 | 28 | 8 | 138 | 1 fore, 1 hind shoe carried on each mount. |
| For pack mules, number. | SS&T | | | | | 48 | | 2 | | 50 | Carried in packs. |
| Extra shoes: | | | | | | | | | | | |
| For horses, lbs. | SS&T | | 3 | 3 | 26 | 9 | 7 | 14 | 4 | 69 | |
| For mules, lbs. | SS&T | | | | | 26 | 116 | 1 | | 143 | |
| Shovels, short handled. | C&E | 2 | 8 | 16 | 2 | 8 | 2 | | 1 | 61 | |
| Slickers. | C&E | | | | 20 | 4 | 37 | 8 | | 69 | Carried in combat wagon. |
| Slings, color, olive drab. | C&E | | 1 | 1 | 2 | | | | | 5 | |
| Stretcher, shoe. | C&E | 1 | | 4 | 1 | 1 | | | | 15 | |
| Sweaters. | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | Winter use, see note 12. |
| Tents, shelter, half: | | | | | | | | | | | |
| Dismounted. | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Mounted. | C&E | 6 | | 24 | 2 | 8 | 4 | 6 | 8 | 100 | |
| Heavy, pyramidal or wall, small. | C&E | | 1 | 1 | | | | 1 | 2 | 6 | |
| Fires, wall, without poles or pins. | | | | | | | | | | | |
| Thread, saddlers: | | 1 | 1 | 5 | 1 | 1 | 1 | 2 | 1 | 21 | For kitchen. |
| No. 3, lbs. | SS&T | | | | | | | | | 3 | |
| No. 10, lbs. | SS&T | | | | | | 3 | | | 3 | Repairs to Q. M. harness. |

| | | | | | | | | | | |
|--|------|-----|---|-----|----|----|----|----|---|------|
| Toilet articles: | | | | | | | | | | |
| Combs..... | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Company barber kit..... | C&E | 1 | | 4 | 1 | 1 | 1 | | | 15 |
| Housewives..... | C&E | 18 | | 72 | 7 | 6 | 4 | 3 | | 236 |
| Soap, cakes..... | SS&T | | | | | | | | | |
| Toothbrushes..... | SS&T | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Towels, face..... | SS&T | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 |
| Tools: | | | | | | | | | | |
| Butcher kit..... | SS&T | | | | | | 1 | | | 1 |
| Farrier and blacksmith kit..... | SS&T | | | | | | 1 | | | 1 |
| Saddler kit..... | SS&T | | | | | | 1 | | | 1 |
| Wheelwright and carpenter kit..... | SS&T | | | | | | 1 | | | 1 |
| Vehicles: | | | | | | | | | | |
| Escort wagons and harness, complete..... | SS&T | | 3 | 3 | | 1 | 17 | | | 27 |
| Wax saddler, lbs..... | SS&T | | | | | | 5 | | | 5 |
| Wheel, hind, escort wagon, extra..... | SS&T | | | | | | 1 | | | 1 |
| Whistles and chains..... | C&E | 9 | | 36 | | 8 | 1 | | | 117 |
| Wicks, lantern..... | SS&T | 2 | 1 | 9 | 2 | 2 | 2 | | 2 | 44 |

See note 5.

A. R. 1215.

See note 6.
See note 7.
See note 8.
See note 9.

See note 10.

REGIMENT OF INFANTRY AT WAR STRENGTH.

EQUIPMENT "B."

| Articles. | Appropriations. | Com-pany of a bat-talion. | Battalion head-quarters. | Total for one bat-talion. | Head-quarters com-pany. | Machine gun com-pany. | Supply com-pany. | Sanitary detach-ment. | Regi-mental head-quarters. | Total for regi-ment including head-quarters sanitary detach-ment. |
|--|-----------------|---------------------------|--------------------------|---------------------------|-------------------------|-----------------------|------------------|-----------------------|----------------------------|---|
| Axes and helves..... | C&E | 5 | 2 | 22 | 4 | ..... | 3 | ..... | 1 | 74 |
| Bags, surplus kit..... | C&E | 19 | ..... | 76 | 7 | 7 | 5 | 3 | ..... | 250 |
| Bars, mosquito, single..... | C&E | 75 | ..... | 300 | 29 | 37 | 19 | 17 | ..... | 1002 |
| Bed sacks..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Blankets, olive drab..... | SS&T | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Brooms: | | | | | | | | | | |
| Corn..... | C&E | 7 | 1 | 29 | 3 | 3 | 2 | 1 | 1 | 97 |
| Stable..... | SS&T | ..... | ..... | ..... | ..... | ..... | 4 | ..... | ..... | 4 |
| Brushes: | | | | | | | | | | |
| Marking..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | 2 | 17 |
| Scrubbing..... | C&E | 5 | 1 | 21 | 2 | 2 | 1 | 1 | 1 | 70 |
| Typewriter..... | SS&T | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 2 |
| Buckets, galv. iron..... | SS&T | 3 | 2 | 14 | 1 | 1 | 1 | ..... | 3 | 48 |
| Cans: | | | | | | | | | | |
| Drinking water..... | SS&T | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 2 | 5 |
| Oil, typewriter..... | SS&T | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 2 |
| Carborundum wheel, with fixtures | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | 2 | 1 |
| Chairs, folding..... | SS&T | ..... | 2 | 2 | ..... | ..... | ..... | ..... | 5 | 11 |
| Chest, commissary with equip-ment..... | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Clothing (packed in surplus kit bags): | | | | | | | | | | |
| Breeches, prs..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Drawers, prs..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Laces, shoe, extra pr..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Shirts, flannel, olive drab..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Shoes, marching, prs..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Stockings, prs..... | C&E | 300 | ..... | 1200 | 116 | 144 | 74 | 66 | ..... | 4004 |
| Undershirts..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |

1 for use of guard.

See note 1.

| | | | | | | | | | | | | |
|-------------------------------------|------|-----|----|-----|--|----|----|-----|-----|----|---|------|
| Coal smithing, lbs. | SS&T | 150 | | | | | | | 100 | | 4 | 100 |
| Colors, camp and staff | C&E | | | | | | | | | | | 4 |
| Cots | C&E | | | 600 | | 58 | 74 | 37 | 33 | | | 2002 |
| Forks, stable | SS&T | | | | | | | 9 | | | | 9 |
| Globes, lantern | SS&T | 1 | 2 | 6 | | 1 | 1 | 1 | | 3 | | 24 |
| Iron, bar, assorted sizes | SS&T | | | | | | | 44 | | | | 44 |
| Irons, branding: | | | | | | | | | | | | |
| Hoof, set | SS&T | | | | | | | 1 | | | | 1 |
| I. C. | SS&T | | | | | | | 1 | | | | 1 |
| U. S. | SS&T | | | | | | | 1 | | | | 1 |
| Lamp black, lbs. | SS&T | 1 | | 4 | | 1 | 1 | 1 | | 2 | | 17 |
| Lanterns, frame combination | SS&T | 1 | | 4 | | 1 | 1 | 1 | | 2 | | 17 |
| Leather, harness, black, lbs. | SS&T | | | | | | | 47 | | | | 47 |
| Medicines and dressings, veterinary | SS&T | | | | | | | | | | | |
| ary | SS&T | | | | | | | 1 | | | | |
| Nails: | | | | | | | | | | | | |
| 6d lbs. | SS&T | | | | | | | | | | | 20 |
| 8d lbs. | SS&T | 10 | 10 | 50 | | 10 | 10 | 10 | | 20 | | 200 |
| 10d lbs. | SS&T | 40 | 40 | 200 | | 40 | 40 | 40 | | 20 | | 800 |
| 20d lbs. | SS&T | 25 | 25 | 125 | | 25 | 25 | 25 | | 50 | | 500 |
| Horseshoe, lbs | SS&T | | 2 | 2 | | 4 | 3 | 12 | 2 | 1 | | 28 |
| Needles, sacking | SS&T | | | | | | | 6 | | | | 6 |
| Oil, typewriter, bottles | SS&T | | | | | | | | | 2 | | 2 |
| Paulins, large | SS&T | 1 | 1 | 5 | | 1 | 1 | 1 | | 1 | | 19 |
| Pickaxe and helvies | C&E | 5 | 2 | 22 | | 4 | | 3 | | 1 | | 74 |
| Pots, marking | SS&T | 1 | | 4 | | 1 | 1 | 1 | | 2 | | 17 |
| Rakes, steel | SS&T | 3 | 1 | 13 | | 1 | 1 | 1 | 1 | 2 | | 45 |
| Ranges, field, complete: | | | | | | | | | | | | |
| No. 1 | SS&T | 1 | | 4 | | 1 | 1 | 1 | | | | 14 |
| No. 2 | SS&T | | 1 | 1 | | | | 1 | | 1 | | 5 |
| Rivets and burrs, copper: | | | | | | | | | | | | |
| No. 8, 1 1/2" lb. | SS&T | | | | | | | 1 | | | | 1 |
| No. 9, 1 1/2" lb. | SS&T | | | | | | | 1 | | | | 1 |
| No. 9, 1" lb. | SS&T | | | | | | | 1 | | | | 1 |
| No. 12, 1/2" lb. | SS&T | | | | | | | 1 | | | | 1 |
| Safes, field | SS&T | | | | | | | 1 | | | | 1 |
| Scales, folding, platform | SS&T | | | | | | | 1 | | | | 1 |
| Shoes, horse and mule, extra, shoes | | | | | | | | | | | | |
| For horses, lbs. | SS&T | | 6 | 6 | | 52 | 18 | 14 | 28 | 8 | | 138 |
| For mules, lbs. | SS&T | | 6 | 6 | | | 52 | 232 | 2 | | | 286 |

See note 6.

Repairs to Q. M. harness.

See note 4, Equipment
"A."

See note 2.

Repairs to Q. M. harness.

EQUIPMENT "B"—Continued.

| Articles. | Appropriations. | Com-pany of a bat-talion. | Battalion head-quarters. | Total for one bat-talion. | Head-quarters com-pany. | Machine gun com-pany. | Supply com-pany. | Sanitary detach-ment. | Regi-mental head-quarters. | Total for regi-ment including sanitary detach-ment. |
|---|-----------------|---------------------------|--------------------------|---------------------------|-------------------------|-----------------------|------------------|-----------------------|----------------------------|---|
| Shovels, short handled..... | C&E | 5 | 2 | 22 | 4 | ..... | 3 | ..... | 1 | 74 |
| Stands, music..... | C&E | ..... | ..... | ..... | 28 | ..... | ..... | ..... | ..... | 28 |
| Sticks, size, shoe..... | C&E | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Tables, folding..... | SS&T | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 5 | 8 |
| Tapes, foot measure..... | C&E | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Tape, measuring 100 feet..... | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Tents, heavy, complete: | | | | | | | | | | |
| Pyramidal, large..... | C&E | 21 | ..... | 84 | 10 | 11 | 6 | 4 | 13 | 286 |
| Wall, small..... | C&E | 2 | 2 | 10 | 3 | 3 | 2 | 3 | 3 | 44 |
| Storage..... | C&E | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 2 |
| Wall..... | C&E | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 2 | 5 |
| Canvas, latrine, screen..... | C&E | 1 | 1 | 5 | 1 | 1 | 1 | ..... | 1 | 19 |
| Thread, saddlers: | | | | | | | | | | |
| No. 3, lbs..... | SS&T | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | 3 |
| No. 10, lbs..... | SS&T | ..... | ..... | ..... | ..... | ..... | 3 | ..... | ..... | 3 |
| Tools: | | | | | | | | | | |
| Farrier and blacksmith set..... | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Saddler set..... | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Wheelwright and carpenter set..... | SS&T | ..... | ..... | ..... | ..... | ..... | 1 | ..... | ..... | 1 |
| Typewriters..... | SS&T | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 2 |
| Wax, saddler, lbs..... | SS&T | ..... | ..... | ..... | ..... | ..... | 5 | ..... | ..... | 5 |
| Wicks, lanterns..... | SS&T | 1 | 2 | 6 | 1 | 1 | 1 | ..... | 3 | 24 |
| Additional camp supplies: | | | | | | | | | | |
| (Provided by camp quar-ter-master and not therefore taken to camp by organiza-tions). | | | | | | | | | | |
| Brushes, whitewash..... | SS&T | 1 | 1 | 5 | 1 | 1 | 1 | ..... | 1 | 19 |
| Cans: | | | | | | | | | | |
| Garbage..... | SS&T | 3 | 2 | 14 | 1 | 1 | 1 | ..... | 2 | 47 |
| Night urinal..... | SS&T | 1 | 1 | 5 | 1 | 1 | 1 | ..... | 1 | 19 |

11 for guard.

For Q. M.

Repairs to Q. M. harness.

See note 3.

See note 4.

See note 5.

| | | | | | | | | | | | | |
|--|------|----|----|----|-----|----|----|----|----|----|-----|----------------------------------|
| Ice..... | SS&T | 10 | 10 | 10 | 50 | 10 | 10 | 10 | 10 | 10 | 190 | A. R. 1215. |
| Lime per day, lbs..... | SS&T | | | | | | | | | | | A. R. 1215. |
| Matches..... | SS&T | | | | | | | | | | | |
| Oil: | | | | | | | | | | | | |
| Crude or fuel for burning out latrines, per day, gals..... | SS&T | 1 | 1 | 1 | 5 | 1 | 1 | 1 | 1 | 1 | 19 | |
| For burning picket lines, per 5 days, gals..... | SS&T | | | | | | | | | | 17 | |
| Mineral, per day, pts..... | SS&T | 3 | 3½ | 3 | 15½ | 3½ | 3 | 17 | 3 | 4 | 69 | |
| Neatfoot, pts..... | C&E | 4 | | 2 | 16 | 2 | 2 | 1 | 1 | | 54 | Includes supply for wag- ons. |
| Typewriter, bots..... | SS&T | | | | | | | | | 2 | | |
| Powder, calcium chloride, per day, tubes..... | SS&T | 5 | | | 20 | 5 | 5 | 3 | | | 73 | A. R. and F. S. R. |
| Rations..... | SS&T | | | | | | | | | | | A. R. 1215. |
| Salt, rock..... | SS&T | | | | | | | | | | | A. R. 1215. |
| Soap, lbs..... | SS&T | | | | | | | | | | | |
| Straw: | | | | | | | | | | | | |
| For bed sacks, lbs..... | SS&T | | | | | | | | | | | A. R. 1084. |
| For bedding animals, lbs..... | SS&T | | | | | | | | | | | A. R. 1085. |
| For burning out latrines, per day, lbs..... | SS&T | 15 | 15 | 15 | 75 | 15 | 15 | 15 | 15 | 15 | 285 | |
| For burning picket lines, per 5 days, lbs..... | SS&T | | | | | | | | | | 510 | 3 lbs. per animal. |
| Vinegar (for animals)..... | SS&T | | | | | | | | | | | A. R. 1215. |

REGIMENT OF INFANTRY AT WAR STRENGTH.

EQUIPMENT "C."

| Articles. | Appropriations. | Com-pany of a bat-talion. | Battalion head-quarters. | Total for one bat-talion. | Head-quarters com-pany. | Machine gun com-pany. | Supply com-pany. | Sanitary detach-ment. | Regi-mental head-quarters. | Total for regi-ment including head-quarters sanitary detach-ment. | For distribution in camp. |
|---------------------------------|-----------------|---------------------------|--------------------------|---------------------------|-------------------------|-----------------------|------------------|-----------------------|----------------------------|---|-------------------------------------|
| Axes and helves | C&E | 7 | 10 | 138 | 6 | 4 | 5 | ... | 2 | 131 | 1 For distribution in camp. |
| Bags: | | | | | | | | | | | |
| Nose. | SS&T | | | | | | | 1 | | 3 | |
| Surplus kit. | C&E | 19 | | 76 | 7 | 7 | 2 | 3 | | 250 | |
| Water, sterilizing. | SS&T | 2 | | 8 | 2 | 2 | 2 | 1 | | 31 | |
| Bars, mosquito, single. | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Baton. | C&E | | | | 1 | | | | | 1 | |
| Bed sacks. | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | |
| Blankets, olive drab. | SS&T | 300 | | 1200 | 116 | 148 | 74 | 66 | | 4004 | |
| Blankets, saddle. | SS&T | | | | | | 2 | | | 2 | |
| Brassards, red. | C&E | | | | 16 | 2 | | | | 18 | |
| Bridles, riding. | SS&T | | | | | | 2 | | | 2 | |
| Brooms: | | | | | | | | | | | |
| Corn. | C&E | 7 | 1 | 29 | 3 | 3 | 2 | 1 | 1 | 97 | |
| Stable. | SS&T | | | | | | 4 | | | 4 | |
| Brushes: | | | | | | | | | | | |
| Horse. | SS&T | | | | | | 2 | 1 | | 3 | |
| Marking. | SS&T | 1 | | 4 | 1 | 1 | 1 | | 2 | 17 | |
| Scrubbing. | C&E | 5 | 1 | 21 | 2 | 2 | 1 | 1 | 1 | 70 | |
| Typewriter, type cleaning. | SS&T | | | | | | | | 2 | 2 | |
| Buckets, galvanized iron. | SS&T | 6 | 3 | 27 | 3 | 3 | 3 | | 4 | 94 | |
| Bugles with sling. | C&E | 2 | | 8 | 1 | 2 | | | | 27 | |
| Calks, toe horseshoe. | SS&T | | | | | | | | | | |
| Cans: | | | | | | | | | | | |
| Drinking water. | SS&T | | 1 | 1 | | | | | 1 | 2 | 1 for guard. |
| Oil, typewriter. | SS&T | | | | | | | | 2 | 2 | |
| Candles. | SS&T | | | | | | | | | | Supplied when required, A. R. 1215. |
| Carbonandum wheel with fixture. | | | | | | | 1 | | | 1 | |
| Chairs, folding. | SS&T | | 2 | 2 | | | | | 5 | 11 | |

Supplied when necessary.

1 for guard.

Supplied when required, A. R. 1215.

| | SS&T | | | | | | 1 | | 1 | | Contents, see note 1. Equipment "B." |
|---|------|--|------|-----|-----|--|-----|----|---|--|---|
| Chest, commissary with equip- ment..... | | | | | | | | | | | 1 |
| Clothing: | | | | | | | | | | | |
| Belts, waist..... | 150 | | | | | | | | | | 2002 |
| Breeches, prs..... | 300 | | 600 | 58 | 74 | | 37 | 33 | | | 4004 |
| Chevrans and other sleeve in- signia, service: | | | | | | | | | | | |
| Regtl. Sergt. Maj..... | | | | 3 | | | | | | | 3 |
| Regtl. Supply Sergt..... | | | | | | | 9 | | | | 9 |
| Regtl. Color Sergt..... | | | | 6 | | | | | | | 6 |
| Band Leader..... | | | | 3 | | | | | | | 3 |
| Drum Maj..... | | | | 3 | | | | | | | 3 |
| Asst. Band Leader..... | | | | 3 | | | | | | | 3 |
| Batt. Sergt. Majs..... | | | | 9 | | | | | | | 9 |
| 1st Sergt..... | 3 | | 12 | | 3 | | 3 | | | | 42 |
| Company Supply Sergt..... | 3 | | 12 | 3 | 3 | | 3 | | | | 45 |
| Company Mess Sergt..... | 3 | | 12 | 3 | 3 | | 3 | | | | 45 |
| Sergt., 1st Class Hosp. Corps | | | | | | | | | | | |
| Sergts. Hosp. Corps..... | | | | | | | | 3 | | | 3 |
| Sergts..... | 24 | | 96 | 12 | 21 | | | | | | 9 |
| Corpls..... | 51 | | 204 | 12 | 24 | | 3 | | | | 321 |
| Stable Sergt..... | | | | 3 | 3 | | 3 | | | | 651 |
| Horseshoer..... | | | | 3 | 3 | | 3 | | | | 9 |
| Saddlers..... | | | | | | | 3 | | | | 9 |
| Mechanics..... | 6 | | 24 | | 3 | | | | | | 75 |
| Cooks..... | 9 | | 36 | 6 | 6 | | 3 | | | | 123 |
| Privates, 1st class. Inf..... | 84 | | 336 | 12 | 36 | | | | | | 1056 |
| Privates, 1st class Hosp. Corps | | | | | | | | | | | |
| Wagoners..... | | | | | | | 81 | 10 | | | 10 |
| Cords, hat: | | | | | | | | | | | 81 |
| Infantry..... | 150 | | 600 | 58 | 74 | | 37 | | | | 1969 |
| Hosp. Corps..... | | | | | | | | 33 | | | 33 |
| Drawers, prs..... | 450 | | 1800 | 174 | 222 | | 111 | 99 | | | 6006 |
| Gloves, horsehide..... | | | | | 74 | | | | | | 74 |
| Riding..... | | | | 20 | 6 | | 7 | 8 | | | 41 |
| Woolen OD..... | 150 | | 600 | 58 | 74 | | 37 | 33 | | | 2002 |
| Hats, service, with tying cords | 150 | | 600 | 58 | 74 | | 37 | 33 | | | 2002 |
| Laces, shoe, extra prs..... | 150 | | 600 | 58 | 74 | | 37 | 33 | | | 2002 |
| Leggings, prs..... | 150 | | 600 | 58 | 74 | | 37 | 33 | | | 2002 |
| Shirts, olive drab, flannel..... | 300 | | 1200 | 116 | 148 | | 74 | 66 | | | 4004 |

EQUIPMENT "C."—Continued.

| Articles. | Appropriations. | Com- pany of a bat- talion. | Battalion head- quarters. | Total for one bat- talion. | Head- quarters com- pany. | Machine gun com- pany. | Supply com- pany. | Sanitary detach- ment. | Regi- mental head- quarters. | Total for regi- ment including sanitary detach- ment. |
|---|-----------------|--------------------------------------|---------------------------------|----------------------------------|------------------------------------|---------------------------------|-------------------------|------------------------------|---------------------------------------|---|
| Clothing: | | | | | | | | | | |
| Shoes, marching..... | C&E | 300 | ..... | 1200 | 116 | 148 | 74 | 66 | ..... | 4004 |
| Stockings, prs..... | C&E | 600 | ..... | 2400 | 232 | 296 | 148 | 132 | ..... | 8008 |
| Tags, identification..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Tags, identification, yds..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |
| Undershirts..... | C&E | 450 | ..... | 1800 | 174 | 222 | 111 | 66 | ..... | 4004 |
| Coal, smithing, lbs..... | SS&T | ..... | ..... | ..... | ..... | ..... | 150 | ..... | ..... | 150 |
| Colors: | | | | | | | | | | |
| Camp and staff..... | C&E | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 4 | 4 |
| With case, staff, cord and tassels:— | | | | | | | | | | |
| Inf. regt. silk..... | C&E | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Natl. silk..... | C&E | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 | 1 |
| Natl. service..... | C&E | ..... | 1 | 1 | ..... | ..... | ..... | ..... | 3 | 3 |
| Combs, curry..... | SS&T | ..... | ..... | ..... | ..... | ..... | 2 | 1 | ..... | 3 |
| Cooking utensils, march kit: | | | | | | | | | | |
| Cake turners..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Cans: | | | | | | | | | | |
| Water, large..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Water, small..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Dippers, large..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Containers, mineral oil..... | SS&T | 1 | ..... | 5 | 1 | 1 | 2 | 1 | 1 | 21 |
| Cleavers, meat..... | SS&T | 1 | 1 | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Forks, meat, large..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Knives, meat, large..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Fire iron set..... | SS&T | 1 | ..... | 4 | 1 | 1 | 1 | ..... | ..... | 15 |
| Kettles, camp, with covers..... | SS&T | 6 | ..... | 24 | 2 | 2 | 2 | ..... | ..... | 78 |
| Pans, bake..... | SS&T | 8 | ..... | 32 | 4 | 5 | 3 | ..... | ..... | 108 |
| Cots..... | C&E | 150 | ..... | 600 | 58 | 74 | 37 | 33 | ..... | 2002 |

1 wall tent fly, without
poles or pins, is issued
with each march kit.
See tentage, heavy.

| | | | | | | | | | | | |
|---|-------|----|----|-----|----|----|-----|---|----|-----|--------------------------------|
| Covers, mule, blanket lined. | SS&T | 1 | 1 | 5 | 1 | 1 | 2 | 1 | 3 | 3 | See note 3, Equipment "A." |
| Deaks, field, small. | C&E | | | | | | 1 | | 3 | 21 | |
| Farrier's instrument, pocket case | SS&T | | | | | | 1 | | | 1 | |
| Guidons, ambulance, without staff | C&E | | | | | | | 2 | | 2 | |
| Forage, portable | SS&T | | | | | | 1 | | | 1 | |
| Forks, stable. | SS&T | | | | | | 9 | | | 9 | |
| Globes, lantern. | SS&T | 3 | 3 | 15 | 3 | 3 | 3 | | 5 | 59 | |
| Halters and straps. | SS&T | | | | | | 2 | 1 | | 3 | |
| Handcuffs, prs. | SS&T | | 1 | 1 | | | | | 1 | 4 | |
| Head nets, mosquito. | C&E | 14 | | 56 | 6 | 5 | 3 | 2 | | 184 | |
| Horses, riding: | | | | | | | | | | | |
| For enlisted men. | HCA&E | | | | 25 | 5 | 5 | 8 | | 43 | |
| For officers. | HCA&E | | | | | | 2 | | | 2 | A. R. 1096. |
| Horseshoe emergency equipment | SS&T | | | | | | | | | 28 | See note 11, Equipment "A." |
| Instruments, band. | C&E | | | | 28 | | 88 | | | 88 | |
| Iron, bar, assorted sizes. | SS&T | | | | | | | | | | |
| Irons, branding: | | | | | | | | | | | |
| Hoot, set. | SS&T | | | | | | 1 | | | 1 | |
| I.C. | SS&T | | | | | | 1 | | | 1 | |
| U. S. | SS&T | | | | | | 1 | | | 1 | |
| Jack, wagon. | SS&T | | | | | | 1 | | | 1 | |
| Lampblack, lbs. | SS&T | 1 | | 4 | 1 | 1 | 1 | | 2 | 17 | |
| Lantern frames, combination. | SS&T | 3 | 3 | 15 | 3 | 3 | 3 | | 5 | 59 | |
| Leather, harness, black, lbs. | SS&T | | | | | | 88 | | | 88 | |
| Matches (issued as required), boxes. | SS&T | 24 | 6 | 102 | 24 | 24 | 24 | 6 | 12 | 396 | 10 day supply. |
| Medicines and dressings, veteri- nary. | SS&T | | | | | | | | | | See note 4, Equipment "A." |
| Menders, harness. | SS&T | | 1 | 1 | | | | | | 3 | |
| Mules: | | | | | | | | | | | |
| Draft. | SS&T | | | | | | 112 | | | 112 | |
| Pack. | SS&T | | | | | 24 | | 1 | | 25 | |
| Riding. | SS&T | | | | | 2 | 4 | | | 6 | |
| Nails: | | | | | | | | | | | |
| 6d, lbs. | SS&T | | | | | | | | 20 | 20 | |
| 8d, lbs. | SS&T | 10 | 10 | 50 | 10 | 10 | 10 | | 20 | 200 | |
| 10d, lbs. | SS&T | 40 | 40 | 200 | 40 | 40 | 40 | | 80 | 800 | |
| 20d, lbs. | SS&T | 25 | 25 | 125 | 25 | 25 | 25 | | 50 | 500 | |
| Horseshoes, lbs. | SS&T | | 6 | 6 | 10 | 11 | 39 | 5 | 2 | 81 | |

EQUIPMENT "C"—Continued.

| Articles. | Appropriations. | Com- pany of a bat- talion. | Battalion head- quarters. | Total for one bat- talion. | Head- quarters com- pany. | Machine gun com- pany. | Supply com- pany. | Sanitary detach- ment. | Regi- mental head- quarters. | Total for regi- ment including sanitary detach- ment. | |
|--|-----------------|--------------------------------------|---------------------------------|----------------------------------|------------------------------------|---------------------------------|-------------------------|------------------------------|---------------------------------------|---|--|
| Needles, harness: | | | | | | | | | | | |
| Glovers, papers. | SS&T | | | | | | 2 | | | 2 | For repairs to Q. M. |
| No. 2, papers. | SS&T | | | | | | 4 | | | 4 | harness. |
| No. 3, papers. | SS&T | | | | | | 4 | | | 4 | |
| No. 4, papers. | SS&T | | | | | | 4 | | | 4 | |
| Sacking. | SS&T | | | | | | 6 | | | 6 | |
| Oil: | | | | | | | | | | | |
| Mineral, issued as required, gal. | SS&T | 3 | 3 | 15 | 4 | 3 | 10 | 3 | 3 | 69 | 10 days' supply, includes supply for wagon train. |
| Neatsfoot (issued as required), pts. | C&E | 4 | | 16 | 2 | 2 | 1 | 1 | | 54 | 10 days' march supply, see additional camp supplies. |
| Sperm, pts. | SS&T | | | | | | | | | 1 | |
| Typewriter, bottles. | SS&T | 150 | | 600 | 58 | 74 | 37 | 33 | 2 | 2002 | |
| Overcoats. | C&E | | | | | | 1 | | | 2 | |
| Pannier, veterinary | SS&T | 1 | 1 | 5 | 1 | 1 | 1 | | 1 | 19 | See note 4, Equipment "A." |
| Paulins, large. | SS&T | 7 | 10 | 38 | 6 | 4 | 5 | | 2 | 131 | For distribution in camp. Includes 500 for officers. |
| Pickaxes and helves. | C&E | 750 | | 2995 | 315 | 370 | 205 | 195 | 10 | 10580 | |
| Pins, tent, shelter. | C&E | 6 | | 24 | 42 | 55 | 41 | 39 | 8 | 257 | |
| Poles, tent, shelter. | C&E | 150 | | 600 | 32 | 71 | | 25 | | 1928 | |
| Ponchos. | C&E | | | | 28 | | | | | 28 | |
| Pouches, music, O. D. | | | | | | | | | | | |
| Powder, hypochlorite of lime, in tubes, issued as required. | SS&T | 50 | | 200 | 50 | 50 | 30 | 30 | | 760 | 10 days' supply. |
| Rakes, steel. | SS&T | | | | | | 4 | | | 4 | |
| Ranges, field, complete: | | | | | | | | | | | |
| No. 1. | SS&T | 1 | 1 | 4 | 1 | 1 | 1 | | | 14 | See note 2, Equipment "B." |
| No. 2. | SS&T | | | 1 | | | | | 1 | 5 | |

[illegible]

EQUIPMENT "C"—Continued.

| Articles. | Appropriations. | Com-pany of a bat-talion. | Battalion head-quarters. | Total for one bat-talion. | Head-quarters com-pany. | Machine gun com-pany. | Supply com-pany. | Sanitary detach-ment. | Regi-mental head-quarters. | Total for regi-ment including sanitary detach-ment. | |
|--------------------------------------|-----------------|---------------------------|--------------------------|---------------------------|-------------------------|-----------------------|------------------|-----------------------|----------------------------|---|----------------------------|
| Tents: | | | | | | | | | | | |
| Storage Wall. | C&E | | 1 | 1 | | | | | 2 | 2 | For Q. M. |
| Canvas, latrine, screen. | C&E | 1 | 1 | 5 | 1 | 1 | 1 | | 2 | 5 | |
| Thread, saddlers: | C&E | | | | | | | | 1 | 19 | |
| No. 3, lbs. | SS&T | | | | | | | | | | |
| No. 10, lbs. | SS&T | | | | | | | | | | |
| Toilet articles: | | | | | | | | | | | |
| Combs. | C&E | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | Repairs to Q. M. harness. |
| Company barber kit. | C&E | 1 | | 4 | 1 | 1 | 1 | | | 15 | |
| Housewives. | C&E | 18 | | 72 | 7 | 5 | 4 | 3 | | 236 | |
| Soap, cakes. | SS&T | | | | | | | | | | |
| Toothbrushes. | SS&T | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | See note 5, Equipment "A" |
| Towels, face. | SS&T | 150 | | 600 | 58 | 74 | 37 | 33 | | 2002 | A. R. 1215. |
| Tools: | | | | | | | | | | | |
| Farrier's and blacksmith's set. | SS&T | | | | | | 1 | | | 1 | See note 3, Equipment "B" |
| Saddler's set. | SS&T | | | | | | 1 | | | 1 | See note 4, Equipment "B" |
| Wheelwright and carpenter set. | SS&T | | | | | | 1 | | | 1 | See note 5, Equipment "B" |
| Typewriters. | SS&T | | | | | | | | | | |
| Vehicles: | | | | | | | | | 2 | 2 | |
| Escort wagons and harness, complete. | SS&T | | 3 | 3 | | 1 | 17 | | | 27 | See note 10, Equipment "A" |
| Wax, saddler, lbs. | SS&T | | | | | | | | | | |
| Wheel, hind, escort wagon, extra | SS&T | | | | | | 10 | | | 10 | |
| Whistles and chains. | C&E | 9 | | 36 | | 8 | 1 | | | 117 | |
| Wicks, lantern. | SS&T | 3 | 3 | 15 | 3 | 3 | 3 | | 5 | 59 | |

| Additional camp supplies: (Provided by camp quar- termaster and not therefore taken to camp by organiza- tions.) | 1 | 1 | 5 | 1 | 1 | 1 | 2 | 19 | |
|--|------|----|----|----|----|-----|----|-----|--|
| Brushes, whitewash..... | SS&T | | | | | | | | |
| Cans: | | | | | | | | | |
| Garbage..... | SS&T | 3 | 14 | 1 | 1 | 1 | 2 | 47 | Not furnished if garbage is burned in pits. |
| Night urinal..... | SS&T | 1 | 5 | 1 | 1 | 1 | 1 | 19 | A. R. 1215. |
| Ice..... | SS&T | | | | | | | 190 | A. R. 1215. |
| Line, per day, lbs..... | SS&T | 10 | 50 | 10 | 10 | 10 | 10 | | A. R. 1215. |
| Matches..... | SS&T | | | | | | | | |
| Oil: | | | | | | | | | |
| Crude or fuel, for burning out latrines, gals..... | SS&T | 1 | 5 | 1 | 1 | 1 | 1 | 19 | |
| For burning picket line, per 5 days, gals..... | SS&T | | | | | | | | |
| Mineral, per day, pts..... | SS&T | 3 | 15 | 3 | 3 | 17 | | 17 | |
| Neatsfoot, pts..... | C&E | 4 | 16 | 2 | 2 | 1 | 4 | 67 | |
| Typewriter, bottles..... | SS&T | | | | | | 1 | 54 | |
| Paper, toilet..... | SS&T | | | | | | 2 | 2 | A. R. 1215. |
| Powder, calcium, chloride, per tubes..... | SS&T | 5 | 20 | 5 | 5 | 3 | | 73 | |
| Rations..... | SS&T | | | | | | | | A. R. and P. S. R. |
| Salt, rock..... | SS&T | | | | | | | | A. R. 1215. |
| Soap, lbs..... | SS&T | | | | | | | | A. R. 1215. |
| Straw: | | | | | | | | | |
| For bed sacks, lbs..... | SS&T | | | | | | | | A. R. 1084. |
| For bedding animals, lbs..... | SS&T | | | | | | | | A. R. 1085. |
| For burning out latrines, per day, lbs..... | SS&T | 15 | 75 | 15 | 15 | 15 | 15 | 285 | |
| For burning picket lines, per 5 days, lbs..... | SS&T | | | | | | | 510 | 3 lbs. per animal. |
| Vinegar for animals..... | SS&T | | | | | 510 | | | A. R. 1215. |

NOTES TO EQUIPMENT "A."

Note 1: Carried in combat wagons.

Note 2: Field desk allowance not to exceed 35 lbs.: 1 gross bands, rubber, N memo., 4; books, duplicating, 2; envelopes, official, 200; erasers, rubber, 1; writer, 1; erasers, steel, 1; fasteners, paper boxes, 1; files, office, General Order, 1; ink, black powdered, pkgs., 1; mucilage or paste, bottles or tins, 1; blotting, 4 x 9 1/4 inches, 6; blotting, 12 x 19 inches, 2; carbon, letter size sheets, 1; typewriter quires, 5; pencils: indelible, 4; lead, 2; colored (blue and red), 2; pens, steel, 24; pins, office cones, 1; ribbons, typewriter, 2; ruler, office, 1; shears, office, 1; tape, office, spool, 1; twine, wrapping ball, 1; wax, sealing, 1.

Note 3: Farrier instrument pocket case: Canvas roll, 1; scalpel, 1; clinical thermometer, 1; pair curved scissors, 1; pair dressing forceps, 1; forceps, 1; director, grooved, 1; bistoury, curved blunt, 1; probe, 1; skein silk, curved, 6.

Note 4: Pannier veterinary and appliances: Aloes, ball, 3; pounds aromatic spirits, 1/4 lb.; ammonia liniment, 1/4 lb.; charcoal, 1/4 lb.; chloronaphthyl kresol, 1/2 lb.; colic mixture, 1/2 lb.; cosmoline, 1/2 lb.; iodine, tincture, 1/4 lb.; of, 1/2 lb.; mercury, bichloride of, 3 oz.; oil, linseed, 1/4 lb.; oil, olive, 1/4 lb.; antiseptic, 1/4 lb.; tar, pine, 1/4 lb.; three sulphates (copper, iron, and zinc), 1/4 lb.; dressings—absorbent cotton, 1/4 lb.; antiseptic gauze, package, 1; bandage, cotton, white, 4; oakum, 1 lb.; soap, castile, 1 lb.

Note 5: Company barber kit: Not to exceed 8 lbs. Purchased from funds. Brushes, shaving, 2; clippers, 2; cups, 2; hone, 1; razors, 6; stropping towels, 12.

Note 6: Tools, butcher kit: Cleaver, 1; hooks, meat, for racks, 6; knives, saw, meat, including two extra blades, 1; steel, butchers, 1; scale, beam, 1.

These articles form a part of the equipment of a commissary chest (see chest under Equipment "B.').

Note 7: Tools, farrier and blacksmith kit: Anvil, small, 1; apron, leather, hot handled, 1; chisel, cold, hand, 1; clinch, cutter (buffer), 1; clinch, iron ball peen, 1; hammer, shoeing, 1; hardie, 1; knife, farrier, 1; nippers, cutting, 1; pritchel, 1; punches, hand, round, 1; rasps, 16 inch, 1; tongs, shoeing, 1; tools, 1.

These tools form a part of a set of farrier's tools under Equipment "B."

Note 8: Tools, saddler kit: Awls, collar, 1; awls, round, 1; blades, a set, 1; can, oil, 1; hammers, riveting, 1; knife, gauge, 1; knife, round, 1; punch, 6 tube, 1; set, rivet, 1; stone, oil, 1; tools, edge, common, 1.

These tools form a part of a saddler's set of tools, under Equipment "B."

Note 9: Tools, wheelwright and carpenter kit: Axe, hand, 1; bits, auger, 1/4 inch; bits, screw-driver, 1; brace, ratchet, 12 inch, 1; chisel, firm, 1; files, saw, taper, 5 inch, 3; hammer, claw, 1; oiler, 1; rule, 2-foot, 1; saw cut, 1; screw-driver, 1; set, saw, 1; stones, oil, 1; wrench, monkey, 10-inch, 1.

These tools form a part of a set of wheelwright and carpenter's tools. See Equipment "B."

Note 10: Wagons, equipment of spare parts and accessories for: 1 set of equipment of spare parts and accessories for wagons, ambulances, and caissons, as follows: Wagon, escort (includes running gear; wagon body, 1 doubletree; 1 lead bar; 4 single-trees; 6 bows; 2 chains, lock; 1 wagon collar box; and 1 oscillating tool box, each with padlock and key, 1 driver's seat wrench). Total weight 2,033 lbs.

Wagon Equipment.

Where Carried.

| | |
|---------------------|---------------------------|
| Blocks, brake..... | In oscillating box..... |
| Bolts, king..... | In oscillating box..... |
| Bolts, tire: | |
| 1/4" x 2 3/4"..... | In oscillating box..... |
| 1/4" x 3"..... | In oscillating box..... |
| Bolts, wagon: | |
| 1/4" x 1 1/2"..... | In oscillating box..... |
| 5/16" x 1 3/4"..... | In oscillating box..... |
| 5/16" x 2"..... | In oscillating box..... |
| 5/16" x 2 1/2"..... | In oscillating box..... |
| 3/8" x 3"..... | In oscillating box..... |
| 1/2" x 1 1/2"..... | In oscillating box..... |
| 3/8" x 4"..... | In oscillating box..... |
| Links, open..... | In oscillating box..... |
| Nuts, axle..... | In oscillating box..... |
| Reach..... | On left side of body..... |

| Wagon Equipment. | Where Carried. | Number. |
|------------------------------------|----------------------------|---------------|
| Rivets iron: | | |
| $\frac{3}{8}$ " x $1\frac{1}{2}$ " | In oscillating box | 6 |
| $\frac{1}{4}$ " x $1\frac{1}{2}$ " | In oscillating box | 4 |
| Tongue | On left side of wagon body | 1 |
| Trees: | | |
| Double | Bolted to coupling pole | 1 |
| Single | In oscillating tool box | 1 |
| Axe and helve | In oscillating tool box | 1 |
| Bags, nose | In oscillating tool box | 4 |
| Brushes, horse | In oscillating tool box | 1 |
| Buckets, galvanized iron | In oscillating tool box | 1 |
| Comb, curry | In oscillating tool box | 1 |
| Globes, lantern | In oscillating tool box | 1 |
| Grease, axle, lbs. | In oscillating tool box | 4 |
| Halters and straps | In oscillating tool box | 4 |
| Lanterns, frame combination | In oscillating tool box | 1 |
| Pickaxe and helve | In oscillating tool box | 1 |
| Rope $\frac{3}{4}$ " feet | In oscillating tool box | 150 |
| Spade | In oscillating tool box | 1 |
| Whip | In oscillating tool box | 1 |
| Wicks, lantern | In oscillating tool box | 1 |
| Wrenches, monkey | In oscillating tool box | 1 |
| Twine, ball | In oscillating tool box | 1 |
| Harness, lead S.S. (72 lbs.) | On mules | 2 |
| Harness, wheel S.S. (90 lbs.) | On mules | 2 |
| Buckles, harness: | | |
| $\frac{3}{4}$ " | In jockey box | 1 |
| $\frac{1}{2}$ " | In jockey box | 1 |
| 1" | In jockey box | 1 |
| 2" | In jockey box | 1 |
| Clips, trace | In oscillating box | 2 |
| Hames | In oscillating box | 2 |
| Rings: | | |
| $\frac{3}{4}$ " | In jockey box | 1 |
| 1" | In jockey box | 1 |
| $1\frac{1}{2}$ " | In jockey box | 1 |
| 2" | In jockey box | 1 |
| Snap: | | |
| 1" | In jockey box | 1 |
| $1\frac{1}{2}$ " | In jockey box | 1 |
| 2" | In jockey box | 1 |
| Straps, hame | In oscillating tool box | 3 |
| Oil, neatsfoot, gals. | In oscillating tool box | $\frac{1}{2}$ |
| Soap, harness, lb. | In oscillating tool box | 1 |
| Sponge | In oscillating tool box | 1 |
| Wire, stove, spool | In jockey box | 1 |

(For Winter use when especially authorized, 1 blanket, lined, for each mule.)

The foregoing list of articles is prescribed for each escort wagon and team wherever used. The oscillating tool box may be fitted on the escort wagon of any model.

Wheels extra. One wagon of each regimental field train, preferably the most lightly laden grain wagon, will be equipped with one extra hind wheel in addition to the usual wagon equipment.

Note 11: A horseshoer's emergency equipment consists of the following articles: 1 shoeing hammer, 1 pincers, 1 hoof knife, 1 jointed horseshoe No. 2, 1 rasp, horseshoe nails assorted, $\frac{1}{4}$ lb. of oakum, 1 four-ounce bottle of chlorolin or kresol.

Note 12: Sweaters will only be issued until the present supply is exhausted.

NOTES TO EQUIPMENT "B."

Note 1: Contents of commissary chest. The butcher kit is taken from this chest. 2 blades meat saw, 22 inch; 1 bolt, stove; 1 brace, carpenter's; 2 candlesticks G. I. iron spiked bottom and sides; 1 cleaver, 8 inch cut; 2 drills, twist; 2 faucets wood, 8 inch; 1 funnel, quart; 1 hammer, claw and helve; 6 hooks, meat, for racks; 1 iron, soldering; 1 knife, butcher, 8 inch; 1 knife, butcher, 10 inch; 1 measure, liquid, quart; 6 needles, packing; 1 opener, box; 3 openers, cans.

Note 2: Contents, of field range No. 1: Field range No. 1, complete, consists of the following articles: 1 field range (1 body No. 41 and 1 boiling plate No. 42); 1 Alamo attachment (2 pieces 42a and 42b); 6 boilers, Nos. 48, 49, 50, 51, 53, and 54; 1 cleaver, 6 inch; 1 dipper, $\frac{1}{2}$ gallon No. 55; 1 dipper, quart, No. 56; 2 forks, small; 1 grinder, meat; 1 guard, tent, 6 $\frac{1}{2}$ inches; 3 knives, butcher, 8 inch; 2 lanterns, folding; 2 pans, bake No. 52; 1 pipe, smoke, elbow, No. 47; 4 pipe, smoke, joints Nos. 43, 44, 45, and 46; 4 rests, pan, No. 57; 1 saw, meat, 15 inch blade; 1 skimmer, large; 2 spoons, large; 1 steel, butcher, 10 inch.

Contents of field range No. 2: Field range No. 2 complete, consists of the following articles: 1 field range (1 body No. 61, and 1 boiling plate No. 62); 2 boilers, No. 50 and 51; 1 dipper, $\frac{1}{2}$ gallon, No. 55; 2 forks, meat, small; 1 guard, tent; 2 knives, butcher, 8 inch; 1 lantern, folding; 2 pans, bake, No. 52; 1 pipe, smoke, elbow, No. 67; 4 pipe, smoke, joints, Nos. 63, 64, 65 and 66; 2 rests, pan, No. 57; 1 saw, meat, 15 inch blade; 1 skimmer, small; 2 spoons, small; 1 steel, butcher, 10 inch.

Note 3: Tools, farrier and blacksmith set. Tools for kit taken from this chest. 1 anvil, small; 1 apron, leather; 1 chest, tool; 2 chisels, cold handled; 1 chisel, hot handled; 1 chisel, cold, hand; 1 clinch cutter (buffer); 1 clinch, iron; 1 dividers, wing; 1 file, flat, bastard, 12 inch; 1 hammer, ball peen; 1 hammer, riveting; 1 hammer, shoeing; 1 hammer, sledge; 1 hardie; 1 knife, farrier; 1 nippers, cutting; 1 nippers, hoof, paring; 1 pincers; 1 pritchel; 3 punches, hand round; 6 rasps, 6 inch; 2 screws, lag, 3 x $\frac{1}{4}$ inch; 1 set stock and dies $\frac{1}{4}$ to $1\frac{1}{4}$ inch; 1 tongs, shoeing; 1 tongs, large, 20 inch; 1 tongs, small, 14 inch; 1 vise, small; 2 wrenches, monkey, 18 and 12 inch; 1 wrench S, adjustable.

Note 4: Tools, saddler, set. Tools saddler kit taken from this chest. 1 awl, collar; 1 awl, round; 18 blades, awl, 3 each 6 sizes; 1 brush, glue, small; 1 can, oil; 1 chest, tool, saddlers, combination; 1 chisel, cold; 1 clamp, stitching; 1 creaser, iron; 1 cup, tin, pint; 1 dividers, wing; 1 file, round (taper 6 inch); 1 hammer, riveting; 1 hammer, shoe; 1 hammer, tack; 1 knife, gauge; 1 knife, head; 1 knife, round; 1 knife, shoe; 1 nippers, cutting, 8 inch; 1 pliers, 8 inch flat nose; 1 punch, revolving, 6 tube; 2 punches, round, Nos. 2 and 9; 1 rule, 36 inch, 1 screw-driver, small; 2 screws, lag, 2 $\frac{1}{2}$ by $\frac{1}{4}$ inch; 1 set, rivet; 1 shears, pairs; 1 slicker, glass; 1 stone, oil; 2 thimbles; 1 tickler; 1 tool, claw; 1 tool, edge, common; 1 vise, small.

Note 5: Tools, wheelwright and carpenter's set. Wheelwright and carpenter's kit taken from this chest. 1 axe, hand; 1 auger, hollow; 8 bits auger, $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$ and 1 inch; 1 bit, screw-driver; 1 brace, ratchet, 12 inch; 1 calipers, pairs; 1 chest, tool; 8 chisels, socket, firmer, $\frac{1}{4}$, $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$, $\frac{1}{2}$, $\frac{1}{4}$, 1, $1\frac{1}{2}$ and 2 inch; 6 files, saw, taper, 5 inch; 1 gauge, thumb, mortise; 1 hammer, claw; 1 knife, drawing; 1 nest of saws (1 handle, 3 blades); 1 oiler; 1 plane, smooth; 1 plane, jack; 1 plane, jointer; 1 rasp, wood, 12 inch; 1 rule, 2 foot; 1 saw, hand, crosscut; 1 saw, hand, rip; 2 screws, lag, 3 by $\frac{1}{2}$ inch; 1 screw-driver, hand; 1 set, saw; 1 spoke, pointer; 1 square, try; 1 square, steel, 24 by 16 inch; 1 stone, oil; 1 vise; 1 wrench, monkey, 10 inch.

Note 6: Irons, branding, hoof set consists of the following articles: One series of letters from A to M, and one series of numbers from 0 to 9.

EXTRACTS FROM COMPILATION OF GENERAL ORDERS, CIRCULARS, AND BULLETINS OF THE WAR DEPARTMENT, 1881-1915, AS PERTAIN TO INFANTRY.

(Including Changes No. 1, March 12, 1917.)

1. Officers to Refrain from Publication of Views on Military Situation. Officers of the army will refrain, until further orders, from giving out for publication any interview, statement, discussion, or article on the military situation in the United States or abroad, as any expression of their views on this subject at present is prejudicial to the best interests of the service. (G. O. 10, 1915.)

Paragraph 2 eliminated, as it has no application to Infantry.

3. Contributions for and Acceptance of Gifts or Presents. The attention of officers and enlisted men is drawn to the following provision of the Revised Statutes:

1784. No officer, clerk, or employee in the United States Government employ shall at any time solicit contributions from other officers, clerks, or employees in the government service for a gift or present to those in a superior official position; nor shall any such officials or clerical superiors receive any gift or present offered or presented to them as a contribution from persons in government employ receiving a less salary than themselves; nor shall any officer or clerk make any donation as a gift or present to any official superior. Every person who violates this section shall be summarily discharged from the government employ.

The foregoing enactment includes within the statutory prohibition the soliciting of contributions by one officer or employee from other officers or employees of the United States when such contributions are to constitute gifts or presents or are to be used for the purchase of gifts or presents to those in superior official position. The receiving of presents by officers as contributions from those under their command or control, in either the military or civil service, also falls within the prohibition of the section, which imposes the penalty of summary dismissal upon all official superiors and those under their command or control who, by soliciting or receiving contributions, or by giving presents, become subject to its penal operation.

The practice of receiving presents from persons not in the military establishment or in the employ of the government in recognition of services rendered, though not expressly forbidden, is opposed to the spirit of the statute and for that reason is not approved by the department.

The requirements of the statute above cited will hereafter be strictly observed in all branches of the military establishment. (Cir. 46, 1904, as amended by Cir. 77, 1909.)

Paragraphs 4 to 10 eliminated, as they have no application to Infantry.

11. Employment of Outside Influence to Obtain Assignments, Etc. Attention is hereby specifically called to the Executive order published in General Orders, No. 112, of July 13, 1905, which is as follows:

EXECUTIVE ORDER.

The Congress of the United States, by appropriate legislative enactments, has made the matter of assignments, transfers, and details in the army the subject of formal statutory regulations; Executive regulations in furtherance of these statutes have been adopted, the operation of which has been to place upon record in the War Department full and detailed information in respect

to the character, capacity, military services, and general attainments of all officers composing the military establishment. The records so obtained fully set forth the relative merits of officers of all grades of rank in the several branches of the line and staff, and enable all vacancies which occur in the military service to be filled after a careful comparison of the records of those officers who are eligible under the law for particular assignments or details.

A similar legislative policy exists in respect to the Navy, and the records of the Navy Department furnish evidence of the character, service, and ability of all officers of the Navy, founded upon the official reports of those officers whose duty it is to make them. These reports are sufficiently specific to enable the department to determine the particular duty which each officer is fitted to perform without the intervention of requests, claims, or influence from sources outside the Navy.

It is therefore announced that in future appointments, details, transfers, and assignments in the Army and Navy, the Executive will be guided by the official records of the War and Navy Departments, respectively, to the exclusion of other sources of influence or information; but in case an officer has performed any special act of bravery or courage or rendered specially efficient service of which there is no record or only a partial record in the War or Navy Department, the testimony of any person who was an eyewitness of the same may be submitted for consideration.

Should it be discovered that since the publication of this order an officer of the Army or Navy has sought recommendation or support from sources outside of those named above, this fact will debar him from obtaining the particular advancement, assignment, or detail which he has by such means attempted to secure, and the fact that he has sought such influence will be noted on his official record.

THEODORE ROOSEVELT.

The White House, July 7, 1905.

and to the order of the President published in General Orders, No. 38, of March 3, 1909, which is as follows:

The White House,
Washington, March 3, 1909.

To the Secretary of War:

Supplementing orders heretofore issued, it is directed that hereafter all requests and recommendations, either written or verbal, received at the War Department from or on behalf of Army officers, of whatever nature—other than those received through regular military channels—shall be filed with or noted on their records. Officers who do not desire such notations on their records should take such action as may be necessary to prevent such requests or recommendations being made.

THEODORE ROOSEVELT.

Notwithstanding these orders, this department is constantly in receipt of numerous requests, written and oral, concerning the promotion, assignment, transfer, detail, and other special treatment of officers in the service. In some instances of recent occurrence it has been found that the officer in question did not desire the thing requested in his behalf, and in many others it is difficult to believe that the officer was not directly or indirectly responsible for the request, although it came through a third person and bore no direct evidence of his participation therein. If the department heeds the importunities of those who, by disobeying these orders in letter or spirit, are enabled to reach it, the result is simply to put a premium upon disobedience and to punish those who strictly observe the orders.

Hereafter any communication made to this department, written or oral, re-

questing any promotion, assignment, transfer, detail, or other special consideration for any officer (excepting when made by the officer himself in the proper way), will at once be referred to the officer in question, who will be required to state whether the communication was made directly or indirectly by his procurement, and whether he avows or disavows the request as one on his behalf. (G. O. 31, 1913.)

12. Official Records Constitute Basis of Assignments, Etc. 1. The strict enforcement of the provisions of paragraph 5, Army Regulations, and of General Orders, No. 31, War Department, 1913, Par. 11, this compilation, which forbid the employment of outside influence by officers to obtain details, assignments, and other favors, makes it desirable to put into effect the best methods of ascertaining the wants of officers and of placing before the Secretary of War this information together with the compiled efficiency records which will enable him to make details and assignments in the interests of the service as well as of individuals.

2. The following sources of information are authorized:

(a) Personal Report and Statement of Preferences.

(b) Special letters of recommendation for particular duties by military superiors.

(c) Official applications from governors of states and presidents of military schools and colleges for the detail of officers under the provisions of law governing such matters.

3. The foregoing sources of information will be considered together with the compiled efficiency records in making details and assignments.

4. Preferences for particular assignments will be considered with special reference to the interests of the service, interests of other officers, and economy, as well as with reference to the personal benefit of the officer.

5. The purpose of the foregoing is to make known the policy of the department that the official records only constitute the basis of all assignments and details. (Bul. 6, 1915.)

Paragraphs 13 to 36 eliminated as they have no application to Infantry.

37. Transfers of Enlisted Men, Cost of. When an enlisted man is transferred from one arm of the service to another for the convenience of the government, all expenses of the transfer, including the cost of the necessary changes in the uniform, will be borne by the government. (Par. I, Cir. 45, 1906.)

Whenever a soldier is transferred at his own request, he should bear the cost of such transfer, for his subsistence as well as for his transportation. (Par. III, Cir. 11, 1887.)

Paragraph 38 eliminated as it has no application to Infantry.

39. Company Noncommissioned Officers, Restrictions on Employment. Paragraph 270, Army Regulations, is construed as prohibiting the employment of noncommissioned officers as company barbers, or as agents for laundries, or in any position of a similar character. (Par. II, Cir. 61, 1906, as amended by Par. III, Cir. 34, 1907.)

40. Debts of Enlisted Men for Merchandise. In view of the fact that the practice by dealers of selling articles of merchandise to enlisted men on credit burdens the War Department with unnecessary correspondence in the cases of nonpayment of the indebtedness, and that such transactions, which are rapidly increasing in number, often involve enlisted men in debts which they can not pay, and frequently lead up to desertion, the following statement of the policy of the department with respect to this matter is published for the information and guidance of all concerned:

The department will no longer concern itself with the business of persons, firms, or corporations selling merchandise to enlisted men on credit, and all

communications with respect to such sales, and all arrangements looking to the establishment of such business relations, must be had with the commanding officers of the organizations to which the enlisted men belong. The War Department will decline to assist by answering inquiries or otherwise, in settling the payment of obligations of this character that are incurred without previous knowledge and consent of the commanding officers of the organizations to which the debtors belong. (Cir. 47, 1910.)

Paragraphs 41 and 42 eliminated, as they have no application to Infantry.

43. Removal of Charge, by Regimental Commander. The commanding officer of a regiment in a tactical brigade or division is regarded under the provisions of paragraph 126, Army Regulations, to be in the position of a commanding officer competent to determine the disposition of an apprehended or surrendered deserter, and accordingly has authority to remove a charge of desertion against such enlisted man under the provisions of paragraph 131, Army Regulations (Par. II, Bul. 24, 1915.)

Paragraphs 44 to 48 eliminated as they have no application to Infantry.

49. Character Given on Discharge Certificate. The "character" given on a discharge certificate is discretionary with the company or other immediate commander of the soldier, except where otherwise directed by sentence of a general court-martial, by the approved finding of a board of officers under paragraph 148, Army Regulations, or by orders from the War Department. The defacing of a discharge certificate by writing thereon anything to the discredit of the soldier's character, after the same has been given by his commander or other immediate commander, is prohibited. (G. O. 74, 1881.)

50. Unsuitable or Undesirable Soldiers. 1. The provisions of paragraph 148½, Army Regulations, published in C. A. R., No. 14, War Department, are intended to apply only to the following classes of enlisted men:

(a) Those who, after a thorough trial extending (except in the case of recruits at recruit depots) over a considerable period, have clearly shown that they can not be trained and instructed to perform the duties of a private soldier in the arm to which they belong. Men who are only slow to learn or difficult to instruct but otherwise adapted for military service do not belong to this class.

(b) Those who exhibit traits of character or are confirmed in habits which render their retention in the service objectionable because of the effect on the morals or discipline. The provisions of the paragraph can not be invoked, however, to rid the service of soldiers who by the commission of specific offenses have rendered themselves liable to trial by courts-martial or of soldiers who have already been tried and adequately punished, except when it becomes evident that the soldier concerned can not be made amenable to discipline. No board should be ordered pursuant to this paragraph for a soldier awaiting trial or result of trial by general court-martial or for one serving sentence pursuant to such trial.

(c) Those who, because of excesses or other misconduct, have become so impaired in character or physically disqualified to such a degree as to justify immediate separation from the service.

2. Boards are convened pursuant to this paragraph in the mobile arm by post or regimental commanders and in the Coast Artillery by coast defense or fort commanders. In exceptional cases where the post, regimental, coast defense or fort commander is also the company or detachment commander, the board will be convened by the next higher authority.

3. Boards convened pursuant to the paragraph will be governed, as far as practicable, by the rules of procedure and evidence applicable to special courts-martial, except that the members will not be sworn. All witnesses will

required to take the oath or affirmation prescribed for witnesses before courts-martial. The recorder of the board or, if there be none, the president of the board, will administer the oath or affirmation.

4. Separate proceedings will be submitted to the convening authority in the case of each soldier recommended by a board for discharge.

5. Such proceedings will include—

(a) The order convening the board, or, if convened by a verbal order, a statement to that effect.

(b) The organization of the board, including the place and date and the names of members present and absent.

(c) The full name, rank, and organization of the soldier whose case is before the board for investigation and recommendation, and a statement to the effect that such soldier appeared before the board; was permitted to challenge for cause; was present during the hearing of all evidence, and was afforded opportunity to question adverse witnesses, to submit evidence, and to make a statement.

(d) The full name, rank, and organization of each witness, a statement that each was duly sworn, and a synopsis of the testimony given by each.

(e) True copies of all written evidence considered by the board.

(f) A synopsis of any evidence given or statement made by the soldier undergoing investigation.

(g) A certificate of physical disability, where applicable.

(h) The findings of the board, which must be based upon the evidence as summarized in or appended to the proceedings and must be in consonance with the provisions of the paragraph.

(i) The recommendation of the board that the soldier be or be not discharged. It is not contemplated that such boards recommend a transfer or other disposition of the soldier in the service.

6. The convening authority, or his successor, will forward all approved proceedings, when discharge is recommended, to the department or mobilized division commander for final action. The proceedings will then be forwarded to the Adjutant General of the Army for file. (Par. I, Bul. 16, 1915, as amended by Par. III, Bul. 24, 1915, and Par. II, Bul. 37, 1915.)

51. Notation on Descriptive List, Etc., of Character Given on Discharge. When an enlisted man is discharged from service the character given him on his discharge certificate and a statement showing whether or not his service during the enlistment from which he is discharged has been honest and faithful will be noted on his descriptive list and on all rolls and returns on which the fact of his discharge is recorded. These notations will correspond to those made on the discharge certificate. (Par. II, G. O. 206, 1905.)

52. Dishonorable Discharge for Desertion and Fraudulent Enlistment. An enlisted man convicted of desertion and fraudulent enlistment and sentenced to be dishonorably discharged will be discharged from the organization from which he deserted and as of the name under which he enlisted in that organization. His name will be dropped from the records of the organization in which he fraudulently enlisted, and a statement of the facts of the case will be noted on those records. (Par. II, Cir. 76, 1908.)

53. Procedure in Case of Enlisted Man Refusing to Submit to Surgical Operation. An enlisted man who refuses to submit to a surgical operation that the attending surgeon certifies is without risk to the life of the soldier and is necessary for the removal of a disability that prevents the full performance of any and all military duties that properly can be required of the soldier will, for such refusal, be brought to trial by general court-martial under charges preferred under the 62d Article of War; but if in any such case the attending

surgeon is in doubt as to whether the proposed operation involves risk to life the soldier will not be brought to trial, but will be discharged on surgeon's certificate of disability. (Par. II, G. O. 43, 1906.)

Paragraphs 54 to 60 eliminated, as they have no application to Infantry.

DESERTERS AND GENERAL PRISONERS.

61. **Reports of Desertion, Escape, and Apprehension.** 1. In order that effective measures may be taken by the War Department for the apprehension of deserters and escaped general prisoners, it is important that in every case the department shall be notified of the desertion or escape at the earliest possible moment. It is directed, therefore, that the commanding officers of all military posts and stations and of troops in the field, except in Alaska and the insular possessions, telegraph directly to the Adjutant General of the Army prompt notification of every desertion and of every escape of a general prisoner occurring within the respective commands of such commanding officers. This telegraphic notification having been sent in any case, further notification will not be required in that case under paragraph 119, Army Regulations.

2. The telegraphic reports required by this order will be as concise as possible and for purposes of identification will give, in the case of a deserter, the name of the man, his rank, the organization from which he deserted, the date of his enlistment, and the date and place of his desertion; and in the case of an escaped general prisoner the name of the man, the designation of the organization of which he was a member at the date of his conviction, and the date and place of his escape from confinement. The forms of these telegraphic reports will be substantially as follows: "The Adjutant General, Washington, D. C. Robert Roe, private, Troop A, First Cavalry, enlisted July first, nineteen eight, deserted January twenty-second, nineteen nine, Fort Assiniboine, Montana. Smith, Commanding." "The Adjutant General, Washington, D. C. Prisoner Joe Doe, formerly Company B, Second Infantry, escaped January fifteenth, nineteen nine, Fort Sheridan, Illinois. Jones, Commanding." Should there be reason to believe in any case that the deserter or the escaped general prisoner will be found at any particular place, the words "probably at ———," or "probably going to ———," should be added to the telegram.

3. Paragraph 132, Army Regulations, will not be construed as requiring a delay of 10 days before reporting as a deserter any man in whose case there is satisfactory ground for believing that he is a deserter. Troop, battery, company, and detachment commanders are enjoined, therefore, to make immediate and thorough inquiry in the case of every man reported absent without leave and to report the absentee as a deserter immediately upon obtaining evidence that appears to be conclusive of his intention not to return. Commanders of military posts and stations and of troops in the field are enjoined to give especial attention to these cases and to adopt such proper corrective measures as may be necessary whenever it is found that there has been unnecessary delay on the part of subordinate commanders in making reports required by this order.

4. Whenever an enlisted man has been officially reported as a deserter, a charge of desertion has been effectively recorded against him, and he stands charged with desertion within the meaning of paragraph 1372, Army Regulations, regardless of whether the charge has or has not been entered on muster rolls and pay rolls, and the charge will stand against him until it is disposed of in one of the various ways prescribed by Army Regulations.

5. The report required by paragraph 126½, Army Regulations, must, there-

fore, be made in the case of every enlisted man who has been reported officially as a deserter, and who has subsequently returned to military control, regardless of whether the charge of desertion has or has not been entered on muster rolls and pay rolls in his case, and a similar report must be made in the case of every escaped general prisoner returned to military control. Commanders of military posts and stations and of troops in the field are enjoined to give especial attention to this matter in order that there may be no unnecessary delay in reporting to the Adjutant General of the Army the return to military control of every person who has been officially reported as a deserter or an escaped general prisoner. (G. O. 208, 1908; G. O. 140, 1909.)

Paragraphs 62 to 71 eliminated, as they have no application to Infantry.

72. Naming of Camps, Vessels, Etc. Following the established practice with regard to naming military posts, no camp or vessel, and no building, hall, street, driveway, etc., on a military reservation will be named in honor of a living officer. Any name not conforming to this rule will be changed.

Paragraphs 73 and 74 eliminated, as they have no application to Infantry.

75. Competition of Army Bands With Civilian Musicians. The attention of all officers of the Army is directed to the legal prohibition against the competition of Army bands or the individual members thereof with civilian musicians, contained in the act of Congress approved May 11, 1908, and embodied in paragraph 261, Army Regulations.

It is the duty of commanding officers of military posts at which Army bands are stationed to make this prohibition effective. The question of fact as to whether or not the playing outside of the post limits will be competitive is one to be determined in each case by the commanding officer, and his determination will be final unless an appeal is taken to higher military authority by the parties concerned or alleging themselves to be concerned in the matter. (Par. II, Cir. 97, 1908.)

76. Soliciting of Claims Against United States on Military Reservations. The soliciting of pension or other claims against the United States on military reservations or at military posts, camps, or stations, including general hospitals, is hereby prohibited, and commanding officers will take measures effectually to prevent such soliciting within the limits of military reservations, posts, camps, stations, or hospitals under their commands. Officers or enlisted men who give information with a view to aiding persons in soliciting such claims will be brought to trial for violation of paragraph 824, Army Regulations, and civilian employees who so offend will be discharged.

In connection with the subject of this order and of paragraph 824, Army Regulations, the attention of all concerned is invited to the provisions of section 5498, Revised Statutes of the United States, which are as follows:

Sec. 5498. Every officer of the United States, or person holding any place of trust or profit, or discharging any official function under, or in connection with, any Executive department of the Government of the United States, or under the Senate or House of Representatives of the United States, who acts as an agent or attorney for prosecuting any claim against the United States, or in any manner, or by any means, otherwise than in discharge of his proper official duties, aids or assists in the prosecution or support of any such claim, or receives any gratuity or any share of or interest in any claim from any claimant against the United States, with intent to aid or assist, or in consideration of having aided or assisted, in the prosecution of such claim, shall pay a fine of not more than \$5000 or suffer imprisonment not more than one year.

Paragraph 77 eliminated, as it has no application to Infantry.

78. Reports of Deaths. Whenever the death of an officer, enlisted man, or civilian employee occurs at a military post or station, or with a command in the field, the senior medical officer present will immediately report in writing to the commanding officer of such military post or station or command in the field the name of the deceased, with rank and organization if he was an officer, or the department and capacity in which he was employed if he was a civilian employee, the date, time, place, and cause of death, and the present location of the body.

The commanding officer will cause necessary measures to be taken for interment or other disposal of the body and will make an immediate report to the facts in the case to the Adjutant General of the Army on the blank form provided for the purpose (Form No. 415, A. G. O., "Report of Death and Disposal of Remains"). (G. O. 67, 1910.)

Paragraph 79 eliminated, as it has no application to Infantry.

80. Young Men's Christian Association, Privileges for. Permission is granted to the Army Young Men's Christian Association to establish its work at various posts of the Army, and commanding officers are enjoined to facilitate the efforts of this association to provide helpful, physical, intellectual, and unsectarian religious influences by providing therefor suitable quarters which may be in the post exchange buildings if room is there available and its use for such purposes deemed wise by the commanding officer. The privileges granted hereunder are subject to the control of commanding officers and should be defined as not to interfere with military operations and discipline. (Cir. 15, 1914. W. D.)

All proper facilities for the work of the association will also be afforded commanding officers of troops serving in camp and in the field.

Whenever practicable, and when it does not interfere with drill and instruction or the purposes for which the troops are assembled, suitable sites will be selected and assigned in camps for the tents of the association. In the case of change of camp sites the tentage and equipment of the association will be transported when means are available. The care and police of the tents of the association, and the grounds surrounding them, will also be provided for in the general scheme of police of the camp.

Permission will be given by commanding officers for the duly accredited secretaries of the association to purchase necessary supplies from the Quartermaster Corps in case the supplies are available and can be spared; and when in the opinion of the commanding officer, the supply of tentage warrants and shelter of this character will be afforded to the association. (Par. I. G. O. 1914.)

Paragraphs 81 to 84 eliminated, as they have no application to Infantry.

85. Training of Mobile Army. 1. **Object of Training.** Readiness for active service, and especially for the particular kinds of active service in which the troops are most likely to be engaged, is the objective to be kept in view in all peace-time training and preparation. The activities of all concerned will consequently be directed to the attainment of that end.

To be prepared for such service the troops must not only be thoroughly instructed, but also must have a high morale, based on consciousness of ability to meet successfully all the demands of war. The value of an organization is to be judged by its all-around ability to take the field and to meet successfully every phase of war service.

2. **Bases of Training.** Study, drill, and practical application form the bases of training. By study, knowledge of principles and methods is acquired; by drill, skill in the mechanism of methods and in the performance of habits.

duties is gained. It is by practical application that officers and men learn to adapt to actual cases the knowledge and skill they have acquired. Facility in so doing is of the utmost importance, since on service a great variety of practical problems present themselves, each of which must be solved on the basis of its own particular requirements. Hence, as soon as proficiency in elementary methods is attained, the applicatory system will be employed, commencing with simple problems and gradually widening the scope so as to introduce the greatest possible variety of conditions. To this end all tactical exercises, whether theoretical or practical, whether with or without troops, will be based upon an assumed situation. In all exercises in the field a concrete case will be stated, calling for the actual employment of the organization concerned, and the organization is then employed to meet the requirements of this case. The strength and character of the opposition to be expected, the nature of the terrain, the obstacles to be overcome being known or developed as the solution proceeds, the opportunity is afforded not only of applying appropriate general principles and tactical methods, but also of putting to practical use many minor phases of instruction which had previously been the subject of drill-ground training. Thus, the service of security and information, signaling, field fortifications, pioneer work, the passage of obstacles may all be incidents of the operation involved, and, being natural incidents, the purpose of the previous drill and instruction becomes apparent, as well as the difficulties liable to arise under the varied conditions of service. The more nearly the conditions of service are simulated and the greater the variety of the incidents introduced, the more instructive will these exercises be.

Such exercises may be conducted at first as map problems or terrain exercises for the training of officers and selected enlisted men.

Study, drill, and practical illustration follow a generally progressive order as indicated below; but instruction of the three kinds should be in a measure concurrent, to the end that the reasons for instruction, the purposes to be attained, and the conditions under which the duties will have to be performed may be continually kept in mind.

The prime immediate need of the Army is correct tactical training of officers and noncommissioned officers in handling commands appropriate to their rank. In this training the study of strategic combinations on a large scale should be avoided, except in so far as such study may bear upon the solution of the problems under consideration, and all such study should be incident to, and form the basis for, the tactical training of officers and their commands.

In order that study and training may be properly directed and that a unified doctrine of tactics may be taught the entire service, all tactical instruction of the mobile army will be conducted in accordance with the principles taught at the service schools and the Army War College, as set forth in the books employed and as illustrated in the approved solutions at those institutions. Graduates of the service schools and the Army War College will be utilized, as far as practicable, to assist in the work contemplated in this order.

3. Annual Course of Training. A progressive scheme is to be followed for each year's instruction. The annual course comprises garrison training and field training, though no sharp line of distinction is to be drawn between the two. For the purpose of illustrating practically the principles taught, or emphasizing the importance of phases of detailed training, instruction appropriate to one period may frequently be held within the period assigned to the other.

4. Garrison Training. The period of garrison training will be devoted especially: (a) To theoretical and practical instruction in the various garrison schools, and (b) to drill and practical instruction preparatory to field training.

(a) War Department orders prescribing regulations to govern post and garrison schools lay down specifically the course to be followed in the more elementary schools for officers and enlisted men. Brigade commanders will devote special attention to the postgraduate scheme of instruction, which will run through the entire period of garrison training. A principal feature of postgraduate instruction will be studies, map problems, and war games based on strategical and tactical situations to be stated for the brigade by the War Department and by the brigade commander for the tactical components of his brigade. The postgraduate course of instruction will also include such map problems, terrain exercises, tactical or staff walks or rides, or other work pertaining to the local terrain as brigade commanders may prescribe; this portion of the course may be made to amplify the work of the elementary schools for officers and enlisted men, as well as the drill and practical instruction preparatory to field training.

(b) Drill and practical instruction preparatory to field training embraces specially: Drill of the company, battery, and troop and all of the units thereof, mounted and dismounted; the preliminary training for fire action and firing exercises on a represented or actual terrain with targets represented to scale or actually designated, thus giving opportunity to train the personnel both in the mechanisms of fire and in appropriate methods of directing, controlling, and adjusting fire; the rudiments of the service of security and information, including the preparation and transmission of orders and messages; map making and map reading for officers, noncommissioned officers, and selected privates; exercises in leaving the post with a part or all of the command equipped for prolonged service in the field; bayonet combat; swordsmanship, mounted and dismounted; visual signaling; gymnastics, athletics, and swimming, including swimming with arms and equipment under proper precautions as to safety; equitation, horse training, and packing; tent pitching; guard duty and ceremonies; first aid and the hygienic care of the person; care of equipment of all descriptions.

5. Field training embraces especially: Range practice; field firing exercises with service ammunition; field fortifications, including the reconnaissance and selection of positions, and the actual construction of appropriate intrenchments; the service of security and information (Field Service Regulations); marches and convoys; maintenance of communication between the elements of a command by signals and by messenger; the care of men and animals, including the preparation and service of food, shelter, and the service of sanitation and supply; the passage of obstacles; night operations; map making in accordance with the needs of the arm of service concerned; swimming of horses and men, to include swimming with arms and equipment under proper precautions as to safety; packing and exercises in the solution of transportation problems; the drafting of orders and messages as incidents of the above exercises; combat and field exercises, first of a simple nature but gradually becoming more and more comprehensive, passing to the larger units and involving combined operations and operations with the Organized Militia.

6. Until our regiments, brigades, and divisions are all located so that it will be possible for their elements to assemble by marching for annual training, there will be difficulty in carrying out a consistent course of progressive training for the whole Army. In the meantime, the policy will be to go as far as is possible with funds available to effect such annual concentrations, and where complete concentration is impracticable, to still do what is possible in the way of regimental, brigade, and division instruction with the troops available. To this end the missing tactical and supply elements will be repre-

sented and maneuvers carried out over a tract of country sufficiently extensive to gain practice not only in the tactical handling of the command to meet a variety of concrete situations, but also in the working of its supply, ammunition, and sanitary services. Similarly, in maneuvers with organizations of the Organized Militia, composite brigades and divisions may be formed and experience gained in the exercise of the functions of the higher command.

7. During the periods allotted to instruction of subordinate units, terrain exercises, tactical or staff walks or rides, war games and map problems furnish the special means whereby all higher commanders may be preparing themselves and their staffs for their appropriate duties.

8. Marching. Ability to march long distances is one of the most important requisites of mobile troops. Training in marching will be secured in connection with the concentration of brigades and in operations in connection with the annual maneuvers; but it is necessary that troops be prepared for such marches by appropriate preparatory work, and that all marches be conducted with a view to accomplishing some well-defined object. To this end, during the period of field training, each organization, except when participating in target practice, will each week engage in field exercises based upon stated tactical situations requiring marches under war conditions and involving training in the various phases of field service. Marches will be arranged and tactical problems drawn so that contact of the larger bodies of troops concerned will occur upon military reservations or upon ground which the troops are authorized to use.

The distances covered in the first marches will be short, but should be gradually increased. Special attention will be given to the fit of shoes and the care of the feet as prescribed in General Orders, No. 26, War Department, 1912, paragraph 91, of this compilation.

In the early stages of field training the articles of equipment carried should be few and the load on the soldier light. As the men become hardened, the load should be increased gradually, so that before the end of the period of company field training troops will be able to make hard marches under service conditions, carrying the full field equipment.

9. Programs of Training. Training must conform to the principles laid down in existing regulations and to the doctrine disseminated through the service by means of the service schools; but unit commanders will be given great latitude in the choice of ways and means for training their units and will be held to corresponding responsibility for results attained. Higher commanders interpose to change the ways and means employed by their subordinate commanders only when convinced, after careful observation, that the necessity for interposition is such as to justify impairment of the initiative ordinarily left to subordinates.

Department commanders will fix the periods of garrison and field training and of target practice for the brigades. They will also fix the period to be devoted to training of the combined arms and to field training in conjunction with the Organized Militia. Brigade commanders will then make an allotment of time between companies, battalions, and regiments. For elements not brigaded, department commanders will fix the periods of garrison and field training and target practice, as well as the allotment of time between companies, battalions, and regiments.

Keeping in mind the foregoing allotments of time and the requirements of this order as to objects to be attained and ground to be covered, each commander, commencing with the company commander, will prepare a program showing in general terms the contemplated scheme of work for the periods allotted for the garrison and field training of his command. The purpose is to

require the commander to formulate and to keep in mind a program of instruction, adapted to the particular conditions under which he is operating, and framed so as (1) to include all the phases of training, (2) to emphasize the importance of each phase, and (3) to combine them all in a well-considered scheme tending always toward real preparedness for field service.

The program of each unit commander is submitted to the next higher commander for approval. Companies, battalions, or regiments not attached to the same territorial department or district as their respective battalions, regimental, or brigade headquarters will forward their programs directly to the next higher tactical commander in the department or district. Battalions, regiments not attached or belonging to a brigade will forward their programs directly to department headquarters.

Company commanders will prepare at the end of each week of training the detailed schedule for the next week's work, submitting the same to the battalion commander for approval. The latter will keep in close touch with the progress of the work.

Regimental commanders supervise the training of the battalions under their immediate control. They will make detailed tests of the work of companies from time to time with a view to determining the progress and to causing the correction of deficiencies noted.

The duties of brigade and department commanders in connection with training are defined in paragraphs 193 and 194, Army Regulations.

10. Responsibility for the Training of Detached Units. If a portion of a tactical unit is detached from its proper command, the responsibility for the training of the detached portion will be placed on the commander of the detachment by the extent to which he has had opportunity to control its training. The elements of a tactical unit are separated from the others but not detached. The commander will be given facilities, when practicable, for visiting such units and supervising their training; otherwise his responsibility is qualified by the preceding case.

Troops detached from one division or brigade will be attached to the division or brigade, and the commander of the latter division or brigade will then have the same responsibility for these attached units as for the units of his tactical organization.

11. Administration. Routine administration throughout the Army is regulated on the basis that training and preparation for active service are of first importance. Administrative duties are an essential feature of military life and are not to be neglected; but in every legitimate way they are to be simplified, reduced in amount, and adjusted as to time of performance so that they will not obscure the real purpose for which the Army is maintained, nor obstruct the attainment of this purpose. Commanders of all grades must order and arrange the affairs of their organizations so that the foregoing principles are given full force and effect. The number of officers regularly present at instruction must be the maximum consistent with the performance of administrative or other duties unavoidably arising from the times allotted to instruction. (G. O. 17, 1913.)

Paragraphs 86 to 90 eliminated, as they have no application to Infantry.

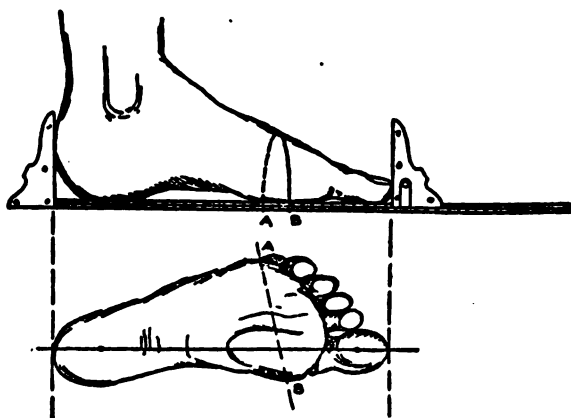
91. Fit of Shoes and Care of Feet of Enlisted Men. With a view to increasing the marching capacity of troops, company commanders will measure the feet and fit the shoes of men of their commands and will be responsible that the instructions herein contained are strictly followed.

All measurements prescribed herein will be taken with the soldier in bare feet and with a 40-pound burden on his back, bearing the entire

upon the foot to be measured. Balance may be preserved by resting the hand on a fixed object. The measurements of the foot, which must be taken to make suitable preliminary selection of the shoe to try on, are (a) the length; (b), the circumference around the ball.

To measure the length the soldier will stand with foot upon the foot measure, furnished by the Quartermaster's Department, fitted in a slot in a board, the heel of the soldier fitting snugly against the heel block. The movable block will then be pushed up until it touches the end of the great toe. The scale on the top of the measure, which is graduated in sizes, will then be read, and the proper length of the shoe will be determined, approximately, by adding 2 to the reading of the scale; thus, if the soldier's foot scales $6\frac{1}{2}$, a shoe not smaller than $8\frac{1}{2}$ should be tried on first.

To take the ball measure, pass the foot tape, supplied by the Quartermaster's Department, around the foot at the prominent tubercle at the base of the great toe and the prominent tubercle at the base of the little toe. The position of the tape is shown by the line A—B in the diagram below:



press it. Having taken the foregoing measurements, the shoe best suited to the foot will be determined by reference to G. O. 17, 1916. For example, assume that the circumference of the ball is found to be $9\frac{1}{4}$ inches. In the table of the aforesaid order, page 942, under the heading "Marching shoes," it will be seen that for a foot requiring an $8\frac{1}{2}$ shoe a ball measurement of $9\frac{1}{4}$ inches corresponds to a D width. The size of shoe to try on for actual fitting is, then, in this case, $8\frac{1}{2}$ D.

If the ball measurement found as above does not correspond exactly with any ball measurement given in the table, then the narrower of the two widths between which the measurement lies should be selected.

Beginning with the size and width thus tentatively selected, shoes will be tried on until a satisfactory fit is secured. Correct fit in waist and instep will be determined experimentally. To determine the fact of fit the shoe will be laced snugly and the soldier with a 40-pound burden upon his back will again throw his entire weight on one foot. The officer will then press in the leather of the shoe in front of the toes to determine the existence of sufficient vacant space in that region to prevent toe injury. Under no circumstances should this vacant space in front of the great toe be less than two-thirds inch; nor should

there be pressure on the top of the toes. The officer will then grasp with his hand the leather of the shoe over the ball. As his fingers and thumb are brought slowly together over the leather, the shoe should feel snugly filled without apparent tension, while the leather should lie smoothly under the hand. If the leather wrinkles under the grasp of the hand, the shoe is too wide and a narrower width is needed; if the leather seems tense and bulging and the hand tends to slip over easily, the shoe is too narrow and a greater width is necessary.

It may be necessary to try on several pairs of shoes in this manner before an entirely satisfactory shoe is secured. A record of the proper size and width of shoes as determined above will be kept as provided by paragraph 37, Uniform Regulations.

Measurements will be taken and shoes will be fitted as prescribed at least once in each enlistment and the record will be changed from time to time if subsequent fittings render a change necessary.

Sizes called for in requisitions will conform to the record, and the fact of fit of shoes issued on such requisitions will be personally verified in every instance by company commanders in the manner above prescribed.

No shoes will be issued to or worn by enlisted men while on duty which are not fitted in accordance with this order.

New shoes should be adapted to the contours of the feet as soon as possible. Shoe stretchers, with adjustable knobs, to take pressure off painful corns and bunions, are issued by the Quartermaster's Department.

All shoes should be properly broken in before beginning a march, but if this is impracticable then the following is suggested but not required:

The soldier stands in his new shoes in about $2\frac{1}{4}$ inches of water for about five minutes until the leather is thoroughly pliable and moist; he should then walk for about an hour on a level surface, letting the shoes dry on his feet, to the irregularities of which the leather is thus molded in the same way as it was previously molded over the shoe last. On taking the shoes off a very little neat's-foot oil should be rubbed into the leather to prevent its hardening and cracking.

If it is desired to waterproof the shoes at any time, a considerable amount of neat's-foot oil should be rubbed into the leather.

Light woolen or heavy woolen stockings will habitually be worn for marching, but commanding officers of organizations may authorize the wearing of cotton stockings in individual cases where the surgeon certifies to the fact that the wearing of such stockings subserves the best interests of the service. The stockings will be large enough to permit free movement of the toes, but not so loose as to permit of wrinkling. Darned stockings or stockings with holes will not be worn in marching.

Company commanders, by frequent inspections throughout the year, will maintain the feet of their men in condition for proper marching. They will cause the proper trimming of nails, removal or paring of corns and calluses, relief of painful bunions, treatment of ingrowing nails, and other defects, sending serious cases to the surgeon.

Before a march is undertaken by foot troops, company commanders will personally inspect the bare feet of their men. While on the march, they will personally see each day that their men wash their feet as soon as possible after reaching camp, prick and evacuate blisters, and cover such blisters or excoriations with zinc oxide plaster, supplied by the Medical Department, applied hot, dust the feet with the foot powder supplied by the Medical Department, and put on clean socks. Hereafter an undue amount of foot injury and disability from shoes will be regarded as evidence of inefficiency on the part of the officers concerned and as causes for investigation.

Post quartermasters will provide a place in the quartermaster's storehouse where shoes may be fitted for the purpose of determining or verifying the record required by paragraph 37, Uniform Regulations. For the purpose of fitting they will keep on hand at all times a complete series of each size and width of shoes furnished for issue. Shoes of this series will be put in stock and issued before they become unserviceable, and will be replaced by new shoes, keeping the series always complete. Company commanders will report in writing to the post commander every instance of failure to secure proper shoes for their commands or to obtain proper facilities for fitting the shoes as herein directed. Post commanders will investigate the reasons for and be held responsible as far as lies in their power for the rectification of such deficiencies.

A brief record of the number of such reports from company commanders and the reason for such deficiencies will be furnished to inspectors at each inspection of the post.

Inspections conducted under the provisions of paragraph 889, Army Regulations, will embrace an inquiry into the manner in which this order has been complied with, and the report of inspections will include a statement of all instances of failure on the part of company commanders to secure proper shoes for their commands and the cause of such failure. (Par. I, G. O. 26, 1912; Par. IV, G. O. 30, 1913.)

92. Venereal Diseases, Prevention and Detection Among Enlisted Men. 1. It is enjoined upon all officers serving with troops to do their utmost to encourage healthful exercises and physical recreation and to supply opportunities for cleanly social and interesting mental occupations for the men under their command; to take advantage of favorable opportunities to point out, particularly to the younger men, the inevitable misery and disaster which follow upon intemperance and moral uncleanness, and that venereal disease, which is almost sure to follow licentious living, is never a trivial affair. Although the chief obligation and responsibility for the instruction of soldiers in these matters rests upon company officers, the medical officers should coöperate by occasional lectures or other instruction upon the subject of sexual physiology and hygiene and the dangers of venereal infection.

2. Commanding officers will require that men who expose themselves to the danger of contracting venereal disease shall at once upon their return to camp or garrison report to the hospital or dispensary for the application of such cleansing and prophylaxis as may be prescribed by the Surgeon General. Any soldier who fails to comply with such instructions shall be brought to trial by court-martial for neglect of duty.

3. Commanding officers will require a medical officer, accompanied by the company or detachment commander, to make a thorough physical inspection twice in each month of all the enlisted men (except married men of good character) of each organization belonging to or attached to the command. These inspections will be made at times not known beforehand to the men and preferably immediately after a formation. The dates on which the physical inspections of the various organizations are made will be noted on the monthly sanitary reports.

At these inspections a careful examination of the feet and footwear and of the condition of personal cleanliness of the men will be made, as well as careful observation for the detection of venereal diseases.

Cases of the latter will be promptly subjected to treatment, but not necessarily excused from duty unless, in the opinion of the surgeon, deemed desirable. They will be made of record in the medical reports in any case. A list of those diseased but doing duty will be kept both by the company or detachment commander and the surgeon, and the infected men will be required to

report to a medical officer for systematic treatment until cured. While in the infectious stages the men should be confined strictly to the limits of the post. When a venereal case, whether or not on sick report, is transferred to another command, the surgeon will send a transfer slip giving a brief history of the case.

4. All instructions from the War Department prohibiting the publication in printed or other orders or instructions prescribing examinations having in view the detection of venereal diseases among enlisted men, heretofore issued, are recalled. (G. O. 17, 1912, as amended by Par. III, G. O. 71, 1913.)

Paragraphs 93 to 105 eliminated, as they have no application to Infantry.

106. Purposes for Which Company Fund May Be Expended. The company fund is not intended for expenditure in the purchase of articles to facilitate the transaction of business in a company. On the contrary, the legitimate and proper application of this fund is in supplementing the articles already furnished by the supply departments for the purpose of increasing the comfort, pleasure, contentment, mental and physical improvement of the organization. To accomplish this purpose, disbursements of company fund are authorized; disbursements for all other purposes are unauthorized. (Cir. 6, 1904.)

The foregoing is construed as not prohibiting the purchase or repair of typewriting machines from the company fund, provided the officer responsible for expenditures from that fund decides that the same are made solely for the benefit of the company and for the purpose of increasing the comfort, pleasure, and contentment of the enlisted men. (Cir. 56, 1906.)

107. Purchase of Additional Articles of Food Supply from Company Funds. Under paragraphs 293 and 296, Field Service Regulations, 1914, the purchase of additional articles of food supply from company funds by troops in campaign is prohibited, in order to prevent the overloading of the ration sections of the field trains and to insure that all organizations of the same command are rationed for the same period. In the case of troops on practice marches and maneuver campaigns in time of peace, however, there is no objection to the purchase of such articles from company funds, provided that no such articles are carried in the ration sections of the field trains. (Par. III, Bul. 26, 1914.)

Paragraphs 108 and 109 eliminated, as they have no application to Infantry.

110. Debts Due Company Fund by Deserter. After deducting for stoppages and forfeitures due to the United States at the date of a desertion, any balance of pay or allowances that might otherwise be due the deserter are forfeited to the United States, and consequently there are no funds which could be used to satisfy debts due by a deserter to the funds of his company, troop, or battery. (Par. II, Cir. 5, W. D., 1903.)

Paragraphs 111 to 115 eliminated, as they have no application to Infantry.

116. Indebtedness to Post Laundries and Post Exchanges. Indebtedness to post laundries established out of funds carried by the acts of appropriation for the support of the Army is an indebtedness to the United States. The post exchange is entitled to be paid its indebtedness against a soldier because it is an individual within the meaning of the exemption contained in section 4818, Revised Statutes.

Paragraphs 117 to 135 eliminated as they have no application to Infantry.

136. Unit Accountability Equipment. Accountability, maintenance, etc.:

Note: This order rescinded by G. O. 58, W. D., 1917.

1. Classification of Property. Hereafter for the purpose of accounting for government property (engineer, ordnance, and signal property) in the hands of organizations for which unit accountability equipment is prescribed, it will be divided into classes, as follows:

Equipment "A" is the equipment prescribed for use in campaign, in simulated

campaign, or on the march. It is limited to the animals and vehicles prescribed in the Tables of Organization, the equipment and clothing worn on the person, and the articles carried on mount, and transported in field, combat, and divisional trains.

Equipment "B" is the equipment which, in addition to equipment "A," is prescribed for the use of troops in mobilization, concentration, instruction, or maneuver camps; and during such pauses in operations against an enemy as permit the better care of troops.

Equipment "C" is the sum of equipments "A" and "B."

Garrison equipment is the equipment prescribed for use in garrison only.

2. Unit Accountability Equipment and Accountability Therefor. The unit accountability equipments comprising the engineer, ordnance, and signal property of the various organizations will consist of articles of "A" and "B" equipment prescribed in the unit accountability equipment manuals for the authorized strength, and will be accounted for by organization commanders on returns (Form No. 451, A. G. O.) to be rendered to the chiefs of the staff departments concerned on December 31 and June 30 of each year. In case of complete transfer of the unit accountability equipment, the transferring officer will render a final return on which he will certify that he has turned over the equipment to his successor, and the receiving officer will, on the same return, acknowledge receipt of the equipment.

The returns of unit accountability equipment ("A" and "B") will be submitted to the commanding officer for direct transmission to the chiefs of bureaus concerned.

3. Accountability and Responsibility for Other Government Property. All garrison equipment and other government property in the hands of organization commanders, except that held under unit accountability, will be held on memorandum receipt from the various post or other designated supply officers, who will render to the chiefs of the staff departments concerned returns as at present for all property for which they are accountable.

4. Maintenance of the Unit Accountability Equipment. (a) Organization commanders will be held responsible that the unit accountability equipment of their respective organizations is at all times complete and serviceable. When any articles of the unit accountability equipment, except those under charge of armament officers and not specifically listed in War Department publications or orders as subject to the action of a surveying officer (certain articles under charge of armament officers are listed in War Department publications as subject also to the action of a surveying officer) are lost, destroyed, or become unserviceable through fair wear and tear, and are no longer repairable with the facilities available in the organization, post, or district, the organization commander will secure the necessary approved expenditure list survey reports, or inventory and inspection reports to cover the same. These vouchers, in duplicate, will be turned over to the post supply officer or other designated issuing officer, who will issue the articles necessary to replace those lost, destroyed, found unserviceable and destroyed, or turned in to him for shipment to an arsenal or depot, in accordance with the regulations governing such shipments. For the excepted articles of artillery and machine-gun matériel under charge of armament officers and not specifically listed in War Department publications or orders as subject to the action of a surveying officer, organization commanders will communicate directly with the armament officer in all cases requiring replacement or repair by means not provided within the organization.

(b) In case any articles of this equipment become unserviceable from any cause and are no longer repairable with the facilities available, or are lost or

destroyed, and are needed for immediate use, they will be replaced by the supply officer upon a certificate signed in duplicate by the organization commander setting forth the facts, the articles required, and that he will furnish a proper voucher to cover same. The supply officer will drop from his certificate under these certificates the articles so issued. The organization commander receiving such articles will file with his next return, forwarded to the supply department concerned, a regular voucher as required by the orders and regulations to cover the articles enumerated on his certificate furnished the supply officer. When issues are so made the total money value of the articles issued will constitute a money charge against the organization commander until he shall have been relieved of such charge by the supply officer of the vouchers referred to in his certificate.

(c) In all cases where old serviceable or cleaned and repaired articles are in the hands of the issuing officer, they will be issued instead of new articles. Organization commanders to whom articles are issued will acknowledge receipt of such articles either (a) upon the approved expenditure list or inventory and inspection reports, statement of charges on pay or other evidence of final disposition now required by regulations, or (b) in the absence of the ability to supply such evidence immediately the receipt will appear upon the organization commander's certificate referred to above.

(d) In case all the articles covered by such vouchers are not replaced at one time, the acknowledgment of such as are actually replaced at the time the vouchers are turned over to the supply officer will be made by Form No. 544, A. G. O. (credit voucher). Replacement of articles of unit value, ability equipment, and the articles remaining due when replaced, will be receipted for on this form.

(e) If on the administrative examination of the property return submitted by the issuing officer any voucher submitted by an organization commander violates the provisions of this paragraph, is disallowed, the organization commander that submitted the voucher will be charged with the accountability and be required to furnish satisfactory vouchers, or to replace the property to pay the money value thereof.

5. Supply Officers. In garrison designated supply officers represent various supply departments, or line officers, are appointed by the organization commander for each post under the provisions of paragraphs 206, 254, and 255, Army Regulations, unless for purposes of supply two or more are appointed together by War Department orders.

In the field issues will be made by designated supply officers who are appointed by the commanding officer of the instruction, maneuver, operation, or concentration camp, or of a tactical unit serving separately. Reference to supply.

Such accountable supply officers shall make issues to organizations and shall keep the records and render the returns and reports of cost of maintenance required by paragraph 9 of this order.

6. Ammunition for Target Practice and for Other Authorized Firing. Ammunition required by organization commanders for authorized target practice, instruction firing, etc., will be furnished on memorandum receipt by post ordnance officers or other issuing officers, and at the end of the accounting period the organization commander will furnish the accounting officer with a voucher properly executed on Form No. 19, Office of Ordnance, to cover all ammunition that has been actually expended for authorized purposes during the period. At the end of the calendar year any ammunition not actually expended will be returned to the accounting officer and the memorandum receipts withdrawn by the responsible officer.

organization holding ammunition on memorandum receipt will, upon departing for duty at another post, furnish the accountable officer a voucher on Form No. 19, Office Chief of Ordnance, to cover all ammunition actually expended and turn in to the accountable officer all ammunition remaining on hand not pertaining to the unit accountability equipment.

7. Expendable Articles. (a) Organization commander having unit accountability equipment may obtain from the post, or other authorized supply officers, on requisition receipt blanks (Form No. 543, A. G. O.), executed in duplicate, such quantities of expendable parts, materials, and supplies as are listed in the supply tables and are within the authorized money allowance, when such money allowance is prescribed. In any case the value of the material so issued under requisition and receipt voucher (Form No. 543, A. G. O.) will be charged against the cost of maintenance of the organization, and the property will be dropped by the supply officer under that voucher as expended. When practicable, issues of expendable material will be made to each organization quarterly.

If conditions arise which, in order to maintain equipment in a serviceable condition, require the issue of expendable materials in excess of the authorized money allowance, the requisition therefor with an explanation of the necessity for the issue will be forwarded to the chief of the supply department concerned, except in the Philippines and Hawaii, where the action of the department commander will be final.

Expendable articles issued to organizations without unit accountability equipment will be covered by exchange of regular property invoices and receipts and the property regularly accounted for, by both the issuing and receiving officers, as at present.

(b) Articles which may be especially so published by any supply department as expendable under the following conditions will be replaced by supply officers upon the certificate of the organization commander that the articles are unserviceable from fair wear and tear in the service and the certificate of the post or regimental commander that they are not economically repairable and have no salable value. Lists of such expendable articles followed by the above certificates properly signed, and including the certificate of an officer that all material not useful for repair has been destroyed, will be filed as vouchers to the supply officer's returns.

8. Surplus at Posts. Supply officers will, so far as practicable, anticipate the needs of the organizations with whose supply they are charged. To this end they will carry on hand within the limits prescribed by the various supply departments such quantities of equipment and supplies in addition to current requirements as the conditions under which they are serving would warrant. Should it become desirable to increase or decrease the limits prescribed either for maintenance of the unit accountability equipment of organizations, or, in the case of engineer equipment and supplies, to meet special needs, authority will first be obtained from the chief of the supply department concerned. Requests for such authority will state reasons therefor.

Requisitions will normally be submitted prior to January 1 and June 30 of each year for the following six months if storage facilities permit; otherwise they will be submitted quarterly. When submitting these requisitions, the supply officer will furnish a statement showing the quantities of the articles requested, which were issued, or called for but not issued though authorized, during the preceding six months' period or quarter; the quantities on hand; and the maximum authorized reserve, for the organizations with whose supply he is charged, together with appropriate brief explanation of any unusual request.

9. Cost of Maintenance. (a) The methods should be such that the cost obtained is the actual cost to the United States of supplying the organization with the particular equipment in question. On account of the difficulty of fixing a just credit to be given an organization for property that has been used by it, and turned in unserviceable but still repairable, it is desired, whenever practicable, that such property be retained in the organization until no longer repairable.

(b) Each post supply officer, or other designated issuing officer, will keep on the prescribed form (Form No. 450, A. G. O.), Record of Cost of Maintenance, an account of the money value of all "A" and "B" equipment, certain designated articles of garrison equipment, and supplies, expendable and nonexpendable (including quartermaster property), issued to or received from organizations provided with the unit accountability equipment, except of articles issued to replace those charged to officers or enlisted men, and to replace those lost and charged to transportation companies, etc. The cost of maintenance will also include the charge for cleaning materials, spare parts, etc., required to maintain in serviceable condition property issued on memorandum receipt. All entries on a record of cost of maintenance pertaining to unit accountability material must be covered by a voucher to the return of the supply officer on which is shown the total value of such entry. Entries on this record on account of charges for garrison equipment will have entered in the record the number of the memorandum receipt, thus: 7 (mem.). Organization commanders will, upon request, be informed of the status of their cost of maintenance account.

(c) For each organization of mobile Artillery separate records of cost of maintenance will be kept, as follows: One for arms, personal, organization, and horse equipment, harness, and parts pertaining thereto; the other for Artillery matériel under charge of an armament officer.

(d) When a transfer of property, with corresponding entries on the record of cost of maintenance, results from an authorized increase or decrease in the strength of an organization or from the change from an old to a new model of equipment, such entries will be identified by appropriate notes as "change in authorized strength" or "new model to replace serviceable old model" and will not be included in the total actual cost of maintenance for the period, but will be totaled separately.

(e) In computing the value of these and other issues or receipts, the prices given in the unit accountability equipment manuals and tables of credits will be used regardless of the models in question. When prices are not otherwise furnished the price list will govern. When serviceable property (except Field Artillery matériel, etc., which is under the supervision of armament officers) which has been used is to be turned in or issued, the value thereof will be determined by a surveying officer and entered by him on the voucher of transfer. These values so determined will hold for future issues in so far as it is practicable and equitable. Similar action will be taken in the case of cleaned and repaired stores whose price is not published.

(f) The cost of all repairs directed by or made under the supervision of an armament officer will be reported by him to the local supply officer for charge, as directed herein, on the proper record of the cost of maintenance. When an armament officer directs that Artillery or machine-gun matériel or parts be turned in for repairs or replacement, the receiving arsenal will report the cost of repairs to the armament officer for transmission to the local supply officer.

(g) When an organization changes station during the accounting period a copy of its records of cost of maintenance (Form No. 450, A. G. O.), to-

gether with a statement of its remaining credits under the various money allowances, will be forwarded by the old supply officer through the commanding officers of the old and new stations to the new supply officer.

(h) Each post supply officer or other designated supply officer will render, through the commanding officer, to the chief of his department or corps, a report (Form No. 449, A. G. O.), showing the cost of maintenance of each organization having a unit accountability equipment, and to whom issues have been made in the preceding six months, but no record of cost of maintenance will be kept in the case of organizations engaged in operations in the field in time of war.

10. Economy of Maintenance and Condition of Equipment to be Considered by Officers Rendering Prescribed Efficiency Reports of Organization Commanders. Officers making the prescribed efficiency reports will consider the condition of equipment and the economy with which an organization has been maintained. In determining this, due consideration will be given to the length of time the particular officer has commanded the organization, the nature of its service, and all other circumstances which would affect the deterioration of the equipment.

11. Increase or Decrease in Authorized Strength. Should the authorized strength of an organization be increased, the post supply officer or other issuing officer will, upon application of the organization commander, issue the necessary additional equipment, the organization commander citing on his receipt therefor the number, date, and source of the order authorizing the increase. Should the authorized strength of an organization be decreased, or should it be necessary for any reason to turn in surplus equipment, the surplus will be invoiced to the proper supply officer, whose receipt therefor, with notations thereon of the authority for the transfer, will be filed by the organization commander with his next return. Surplus equipment to be turned in should be new and unused, if such is on hand; otherwise, the most serviceable that is on hand, and supply officers or other issuing officers will receive and receipt for such serviceable surplus equipment which has been passed upon by a survey officer who will also determine its value as prescribed in section (e), paragraph 9, of this order.

12. Completion of Equipment. One of the reasons for changing to the unit accountability method of accounting for property was to lessen the paper work of organization commanders in connection with rendering property returns. To this end it is desired that every such commander endeavor at all times, but especially as the accounting time approaches, or when a transfer is to be made to another officer, to see that the full authorized equipment is on hand, and no more.

Paragraphs 137 to 152 eliminated, as they have no application to Infantry.

153. Claims for Damages. 1. There are received in the War Department many claims for damages to private property resulting from military operations, including heavy gun practice at the seacoast defense forts. When it is clearly established that the damages claimed in any case have been caused by such operations, and the circumstances are such as to make it equitable for the United States to assume responsibility therefor, the amount of the damages having been determined and the claimant having filed a statement that he will accept the amount so determined in full of his claim, the amount of the damages so determined will be included in an estimate submitted to Congress for an appropriation to cover such claims. In the absence of such appropriation, the department is without authority to pay or settle such claims.

2. The action of the department upon such claims is based upon the evi-

dence submitted by the claimant as to the nature of the damages; how they were incurred, and the cost of restoring the damaged property to its previous condition, supported by the findings of a board of officers that has investigated the claim, or by a surveying officer when the appointment of a board of officers is not practicable.

3. To enable intelligent action to be taken upon claims of this nature it is requisite that the claimant submit a statement over his own signature setting forth all the facts and circumstances under which the damages charged for accrued; the nature and extent of the damages; the date they were incurred, and the cost for repairs of the same, to be accompanied by such evidence as is available, and by a receipt for the payment of the repairs, if they have been made, or an estimate of the cost thereof. The post-office address of the claimant will also be stated.

4. The report of the board of officers or surveying officer investigating the claim should recite the circumstances under which the claim accrued; the date thereof; the nature and extent of the damages, and whether or not they were due to pure accident, or to the fault of any officer or agent of the United States or any other person, or were the necessary result of military operations. The report should also cover the cost of restoring the property to the condition in which it was before it was damaged, deduction being made for any improvement in such restoration, and should conclude with a recommendation as to the amount which should be allowed and paid to the claimant for the restoration.

5. Should the investigating board or the surveying officer require expert assistance to determine the nature of the damages and the cost for repairs, application will be made to the Adjutant General of the Army for the services of an expert competent to advise the board or the surveying officer as to the matters under consideration.

6. Officers to whom claims for damages to private property are submitted will explain to claimants the method of determining the award to be recommended, and that there is no appropriation or authority of law for the payment of such claims by the War Department, but that they can be paid only after appropriations have been made by Congress for that purpose. All action taken toward determining the amount of damage to any property is for the purpose of obtaining information to enable the Secretary of War to make proper recommendation to Congress, by which body only can be taken final action authorizing payment.

7. No charges or estimates for improvements, changes, or additions to property should be included in any claim for damages, and if included will not be allowed in the award recommended, but will be deducted from the amount claimed.

8. The claimant will be advised in writing of any deductions made from his claim, and the reasons therefor, and of the award to be recommended, and will be requested to state in writing whether or not he will accept the award, and if he will not accept the award to submit his reasons. His answer will be forwarded with the recommendations as to the award. (Cir. 22, 1910.)

Paragraphs 154 to 173 eliminated, as they have no application to Infantry.

CORRESPONDENCE.

174. Method of Writing Letters and Indorsements. The method of writing letters and indorsements prescribed herein will be used in all official correspondence in the service of the War Department and the Army and with bureaus of executive departments:

1. Heading, Subject, and Number of Letter. The letter will begin with the place and date, written as at present; below this, beginning at the left margin, will come the word "From," followed by the official designation of the writer or, in the absence of any official designation, the name of the writer with his rank and regiment, corps, or department; below this, also beginning at the left margin, will come the word "To," followed by the official designation or name of the person addressed. Next will come the subject of the communication, indicated as briefly as possible and in not to exceed 10 words. The words "From," "To," and "Subject" will begin on the same vertical line. The sending office number of the communication will appear in the upper left-hand corner.

EXAMPLE.

176.

Hq. Eastern Division,
Governors Island, N. Y., May 25, 1911.

From: The Adjutant General.

To: Captain John A. Smith, 1st Inf.

(Through C. O. Madison Barracks, N. Y.)

Subject: Delay in submitting reports.

The division commander directs that you submit without further delay the reports of your recent inspection of the Organized Militia of the State of New York, and that you submit an explanation of your failure to comply with Par. 6, S. O. 25, c. s., these headquarters.

J. R. HENRY.

In case of letter paper, the upper third, and in the case of foolscap, the upper fourth of the sheet, will be devoted solely to the matter described in this paragraph. (See Par. 7.)

2. Body. Then will come the body of the letter, which, when typewritten, will be written single spaced, with a double space between paragraphs, which will be numbered consecutively.

3. Signature. The body of the letter will be followed by the signature. If the rank and the regiment, corps, or department of the writer appear at the beginning of the letter they will not appear after his name; but if they do not appear at the beginning of the letter they will follow under his name as at present. For example:

200.

Company A, 24th Infantry.
Madison Barracks, N. Y., Jan. 3, 1911.

From: Commanding Officer, Co. A, 24th Inf.

To: The Commanding Officer.

Subject: Pvt. Smith's case.

The case of Pvt. Smith has been investigated and charges have been preferred under the 62 A. W.

ROBERT JONES,
1st Lt., 24th. Inf.

Madison Barracks, N. Y.,
Jan. 10, 1911.

From: Capt. John A. Smith, 24th Inf.

To: The Adjutant General, U. S. A.

Subject: Leave of absence.

I have this day taken advantage of the leave granted me by Par. 1, S. O. 1, Hq. D. E., 1911. My address will be c/o Army and Navy Club, 107 West 43d St., N. Y.

JOHN A. SMITH.

4. Omission of Ceremonial Forms. All ceremonial forms at the beginning and end of letters, such as "Sir," "I have the honor," "I would respectfully," "Very respectfully," etc., will be omitted.

5. Use of Only One Side of Sheet. Only one side of the paper will be used, the writing beginning about 1 inch from the top.

6. Office Marks. The stamps bearing office numbers will be placed on the back of the lower fold of the first sheet. The received and received-back stamps will be placed immediately below the body of the letter, and, in the case of indorsements, immediately after the proper indorsement. When a communication of two or more sheets is filed, the back of the lower fold of the first sheet will be on the outside, thus exposing to view the office numbers.

7. Brief. The matter described in paragraph 1 of this order will constitute the brief of the letter.

8. Folding. Letter paper will be folded in three and foolscap in four equal folds, parallel with the writing; the top fold will be folded toward the back of the letter and the lower fold over the face of the letter. In three-fold letters both the brief and the office mark will be on the outside. In three-fold letters of more than one sheet the two lower folds of the sheets other than the first will be placed between the first and second folds of the first sheet, thus exposing to view both the brief and the office mark. In four-fold letters, whether of one or more sheets, the brief will be exposed to view by covering the office-mark fold or the office-mark be exposed to view by covering the brief, according as it is desired to keep either the one or the other exposed to view for the purpose in hand.

9. Inclosures. All inclosures will be numbered and will be given the proper office marks. Inclosures to the original communication will be noted on the face of the letter to the left of the signature. If others are added when an indorsement is made, their number will be noted at the foot of the indorsement to which they pertain and also on the back of the lower fold of the first sheet of the original communication. To the latter notation will be added the number of the indorsement to which they belong, thus: "One inclosure—fifth indorsement." Inclosures to indorsements are numbered in the same series as those to the original paper and the number of the indorsement to which they belong is added below. If few in number and not bulky, inclosures may be kept inside the original paper; otherwise they will be folded together in a wrapper marked "Inclosures." Officers through whose hands official papers pass will make the inclosures secure when they are not so. The entry of serial numbers on inclosures and of notations on papers to show the presence of inclosures to an original communication or to show inclosures added to or withdrawn from a case when indorsements are written, as illustrated by the Correspondence Model distributed by the Adjutant General of the Army, will be made in the office in which the inclosures concerned originate or are added or withdrawn. The total number of inclosures accompanying a paper will be noted at the foot of each indorsement thereon.

INDORSEMENTS.

10. Form. The writing width of indorsements will be the same as that of letters. The first indorsement will begin about one-half inch below the rank after the signature of the writer of the letter, and succeeding indorsements will follow one another serially, with a space of about one-half inch between indorsements.

The serial number of the indorsement, the place, the date, and to whom written, will be written as shown in the example (Par. 21).

When typewritten, indorsements will be written single-spaced with a double space between paragraphs. The paragraphs will be numbered consecutively.

11. Additional Sheets. Should one or more additional sheets be necessary for indorsements, sheets of the same size as the letter will be used.

12. "Respectfully referred," etc., to be omitted. In referring, transmitting, forwarding, and returning papers, the expressions "Respectfully referred," "Respectfully transmitted," "Respectfully forwarded," and "Respectfully returned," will be omitted.

13. Routine Indorsements to be Signed With Initials. Indorsements of a routine nature, referring, transmitting, forwarding, and returning papers, will not be signed with the full name, but with the initials. For example:

1st Ind.

Hq. 24 Inf., Madison Bks., N. Y., Jan. 1, 1911—To C. O., Co. C, 24 Inf.

To note and return. M. A. R.

2d Ind.

Co. C, 24 Inf., Madison Bks., N. Y., Jan. 2, 1911—To the Commanding Officer.

Returned. Contents noted. I. K. S.

Nothing in this order shall be construed as prohibiting the practice that obtains at present at department and other headquarters of referring, transmitting, forwarding, and returning papers to the various staff officers thereat without signature or initials.

LETTERS AND INDORSEMENTS.

14. Numbering of Pages. The pages, beginning with the first, will be numbered midway about one-half inch from the bottom. In referring to an indorsement by number, the number of the page will also be given. Thus: "5th Ind., page 3."

15. Carbon Copies. All letters and indorsements that are typewritten, excepting letters of transmittal, reports of taking leave of absence, periodical reports, and other communications of a similar nature, will be made with two carbon copies. One copy will be retained for the records of the office in which the letter was written, and the other will be forwarded with the communication for the files of the first office in which a complete copy of the communication is required for the records, but such forwarded copy will not be regarded as an inclosure within the meaning of Paragraph 9 of this order. The carbon copy retained for the office record will be initialed by the person responsible for the letter, and such person is charged with the duty of seeing that the name of the official who signs the letter and any changes made before signature are inserted in the carbon. When a complete copy of a communication is not required for the records of an intermediate office the carbon copy will be forwarded to the next office. In offices authorized to use the record card system the carbon copies will be made on sheets of perforated paper, furnished by the Quartermaster's Department, with perforated sections the same width as the standard record file cards. The sheets will be torn along the perforations and the sections attached to the record file cards. In other offices the carbon copies will be made on ordinary paper and the retained copy filed in the document file. The pro-

visions of this paragraph apply only to communications addressed to individuals and offices within the military service.

16. Press Copies. Press copies will not be used except by written authority of the Secretary of War.

17. Communications written prior to the receipt of this order are not subject to its provisions when in the future they are received or transmitted by any office or individual.

18. Printed and Multigraph Forms. Nothing in this order is intended to prohibit the use of printed or multigraph forms of letters and indorsements in offices now using such forms, provided the forms conform to the general principles of this order. The back of the first sheet of such forms, except the fold containing office marks, may be used for indorsements.

19. Channels of Communication. All classes of official communications heretofore addressed to adjutants or to adjutants general other than the Adjutant General of the Army will in the future be addressed to the commanding officer concerned.

20. Points not touched upon in this order will be governed by the present regulations on the subject of correspondence.

21. Example. The following example will be used as a guide in carrying out the instructions contained in this order:

20.

Fort Riley, Kans.

October 27, 1910.

From: The Ordnance Officer.

To: The Commanding Officer, 7th Cav.

Subject: New system of issuing ordnance stores.

1. In compliance with instructions contained in a letter from the Adjutant General's Office, dated November 27, 1909, regarding the testing of a new system of issuing ordnance stores, the following report concerning the working of this system is submitted.

2. As far as I have been able to observe, the new system has no disadvantages. Its advantages are:

* * * * *

A—— B——,
1st Lt., 7th Cav.

1st Ind.

Hq. 7th Cav., Ft. Riley, Kans., Oct. 29, 1910—To the C. O., Ft. Riley, Kans.
I concur in the conclusions of the Ordnance Officer.

C—— D——,
Major, 7th Cav., Comdg.

2d Ind.

Hq. Ft. Riley, Kans., Nov. 1, 1910—To Comdg. Gen., Dept. of the Mo.
Approved.

E—— F——,
Brig. Gen., Comdg.

(Stamp) To Chief Ordnance Officer.

3d Ind.

Hq. Dept. of the Mo., Nov. 2, 1910—To The Adj. Gen., U. S. A.
Approved.

G—— H——,
Brig. Gen., Comdg.

4th Ind.

A. G. O., Nov. 5, 1910—To the C. of O.

36949—204

5th Ind.

Ghs—Bam

Office of the C. of O., Nov. 9, 1910—To Comdg. Officer, Rock Island Arsenal.

For remark with reference to paragraph 2 of the within letter. By order of the Chief of Ordnance.

I—— J——,

Capt., Ord. Dept.

159—181

36949—204

6th Ind.

Hf—L

Rock Island Arsenal, Ill., Nov. 14, 1910—To the Chief of Ordnance.

1. It is the practice at this arsenal to make shipments of all articles required on * * * *

2. The final shipment in this particular case was delayed by the failure of to supply acceptable * * *

K—— L——,

Lt. Col., Ord. Dept., Comdg.

(Stamp) Rec'd back, O. C. of O., Nov. 16, 1910.

36949—204

7th Ind.

JMy

Office of the C. of O., Nov. 17, 1910—To The Adjt. Gen., U. S. A.

Returned in connection with O. O. file 36949—198 (A. G. O. 1527570).

M—— N——,

Lt. Col., Ord. Dept.,

(Stamp) Rec'd back, A. G. O., Nov. 18, 1910.

Actg. C. of O.

1527570

8th Ind.

War Department, A. G. O., Nov. 18, 1910—To Comdg. Gen., Dept. of the Lakes; Comdg. Gen., Dept. of Dakota; Comdg. Gen., Dept. of the Mo.; etc. * * *

Returned in connection with papers referred to in the preceding indorsement hereon. The early return of all papers is desired. By order of the Secretary of War.

O—— P——,

Adjutant General.

9th Ind.

Hq. Dept. of the Lakes, Nov. 22, 1910—To Comdg. Gen., Dept. of Dakota.

Noted.

R—— S——,

Brig. Gen., Comdg.

10th Ind.

(Stamped indorsement.)

A. G. O. D. D.

Nov. 25, 1910.

To the Chief Ordnance Officer.

(G. O. 23, 1912—1930959, A. G. O., as amended by Par. I, Bul. 24, 1912—1930959, and Par. III, G. O. 53, 1913.)

Paragraphs 175 to 177 eliminated, as they have no application to Infantry.

178. **Correspondence in Battalions or Squadrons.** Correspondence relating to the personnel, instruction, discipline, or equipment of a company, battery, or troop in battalion or squadron will pass through the battalion or squadron commander. No official record, however, will be kept by the battalion or squadron commander of such correspondence. (Par. IV, G. O. 8, 1914.)

Paragraph 179 eliminated, as it has no application to Infantry.

180. **Data for Changes on Enlistment Papers or Muster Rolls.** When an officer of the Army finds it necessary, on account of errors or omissions, to

have changes or corrections made on enlistment papers or muster rolls that have been furnished to the Adjutant General's Office, he will forward the data pertaining to such changes or corrections directly to the Adjutant General of the Army. (Par. IV, G. O. 24, 1912.)

181. Prompt Reply to be Made to Official Communications. Officers who fail to make prompt reply to official communications without satisfactory excuse for the delay will be subjected to disciplinary measures.

When, in order to make proper reply, it is necessary to examine papers not at hand or to consult with other persons at a distance, or when for other sufficient reason full and prompt reply is impossible, acknowledgment of the receipt of the communication will be made at once with a statement giving the cause of the anticipated delay.

The commanding officer of every Army post and station will take such steps as he may deem expedient to insure prompt reply by officers of his command to official communications sent them which require reply. (Par. I, Cir. 25, 1906.)

Paragraphs 182 to 192 eliminated, as they have no application to Infantry.

193. Charges on Pay Rolls for Ordnance Property. When charges are made on pay rolls against an enlisted man on account of the loss or damage to property pertaining to the Ordnance Department, the officer who makes the charges will forward a report thereof on Form No. 94, Ordnance Department, to the quartermaster who is to pay the organization to which the soldier belongs. When charges of this character are made on final statements, the officer who makes the charges will forward a report thereof on the same blank form to the department quartermaster of the department in which payment is to be made. After verification of the charges the quartermaster or department quartermaster, as the case may be, will forward the reports directly to the Chief of Ordnance, except in the Philippine Department, where they will be forwarded through the chief ordnance officer of the department.

When charges are made on pay rolls against an enlisted man and not collected, reports will be made until the amount shall have been collected. If an enlisted man is separated from the service and the charges standing against him have not been collected on the pay rolls, a notation showing that the charges have been transferred to his final statements will be made on the report for the month in which the soldier was dropped. If for any reason final statements are not furnished to a discharged soldier, the notation will be modified so as to show that fact. If an enlisted man is detailed or transferred to another organization and the charges standing against him have not been collected on the pay rolls, a notation will be made on the report for the month in which the detail or transfer was effected showing that the receipt of the soldier was obtained for the missing property, as prescribed in Paragraph 1535, Army Regulations.

If an enlisted man should desert and the charges standing against him have not been collected, a notation will be made on the report for the month in which he is dropped for desertion showing that collection could not be made on that account; if the soldier should subsequently reënlist or be apprehended, any charges standing against him on the prior pay rolls will be transferred to the new rolls and reports thereof made on Form No. 94, Ordnance Department, until the charges shall have been collected.

If an enlisted man should desert and it should subsequently appear that the last roll upon which his name is borne did not cover all the charges that should have been made against him, the commanding officer of the organization to which the soldier belongs will take steps to have the necessary corrections made on the roll. The report required on Form No. 94, Ordnance Department,

will be made as in other cases to cover the additional ordnance charges and notation made on the report showing why the charges have not been collected.

When the charges are made for the first time, the accountable officer is authorized to enter on the semiannual statement of charges (Form No. 86, Ordnance Department) a list of the missing articles and to take credit for the same on his next semiannual return, without being required to show that collection has been made of the charges. He is, however, not authorized to make entry on the statement of charges or to take credit for these articles on account of the same charges appearing on a subsequent pay roll by reason of failure to collect on a prior roll.

When an enlisted man is detailed or transferred to another organization, any articles of ordnance property for which he may be indebted to the United States at the time of the detail or transfer, and any other article of ordnance property which he may carry with him, will be dropped from the return of the accountable officer on the duplicate invoice and receipt transfer voucher (Form No. 152, Ordnance Department) as prescribed in paragraph 1535, Army Regulations. If any of the articles appearing on this invoice have been dropped on the statement of charges, they will not be again dropped by virtue of this voucher. Such articles as the soldier may be indebted for will not be entered on the statement of charges or on Form No. 94, Ordnance Department, as charged on the Descriptive List, or on the descriptive and assignment card. (G. O. 59, 1907.)

194. Preparation of Pay Rolls, Muster Rolls, etc., on Typewriting Machine. The preparation of muster rolls, pay rolls, inventories of effects, and certificates of disability for discharge, on a typewriting machine, is authorized, provided a black-record ribbon of standard quality is used, but carbon copies of such papers will not be forwarded to the War Department.

Under no circumstances will discharge certificates and final statements be prepared on a typewriting machine. (Par. 4, Cir. 5, 1909, as amended by Par. I, Cir. 41, 1910.)

Paragraphs 195 to 198 eliminated, as they have no application to Infantry.

199. Mailing of Letters of Soldiers in the Field. Letters sent by soldiers, sailors, and marines in the United States service, located in the United States or any of its possessions, or other places where the United States domestic mail service is in operation, addressed to places in the United States or any of its possessions, when indorsed "Soldier's letter," "Sailor's letter," or "Marine's letter," and signed thereunder, either with facsimile hand stamp or in writing, with his official designation, by a field or staff officer, post or detachment commander, to whose command the soldier belongs, or by a surgeon or chaplain at a hospital where he may be; and in the Navy and Marine service by any commissioned officer attached to the vessel, or officer commanding a hospital or detachment ashore, may be dispatched to destination without prepayment of postage, and only the single rate of postage shall be collected on delivery. (Par. II, Bul. 19, 1914.)

Paragraphs 200 to 228 and 230 to 250 eliminated, as they have no application to Infantry.

Note: See par. 229, p. 976.

251. Stovepipe Openings Not to be Cut in Roofs or Flies of Tents. All regulation hospital and regulation wall tents will be provided with asbestos rings for the openings for stovepipe, to take the place of the rectangular ventilators, the rings and the necessary elbows for the stoves to be supplied by the Quartermaster Corps.

The cutting of stovepipe openings in the roofs or flies of tents is forbidden. (Par. II, Cir. 63, 1906.)

Paragraphs 252 to 276 eliminated, as they have no application to Infantry.

277. Material for Treatment of Dental Injury. When a dental injury, incurred in line of duty, is reported for treatment conformably to the provisions of paragraphs 1402 and 1403, Army Regulations, and the dental surgeon or acting dental surgeon has not on hand the material or equipment necessary to perform the work required, he will bring the case to the attention of higher authority for decision as to what further procedure shall be had. (Par. V, G. O. 67, 1914.)

Paragraphs 278 to 294 eliminated, as they have no application to Infantry.

RIFLES.

295. Submission of United States Rifles, Caliber .30, Model of 1903, for the Action of Inspectors and Surveying Officers. 1. Experiments at the arsenals indicate that the rifle, with ammunition as now issued, should be serviceable for from 8,000 to 13,000 rounds. The earlier ammunition of 1906 model, however, was loaded with a nitroglycerin powder, and doubtless there are rifles in service which were fired one or two seasons with this powder. With this powder the life of the rifle would be about 4,500 to 5,000 rounds. The foregoing results obtain at the arsenals where the work of cleaning and caring for the rifles is done by experienced and careful employees. The unserviceable rifles turned in to the arsenals appear to have become so more through want of careful cleaning and through the use of abrasives than by reason of the actual number of rounds fired. This appears from the fact that the rifles turned in are worn at the muzzles and the barrels are rusted or pitted, whereas with proper care the rifles should become inaccurate only by reason of erosion at the bullet seat. It may be considered that a rifle will be fired 400 rounds in one season. A rifle with reasonable care should be good for at least 10 years with the present powder, or for about 4,000 rounds.

2. Experience has shown that in general the accuracy of rifles is not affected sufficiently to make them unserviceable until the diameter across the lands at the muzzle exceeds 0.304 inch, and that rifles measuring 0.308 inch across the lands at the muzzle are generally unserviceable. Hereafter all rifles, before being submitted for the action of an inspector or a surveying officer on the ground of lack of accuracy, will first be inspected under the supervision of a commissioned officer, using cylindrical plug gauges 0.304 and 0.308 inch in diameter, issued by the Ordnance Department for the purpose and to be obtained from the post or regimental ordnance officer. Those rifles in which the 0.304-inch plug gauge does not enter or enters snugly will be retained in service without further accuracy tests. Those rifles in which the 0.308-inch plug gauge enters freely will be reported as unserviceable and will not be tested by targeting. Rifles considered unserviceable in which the 0.304-inch plug gauge enters freely and which will not admit a 0.308-inch plug gauge or admit it only snugly will be tested by targeting as hereinafter explained before being submitted for the action of an inspector. After these tests with plug gauges have been made, they will be certified to by the officer supervising the tests. Plug gauges will be issued to post or regimental ordnance officers without requisition.

3. The test will be made under favorable weather conditions by an expert shot with the rifle at known distance slow fire, under the personal supervision of a disinterested officer, and will consist of one target of 10 shots at each of the ranges, 300 and 500 yards, the targets to be preceded by sighting shots at each range and muzzle rest to be permitted. When practicable the expert making the test will be of another organization than the one to which the rifles belong. Before being tested at each range the rifles will be thoroughly cleaned and all metal fouling removed from the bore. The best ammunition

available will be issued for testing the rifles, and ammunition of different dates of manufacture should not be used in making targets for a single rifle. If the mean radius of these targets is less than 6.5 inches at 300 yards, or less than 13 inches at 500 yards, the rifles will be considered sufficiently accurate to be retained in the service. If the mean radius is greater than that stated the rifles will be submitted to an inspector or surveying officer for his action. The results of the test will be certified to by the officer supervising it, and will be shown in the case of each rifle, the rifle being designated by its number and the initials of the arsenal where it was manufactured. If a range of 500 yards is not available the test should be conducted under the same conditions at each of the ranges 200 and 300 yards. If the mean radius of these targets is less than 6.5 inches at 300 yards, or less than 4.5 inches at 200 yards the rifles will be considered sufficiently accurate to be continued in service.

4. The expenditure of the ammunition necessary to conduct the test prescribed in the preceding paragraph is authorized, but it will be furnished by the organization presenting the rifles for test from its allowance for target practice.

5. The mean radius of a group of shots is determined as follows: After removing the paper target from the frame, lay out vertical and horizontal axes which will contain the group of shots. Measure the vertical distance from the center of each shot hole to the horizontal axis; the mean of these distances gives the vertical ordinate of the center of impact. Measure the horizontal distance from the center of each shot hole to the vertical axis; the mean of these distances gives the horizontal ordinate of the center of impact of the group of shots. After plotting the center of impact, measure the distance from the center of impact to the center of each shot hole. The mean of the distances from the center of impact to the centers of the shot holes is the mean radius.

6. In preparing the inventory and inspection reports, or reports of survey, the following data will be shown thereon:

(a) The number of each rifle and its arsenal initial.

(b) The date of issue of the rifle to the organization (date of invoice) and the number of target seasons it has been fired.

(Par. I, Bul. 24, 1913, as amended by Par. II, Bul. 15, 1915, and Par. II, Bul. 31, 1915.)

296. Use in Swimming and Wall-scaling Exercises. 1. Hereafter United States rifles, caliber .30, model 1903, may be used in swimming or wall-scaling exercises, but company commanders will be held responsible therefor.

2. The rifles will be carefully prepared for swimming exercises by the use of plenty of oil, cosmoline, or other suitable substance, and after each swimming exercise will be carefully cleaned and dried.

3. In the wall-scaling exercise the rifle will not be thrown from the wall, but will be taken from the top of the wall to the ground on the person of the soldier to whom it belongs in such a manner as to be ready for immediate use on reaching the ground. (Par. I, Cir. 38, 1910, as amended by Par. I, G. O. 43, 1911.)

297. Telescopic Musket Sights Not to Be Separated from Rifles. 1. As each telescopic musket sight, model of 1908, has been carefully adjusted and fitted to a specially selected rifle by expert firings at the armories and marked with the number of the rifle to which it belongs, it is not intended that such telescopic musket sight should be permanently separated from its particular rifle.

2. In case it should become necessary to transfer a telescopic musket sight from one organization to another, the specially selected rifle to which it belongs should also be transferred.

3. Likewise, if it should become necessary to forward the specially selected rifle or its telescopic musket sight to an arsenal for repairs, both the rifle and the telescopic musket sight should be forwarded. (Par. II, Cir. 49, 1910, as amended by Par. IV, Bul. 38, 1914.)

298. Assembling. Instructions relative to the assembling of the 1907 gun sling on the rifle:

Assemblage. The sling is made up of four parts, the long strap, the short strap, and two keepers. To assemble it the plain end of the long strap is passed through the larger keeper, then through the metal loop of the short strap, passing from the undressed to the dressed side of the latter, then back through the larger keeper, forming the arm loop dressed side out. The same end is then passed through the smaller keeper, through the upper sling swivel from the butt toward the muzzle, and back through the smaller keeper, the arm loop being completed by engaging the claw of the long strap in the proper holes in the other end of same.

The size of the arm loop is adjusted to suit the individual who is to fire the piece, the loop being drawn through the upper swivel until the claw comes well up toward the upper swivel. The claw end of the short strap is then passed through the lower swivel from muzzle to butt and brought up and engaged in the proper holes in the long strap, drawing the sling taut. This gives the parade position of the sling.

To adjust it for firing or carrying, the claw of the short strap is disengaged and reengaged in the proper holes of the short strap, no change being necessary in the adjustment of the arm loop. (Cir. 16, 1907.)

Paragraphs 299 to 317 eliminated, as they have no application to Infantry.

318. Boxes and Bedding Rolls—Personal Baggage of Officers in the Field. The personal baggage of officers when taking the field will be packed in boxes or bundles conforming to descriptions as follows:

1. A box made of three-ply veneer covered with vulcanized fiber, 32 inches by 19 inches by 13 inches over all. Handles to be of leather and all hinges, locks, and handles to be as flat as possible so as not to interfere with proper packing in wagons. The weight of the box when packed will not exceed 100 pounds.

Any suitable equivalent, such as the Army trunk locker, a telescope, or leather trunk, conforming to the prescribed dimensions and weight and free from projecting parts is authorized.

2. A canvas roll, the bundle not to exceed 39 inches in length and 21 inches in diameter.

3. Canvas bedding rolls for use in the field, as contemplated herein, made in accordance with the sealed pattern in the office of the Quartermaster General of the Army, will be kept on hand by the Quartermaster Corps for sale to officers. (Par. I, G. O. 201, 1905; Par. I, Cir. 42, 1906; Cir. 22, 1909.)

319. Instructions Pertaining to Field Equipment. 1. Field service is defined to be service in mobilization, concentration, instruction, or maneuver camps, as well as service in campaign, in simulated campaign, or on the march.

The complete equipment for field service (equipment "C") consists of engineer, ordnance, signal, medical, and quartermaster property, and is divided into two classes, "A" and "B."

Equipment "A" is the equipment prescribed for use in campaign, in simulated campaign, or on the march. It is limited to the animals and vehicles prescribed in the Tables of Organization, the equipment and clothing worn on the person, and the articles carried on mount, and transported in field, combat, and divisional trains.

Equipment "B" is the equipment which, in addition to equipment "A," is

prescribed for the use of troops in mobilization, concentration, instruction, or maneuver camps, and during such pauses in operations against an enemy as permit the better care of troops.

Equipment "C" is the sum of equipments "A" and "B," and therefore includes every article prescribed for field service as hereinbefore defined.

When troops are ordered on field service, instructions will state the letter designation of the equipment to be taken. The instructions will also specify whether mosquito bars and head nets are to form a part of the equipment, and what winter articles, if any, are to be included. The same rule will apply in the issuance of subsequent orders when necessary. Articles distinctively for winter use can be transported as baggage on the march only when transportation in addition to that prescribed in equipment "A" is provided for that purpose. In addition to the allowances prescribed as the field equipments, service coats, cravats, fatigue clothing, and other articles of uniform, extra bedding, and toilet articles may be taken by officers and enlisted men with equipment "B," when authorized in orders directing the movement of troops.

2. The articles of engineer, ordnance, and signal property listed in the several Unit Accountability Equipment Manuals belong to equipment "A." The articles of medical property belonging to equipment "A" are shown in the Manual for the Medical Department. The articles of quartermaster property belonging to equipments "A," "B," and "C," respectively, are shown in Equipment Tables, Quartermaster Supplies, 1915, published in G. O. 39, 1915, A. G. O. (Par. I, G. O. 85, 1914.)

320. Clothing Component of the Field Kit and the Surplus Kit. 1. The field kit, clothing component, for all arms and branches of the service, mounted and dismounted, in addition to the clothing worn on the person, is composed of the following articles: One blanket; 1 comb; 1 drawers, pair; 1 poncho (dismounted men); 1 slicker (mounted men)¹; 1 soap, cake; 2 stockings, pairs; 1 toothbrush; 1 towel; 1 undershirt; 1 housewife (for 1 man of each squad). The foregoing field kit, which is carried on the person by dismounted men and on the packed saddle by mounted men, is supplemented by the surplus kit, the two together making up the clothing component of the service kit.

2. The surplus kit consists of 1 breeches, pair; 1 drawers, pair; 1 shirt, olive drab; 1 shoes, russet leather, pair; 2 stockings, pairs; 1 shoe laces, extra pair; 1 undershirt. The surplus kit pertains to equipment "B" (Par. I, G. O. 85, W. D., 1914, par. 319, this compilation), as part of the permanent camp equipment, to be forwarded to troops when serving in instruction, maneuver, mobilization, or concentration camps, or when in active service a temporary suspension of operations permits the troops to refit. In peace-time maneuvers and marches the surplus kit may accompany the troops, if so directed in the orders prescribing the movement. The vehicles and animals of the combat train and those representing the divisional supply train will be utilized to transport them.

3. The sweater will form part of equipment "A" (Par. I, G. O. 85, W. D., 1914, par. 319, this compilation), pertaining to field service, and when climatic conditions require its use will be carried by the soldier on his person. When sweaters are not prescribed to be worn on the person, they will be collected into bundles of convenient size and secured by burlap or other suitable material or will be boxed. They will be marked ready for shipment to be forwarded when required. In peace-time maneuvers and marches the sweater, even

¹For all enlisted men of the Quartermaster Corps, both mounted and dismounted; also for enlisted men of the Hospital Corps detailed as ambulance drivers and ambulance orderlies.

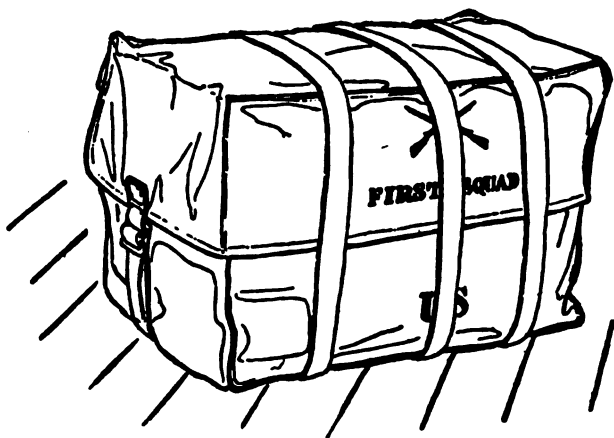
though not prescribed to be carried by the soldier on the march, may accompany the troops, if so directed in the orders prescribing the movements. The vehicles and animals of the combat train and those representing the divisional supply train will be utilized to transport them.

The same rule will apply in regard to overcoats.

4. Surplus kit bags will be issued to each organization at the rate of one to each squad, one for the sergeants and one for the cooks and buglers, and one for every eight men of detachments.

Each bag will be marked with the letter of the company and the number of the regiment, as provided in paragraph 295, Army Regulations, for haversacks, and the proper designation of the squads to which the bags belong, both markings to be in center of front cover flap, as shown in the following illustration:

5. The kit bag for the sergeants and that for the cooks and buglers will be marked "Sergeants," "Cooks and buglers" respectively. Similarly, the kit bags for detachments will be appropriately marked.



The kit of each man will be packed as follows:

Stockings to be rolled tightly, one pair in the toe of each shoe; shoes placed together, heels at opposite ends, soles outward, wrapped tightly in underwear, and bundle securely tied around the middle by the extra pair of the shoe laces, each bundle to be tagged with the company number of the owner. These individual kits will be packed in the surplus kit bag in two layers of four kits each, the breeches and olive-drab shirts to be neatly folded and packed on the top and sides of the layers, the jointed cleaning rod and case, provided for each squad, being attached by the thongs on the inside of the bag.

6. (a) In garrison, the surplus kit articles are not required to be kept habitually packed and stored, or kept apart from the rest of a soldier's belongings. The soldier should have the clothing component of the service kit. Surplus kits are packed only when commanders require it to be done.

(b) Organization commanders will keep on hand a sufficient supply of surplus kit bags, marked as prescribed above, but unpacked. (Par. I, G. O. 56, 1915.)

321. First-aid Packets, Field and Instruction. Two types of first-aid packets are supplied by the Medical Department, the field packet in a sealed metal case and the instruction packet in a cardboard box.

The field packet, which forms part of the full equipment of enlisted men,

will be inserted, ring down, in the pouch for first-aid packet, and will be carried as prescribed in the Uniform Regulations. The pouch and packet will be regularly inspected and will not be used except for the purposes for which they are issued, and when damaged, destroyed, or lost through the fault of the soldier to whom issued the cost will be charged against him on the pay rolls of his organization.

The instruction packet will be obtained by the surgeons of posts upon special requisition and supplied by them to company commanders. The allowance for this purpose will be 20 packets for each company, battery, and troop, and 10 packets for each band. The dressings contained in these packets can be used repeatedly for the practical instruction of officers and enlisted men, and after being used for this purpose they should be repacked in the original form.

Both packets are expendable, but officers will be held strictly accountable for their proper and economical use, and will exercise every care to prevent any unnecessary expenditure. (Par. I, Cir. 2, 1908, as amended by Par. I, Cir. 16, 1908, and Par. V, G. O. 44, 1913.)

Paragraph 322 eliminated, as it has no application to Infantry.

323. Care of Saddle Blankets. Saddle blankets, before being folded and put in the storeroom after use, will be dried thoroughly. When in constant use they will be washed at least once a month and will be folded so that the side next to the horse will be changed frequently. (Par. 6, Cir. 47, 1909.)

Paragraphs 324-334 (end of book) eliminated, as they have no application to Infantry.

EXTRACTS FROM GENERAL ORDERS OF THE ARMY, AS PERTAINS TO INFANTRY, FROM JANUARY 1, 1916, TO MAY, 1917 (G. O. 60).

General Orders, } As amended by par. iii,
No. 9. } G. O. 15, 1916.

War Department,
Washington, March 9, 1916.

I. 1. The act of Congress approved May 11, 1908 (35 Stat. 108), making appropriation for the support of the Army, fiscal year ending June 30, 1909, provides:

"That hereafter the United States shall furnish mounts and horse equipments for all officers of the Army below the grade of major required to be mounted, but in case any officer below the grade of major required to be mounted provides himself with suitable mounts at his own expense, he shall receive an addition to his pay of one hundred and fifty dollars per annum if he provides one mount, and two hundred dollars per annum if he provides two mounts."

The purpose of this provision is to cover the necessary expense, and to encourage individual ownership, thereby increasing interest and effort to assure a superior type of mount for mounted officers in the military service.

2. Hereafter private mounts owned by officers of all grades in the Army, for which the Government expends public funds in the matter of maintenance and care, or additional pay, must at least equal the requirements contained in the specifications prepared under the direction of the Quartermaster General, and published for the guidance of all concerned in the inspection and purchase of public animals for the military service, subject to the following modifications:

(a) For all officers of the mounted service who are 5 feet 10 inches or over in height and when only one mount is owned, it will be required that such animal be at least 15 hands 2 inches in height.

(b) For all officers of the mounted service who are under 5 feet 10 inch height, and for all officers of the dismounted service, it will be required, only one mount is owned, that such animal shall be at least 15 hands in height.

(c) For all officers of both the mounted and dismounted service who own a second mount is owned, the minimum requirement of height for such a mount will be 15 hands.

(d) White or gray horses and stallions will be considered unsuitable mounts. Mares will be considered suitable only when exceptionally well qualified.

(e) The weight should in all cases conform to height and both be such as to cause the animal, when in normal flesh, to be well proportioned and a good weight carrier. Animals which fail to meet the foregoing requirements, which have heretofore been considered suitable mounts, will, while serviceable, be so continued only for their present owners.

3. It will be the duty of post commanders to ascertain which officers of their respective commands are drawing additional pay for furnishing their own mounts, or are having private mounts maintained at Government expense. They will assure themselves by personal inspection and actual test that the private mounts at their respective posts for which additional pay is drawn that are foraged at Government expense, conform to the requirements of this order, and are such as will enable the officer to perform properly all his mounted duties, both in garrison and in the field. A certificate of suitability will be required in all cases of change of ownership.

4. All private mounts belonging to officers stationed at military posts will be inspected at least once a year by post commanders, and when found unserviceable or unsuitable, thirty days will be given the officer to dispose of the same, after which time they will not be foraged or maintained at Government expense, nor will additional pay therefor be allowed. A certificate of such inspection and suitability will be furnished the quartermaster, who will keep a register of private mounts, which will show that all animals foraged at Government expense, or for which additional pay is allowed, have been properly inspected, together with date of inspection, and no such mount shall be shipped on a Government bill of lading which has not been inspected and passed within the current year. No animal will be passed as a suitable mount that is less than four years old.

The certificate of inspection and suitability of private mounts will be furnished by the officers owning the mounts when such officers are not at the post of the immediate command of a post commander.

General Orders, } Extract
No. 11. } from

War Department
Washington, March 29, 1916

III. 1. Under the decisions of the Comptroller of the Treasury of December 18, 1912 (19 Comp., 367), and of March 24, 1915 (21 Comp., 651), a enlisted man of the Army, when discharged from the service, except by way of punishment for an offense, or when furloughed to the reserve, is entitled to travel allowances from place of discharge or furlough to place of acceptance for enlistment or as otherwise prescribed by paragraph 1378, Army Regulations, as amended by C. A. R., No. 39, March 17, 1916. In no case will the place of actual enlistment, if different from the place of acceptance, be considered in determining such travel allowance.

2. Pending the revision of the present final statement form (old Q. M. Form No. 16, now War Department Form No. 370), the officer preparing the final statement will enter on the form now in use under the head of "place of acceptance" the place of acceptance for enlistment so as to enable the quar-

master making settlement of such final statement to determine the travel allowance due the soldier. The provisions of this order become effective, as to all enlisted men discharged or furloughed to the reserve, on or after the date of its receipt, regardless of the date of enlistment.

General Orders, } Extract
No. 17. } from

War Department,
Washington, May 1, 1916.

The following tables, giving the allowance of clothing in kind for enlisted men, the articles of clothing issued without charge to enlisted men, the money allowance for clothing drawn by enlisted men, prices at which articles of clothing and equipage will be charged, sizes of clothing, and allowance of tableware and kitchen utensils, are published for the information and guidance of all concerned, to go into effect July 1, 1916.

The articles herein enumerated furnished to the Organized Militia shall have added to the prices herein given the cost of packing.

Clothing and equipage purchased in Manila for service in the Philippine Islands will be charged at invoice or cost price.

At posts where this order shall not have been received by July 1, 1916, General Orders, No. 22, War Department, 1915, as amended by Paragraph III, General Orders, No. 50, War Department, 1915, will govern until the receipt of this order.

By order of the Secretary of War:

TASKER H. BLISS,
Major General, Acting Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

Note: The original order gives the allowance of clothing in kind for enlisted men, articles of gratuitous issue, money allowance, prices of articles of clothing, sizes of clothing and allowance of table ware, etc. In view of the fact that the money allowance and prices will change July 1, 1917, it was deemed best to include only the tables pertaining to sizes of clothing.

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS, WITH
DIMENSIONS TO DETERMINE SIZES.

BREECHES—OLIVE-DRAB WOOL AND OLIVE-DRAB COTTON; SERVICE; FOOT AND MOUNTED.

| Number. | Waist. | Inseam. | Number | Waist. | Inseam. |
|---------|----------------|----------------|---------|----------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 30 | 26 | 17..... | 35 | 25 |
| 2..... | 30 | 28 | 18..... | 35 | 27 |
| 3..... | 31 | 25 | 19..... | 35 | 29 |
| 4..... | 31 | 27 | 20..... | 36 | 26 |
| 5..... | 31 | 29 | 21..... | 36 | 28 |
| 6..... | 32 | 26 | 22..... | 36 | 30 |
| 7..... | 32 | 28 | 23..... | 37 | 27 |
| 8..... | 32 | 30 | 24..... | 37 | 29 |
| 9..... | 33 | 25 | 25..... | 37 | 31 |
| 10..... | 33 | 27 | 26..... | 38 | 26 |
| 11..... | 33 | 29 | 27..... | 38 | 28 |
| 12..... | 33 | 31 | 28..... | 38 | 30 |
| 13..... | 34 | 26 | 29..... | 39 | 27 |
| 14..... | 34 | 28 | 30..... | 40 | 28 |
| 15..... | 34 | 30 | 31..... | 41 | 27 |
| 16..... | 34 | 32 | 32..... | 42 | 28 |

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS, WITH DIMENSIONS TO DETERMINE SIZES—Continued.

COATS—OLIVE-DRAB WOOL AND OLIVE-DRAB COTTON.

| Size. | Breast. | Waist. | Length. | Length of sleeve. | Collar at bottom. |
|----------------------------|----------------|----------------|------------------|-------------------|-------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1 regular..... | 33 | 29 | 26 | 29 $\frac{3}{4}$ | 15 |
| 2 regular..... | 34 | 30 | 26 $\frac{1}{2}$ | 30 $\frac{1}{4}$ | 15 $\frac{1}{2}$ |
| 3 regular..... | 35 | 31 | 26 $\frac{3}{4}$ | 30 $\frac{3}{4}$ | 15 $\frac{3}{4}$ |
| 3 $\frac{1}{2}$ long..... | 35 | 30 | 27 $\frac{1}{4}$ | 32 | 15 $\frac{1}{2}$ |
| 4 regular..... | 36 | 32 | 27 $\frac{1}{4}$ | 31 $\frac{1}{4}$ | 16 $\frac{1}{2}$ |
| 4 $\frac{1}{4}$ stout..... | 36 | 34 | 26 $\frac{3}{4}$ | 31 | 16 $\frac{1}{2}$ |
| 4 $\frac{1}{2}$ long..... | 36 | 31 | 28 $\frac{1}{4}$ | 32 $\frac{1}{2}$ | 16 |
| 5 regular..... | 37 | 33 | 27 $\frac{3}{4}$ | 31 $\frac{3}{4}$ | 16 $\frac{3}{4}$ |
| 5 $\frac{1}{4}$ stout..... | 37 | 35 | 27 $\frac{1}{4}$ | 31 | 17 |
| 5 $\frac{1}{2}$ long..... | 37 | 32 | 28 $\frac{3}{4}$ | 33 | 16 $\frac{1}{2}$ |
| 6 regular..... | 38 | 34 | 28 $\frac{1}{4}$ | 32 $\frac{1}{4}$ | 17 $\frac{1}{4}$ |
| 6 $\frac{1}{4}$ stout..... | 38 | 36 | 27 $\frac{3}{4}$ | 31 $\frac{3}{4}$ | 17 $\frac{1}{2}$ |
| 6 $\frac{1}{2}$ long..... | 38 | 33 | 29 $\frac{1}{4}$ | 33 $\frac{1}{2}$ | 17 |
| 7 regular..... | 40 | 36 | 29 $\frac{1}{4}$ | 32 $\frac{3}{4}$ | 17 $\frac{3}{4}$ |
| 7 $\frac{1}{4}$ stout..... | 40 | 38 | 28 $\frac{3}{4}$ | 32 | 18 |
| 7 $\frac{1}{2}$ long..... | 40 | 35 | 30 $\frac{1}{4}$ | 34 | 17 $\frac{1}{2}$ |
| 8 regular..... | 42 | 39 | 29 $\frac{3}{4}$ | 33 | 18 $\frac{1}{2}$ |
| 9 regular..... | 44 | 41 | 30 $\frac{3}{4}$ | 33 $\frac{3}{4}$ | 19 |

COATS, DRESS.

| Size. | Breast. | Waist. | Length. | Length of sleeve. | Collar at bottom. |
|----------------------------|----------------|----------------|------------------|-------------------|-------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1 regular..... | 33 | 29 | 26 | 29 $\frac{3}{4}$ | 15 $\frac{1}{4}$ |
| 2 regular..... | 34 | 30 | 26 $\frac{1}{2}$ | 30 $\frac{1}{4}$ | 15 $\frac{1}{2}$ |
| 3 regular..... | 35 | 31 | 26 $\frac{3}{4}$ | 30 $\frac{3}{4}$ | 16 |
| 3 $\frac{1}{2}$ long..... | 35 | 30 | 27 $\frac{1}{4}$ | 32 | 15 $\frac{3}{4}$ |
| 4 regular..... | 36 | 32 | 27 $\frac{1}{4}$ | 31 $\frac{1}{4}$ | 16 $\frac{1}{2}$ |
| 4 $\frac{1}{4}$ stout..... | 36 | 34 | 26 $\frac{3}{4}$ | 31 | 16 $\frac{3}{4}$ |
| 4 $\frac{1}{2}$ long..... | 36 | 31 | 28 $\frac{1}{4}$ | 32 $\frac{1}{2}$ | 16 $\frac{1}{4}$ |
| 5 regular..... | 37 | 33 | 27 $\frac{3}{4}$ | 31 $\frac{3}{4}$ | 17 |
| 5 $\frac{1}{4}$ stout..... | 37 | 35 | 27 $\frac{1}{4}$ | 31 | 17 $\frac{1}{4}$ |
| 5 $\frac{1}{2}$ long..... | 37 | 32 | 28 $\frac{3}{4}$ | 33 | 16 $\frac{3}{4}$ |
| 6 regular..... | 38 | 34 | 28 $\frac{1}{4}$ | 32 $\frac{1}{4}$ | 17 $\frac{1}{2}$ |
| 6 $\frac{1}{4}$ stout..... | 38 | 36 | 27 $\frac{3}{4}$ | 31 $\frac{3}{4}$ | 17 $\frac{3}{4}$ |
| 6 $\frac{1}{2}$ long..... | 38 | 33 | 29 $\frac{1}{4}$ | 33 $\frac{1}{2}$ | 17 $\frac{1}{4}$ |
| 7 regular..... | 40 | 36 | 29 $\frac{1}{4}$ | 32 $\frac{3}{4}$ | 18 |
| 7 $\frac{1}{4}$ stout..... | 40 | 38 | 28 $\frac{3}{4}$ | 32 | 18 $\frac{1}{4}$ |
| 7 $\frac{1}{2}$ long..... | 40 | 35 | 30 $\frac{1}{4}$ | 34 | 17 $\frac{3}{4}$ |
| 8 regular..... | 42 | 39 | 29 $\frac{3}{4}$ | 33 | 18 $\frac{3}{4}$ |
| 9 regular..... | 44 | 41 | 30 $\frac{3}{4}$ | 33 $\frac{3}{4}$ | 19 $\frac{1}{4}$ |

SUMMER COATS.

| Size. | Breast. | Waist. | Length of coat. | Length of sleeve. | Length of collar. |
|--------|----------------|----------------|------------------|-------------------|-------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 35 | 33 | 28 | 31 | 15 $\frac{3}{4}$ |
| 2..... | 36 | 34 | 28 $\frac{1}{2}$ | 31 $\frac{1}{2}$ | 16 |
| 3..... | 38 | 36 | 29 $\frac{1}{2}$ | 32 $\frac{3}{4}$ | 17 |
| 4..... | 40 | 38 | 30 $\frac{1}{2}$ | 33 $\frac{3}{4}$ | 17 $\frac{1}{2}$ |
| 5..... | 42 | 40 | 31 | 34 $\frac{1}{2}$ | 18 $\frac{1}{4}$ |
| 6..... | 44 | 42 | 31 $\frac{1}{2}$ | 34 $\frac{1}{2}$ | 19 |

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS, WITH DIMENSIONS TO DETERMINE SIZES—Continued.

DENIM JUMPERS.

| Size. | Breast measure. | Sleeve length. | Length of jumper. | Collar. |
|--------|-----------------|----------------|-------------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 44 | 32 | 26 | 19 |
| 2..... | 46 | 33 | 27 | 20 |
| 3..... | 49 | 34 | 28 | 21 |
| 4..... | 52 | 35 | 29 | 22 |

CANVAS LEGGINS.

| | Sizes. | | | | | |
|---|--------|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Height of front along inside stitching..... | 10¾ | 11 | 11¼ | 11½ | 11¾ | 11¾ |
| Height of back along seam..... | 10¾ | 11 | 11¼ | 11½ | 11¾ | 11¾ |
| Width around calf..... | 14 | 15 | 15½ | 16 | 17 | 18 |
| Width around ankle, over bottom grommet.. | 10 | 10½ | 11 | 11½ | 12 | 12½ |

LEATHER LEGGINS.

| Size. | Height. | Width around calf. |
|----------------|----------------|--------------------|
| | <i>Inches.</i> | <i>Inches.</i> |
| 1 regular..... | 12¾ | 13 |
| 1½ short..... | 11¾ | 13 |
| 2 regular..... | 12¾ | 14 |
| 2½ short..... | 11¾ | 14 |
| 3 regular..... | 12¾ | 15 |
| 3½ short..... | 11¾ | 15 |
| 4 regular..... | 12¾ | 16 |
| 4½ short..... | 11¾ | 16 |
| 5 regular..... | 12¾ | 17 |
| 5½ short..... | 11¾ | 17 |

OLIVE-DRAB OVERCOATS.

| Size. | Breast. | Waist. | Length. | Sleeve length. | Collar at bottom. |
|----------------|----------------|----------------|----------------|----------------|-------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1 regular..... | 34 | 30 | 48 | 31½ | 16½ |
| 1½ long..... | 34 | 30 | 51 | 32½ | 16½ |
| 2 regular..... | 36 | 32 | 49½ | 32½ | 17½ |
| 2½ long..... | 36 | 32 | 52½ | 33½ | 17½ |
| 3 regular..... | 38 | 34 | 50½ | 33½ | 18½ |
| 3½ long..... | 38 | 34 | 53½ | 34½ | 18½ |
| 4 regular..... | 40 | 36 | 51½ | 34 | 19 |
| 4½ long..... | 40 | 36 | 54½ | 35 | 19 |
| 5 regular..... | 42 | 40 | 52½ | 34½ | 19½ |
| 6 regular..... | 44 | 42 | 54 | 35 | 20 |

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS.
DIMENSIONS TO DETERMINE SIZES—Continued.

SUMMER AND WINTER DRAWERS.

| Size. | Waist. | Inseam. | Size. | Waist. | Inseam. |
|---------|----------------|----------------|---------|----------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 32 | 29 | 12..... | 38 | 31 |
| 2..... | 32 | 31 | 13..... | 40 | 33 |
| 3..... | 32 | 33 | 14..... | 40 | 35 |
| 4..... | 34 | 29 | 15..... | 40 | 37 |
| 5..... | 34 | 31 | 16..... | 42 | 39 |
| 6..... | 34 | 33 | 17..... | 42 | 41 |
| 7..... | 36 | 29 | 18..... | 42 | 43 |
| 8..... | 36 | 31 | 19..... | 44 | 45 |
| 9..... | 36 | 33 | 20..... | 44 | 47 |
| 10..... | 38 | 29 | 21..... | 44 | 49 |
| 11..... | 38 | 31 | | | |

OLIVE-DRAB FLANNEL SHIRTS.

| Size. | Length from collar seam at plait to bottom. | Breast, finished. | Waist, finished. | Seat, finished. | Length of sleeve from center of yoke, including cuff | Collar, when but- toned. | Width of cuff, but- toned. |
|--------|---|----------------------|---------------------|--------------------|--|-----------------------------------|-------------------------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 29½ | 43 | 41 | 43 | 32 | 15 | 9½ |
| 2..... | 30½ | 45 | 43 | 45 | 32½ | 15½ | 9½ |
| 3..... | 31½ | 47 | 45 | 47 | 33 | 16 | 10 |
| 4..... | 32½ | 49 | 47 | 49 | 34 | 17 | 10 |
| 5..... | 33½ | 51 | 50 | 51 | 35 | 18 | 10½ |
| 6..... | 34 | 54 | 53 | 54 | 35 | 19 | 10½ |

MUSLIN SHIRTS.

| Size | Breast. | Waist. | Seat. | Length of front from button- hole. | Length of front from shoulder point. | Length of sleeve. | Size of collar worn. | Width of wrist- band. |
|---------|----------------|----------------|----------------|--|--|----------------------|----------------------------|-----------------------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 39 | 37 | 39 | 31 | 32¾ | 29½ | 13 | 8½ |
| 2..... | 40 | 38 | 40 | 31½ | 33¼ | 30 | 13½ | 8½ |
| 3..... | 41 | 39 | 41 | 32 | 33¾ | 30½ | 14 | 9 |
| 4..... | 42 | 40 | 42 | 32½ | 34¼ | 31 | 14½ | 9 |
| 5..... | 44 | 42 | 44 | 33 | 34¾ | 31½ | 15 | 9 |
| 6..... | 46 | 44 | 46 | 33½ | 35¼ | 32 | 15½ | 9½ |
| 7..... | 48 | 46 | 48 | 34 | 35¾ | 32½ | 16 | 9½ |
| 8..... | 50 | 48 | 50 | 34½ | 36½ | 33 | 16½ | 9½ |
| 9..... | 51 | 49 | 51 | 35 | 37 | 33½ | 17 | 9½ |
| 10..... | 52 | 51 | 52 | 35½ | 37¾ | 34 | 17½ | 10 |
| 11..... | 53 | 52 | 53 | 35½ | 37¾ | 35 | 18 | 10 |

DENIM TROUSERS.

| Size. | Waist. | Seat. | Length. | Belt. |
|--------|----------------|----------------|----------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 36 | 44 | 29 | 1 |
| 2..... | 38 | 46 | 30 | 1 |
| 3..... | 42 | 50 | 31 | 1 |
| 4..... | 44 | 52 | 32 | 1 |

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS, WITH DIMENSIONS TO DETERMINE SIZES—Continued.

TROUSERS, DRESS AND OLIVE-DRAB WOOL.

| Size. | Waist. | Seat. | Inseam. | Outseam. | Knee. | Bottom. |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1 regular..... | 29 | 35 | 30 | 39 | 17 | 16½ |
| 2 regular..... | 30 | 36 | 30½ | 39½ | 17¼ | 16¾ |
| 3 regular..... | 31 | 37 | 31 | 40½ | 17¾ | 17¼ |
| 3½ long..... | 30 | 36 | 32½ | 42½ | 18 | 17½ |
| 4 regular..... | 32 | 38 | 32 | 42 | 18 | 17½ |
| 4¼ stout..... | 34 | 40 | 31 | 41 | 18½ | 18 |
| 4½ long..... | 31 | 37 | 34 | 44¼ | 18¾ | 18¼ |
| 5 regular..... | 33 | 39 | 33 | 43 | 18½ | 18 |
| 5¼ stout..... | 35 | 41 | 32 | 42 | 19 | 18½ |
| 5½ long..... | 32 | 38 | 35 | 45¼ | 19 | 18½ |
| 6 regular..... | 34 | 40 | 33 | 43 | 18¾ | 18¼ |
| 6¼ stout..... | 36 | 42 | 32 | 42 | 19 | 18¾ |
| 6½ long..... | 33 | 39 | 36 | 46¼ | 19½ | 19 |
| 7 regular..... | 36 | 41 | 33 | 43¼ | 19 | 19¼ |
| 7¼ stout..... | 38 | 43 | 32 | 42¼ | 20 | 19½ |
| 7½ long..... | 35 | 40 | 34 | 44½ | 20¼ | 19¾ |
| 8 regular..... | 40 | 44 | 33½ | 44 | 20 | 19½ |
| 9 regular..... | 42 | 45 | 34 | 45 | 20½ | 20 |

TROUSERS, OLIVE-DRAB COTTON.

| | | | | | | |
|----------------|----|----|-----|-----|-----|-----|
| 1 regular..... | 29 | 36 | 30 | 39 | 18 | 17 |
| 2 regular..... | 30 | 37 | 30½ | 39½ | 18¼ | 17¼ |
| 3 regular..... | 31 | 38 | 31 | 40½ | 18¾ | 17¾ |
| 3½ long..... | 30 | 37 | 32½ | 42½ | 19 | 18 |
| 4 regular..... | 32 | 39 | 32 | 42 | 19 | 18 |
| 4¼ stout..... | 34 | 41 | 31 | 41 | 19½ | 18½ |
| 4½ long..... | 31 | 38 | 34 | 44¼ | 19¾ | 18¾ |
| 5 regular..... | 33 | 40 | 33 | 43 | 19½ | 18½ |
| 5¼ stout..... | 35 | 42 | 32 | 42 | 20 | 19 |
| 5½ long..... | 32 | 39 | 35 | 45¼ | 19¾ | 18¾ |
| 6 regular..... | 34 | 41 | 33 | 43 | 19¾ | 19 |
| 6¼ stout..... | 36 | 43 | 32 | 42 | 20½ | 19½ |
| 6½ long..... | 33 | 40 | 36 | 46¼ | 20¼ | 19¼ |
| 7 regular..... | 36 | 42 | 33 | 43¼ | 20¾ | 19¾ |
| 7¼ stout..... | 38 | 44 | 32 | 42¼ | 21¼ | 20¼ |
| 7½ long..... | 35 | 41 | 34 | 44½ | 21 | 20 |
| 8 regular..... | 40 | 45 | 33½ | 44 | 21½ | 20¼ |
| 9 regular..... | 42 | 46 | 34 | 45 | 21¾ | 20¾ |

SUMMER TROUSERS.

| Size. | Waist. | Seat. | Inseam. | Outseam. | Knee. | Bottom. |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|
| | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> | <i>Inches.</i> |
| 1..... | 32 | 38 | 32 | 42½ | 18 | 19 |
| 2..... | 33 | 39 | 33 | 43 | 18¼ | 19¼ |
| 3..... | 34 | 40 | 34 | 44 | 18½ | 19½ |
| 4..... | 35 | 41 | 33 | 43 | 18¾ | 19¾ |
| 5..... | 36 | 42 | 34 | 44 | 19 | 20 |
| 6..... | 38 | 43 | 32 | 42½ | 19¼ | 20 |
| 7..... | 40 | 44 | 32½ | 42¾ | 19½ | 20¼ |
| 8..... | 42 | 45 | 33 | 43½ | 19¾ | 20½ |
| 9..... | 43 | 46½ | 34 | 45 | 20 | 21 |

LIST OF CLOTHING FURNISHED ENLISTED MEN BY THE QUARTERMASTER CORPS, WITH DIMENSIONS TO DETERMINE SIZES—Continued.

OLIVE-DRAB SWEATERS.

| | | Sizes. | | | | |
|--------------------|----------|--------|-----|-----|-----|-----|
| | | 32 | 36 | 40 | 44 | 48 |
| Length..... | inches.. | 26½ | 27½ | 28 | 29 | 30 |
| Width flat..... | inches.. | 15 | 16½ | 18 | 19½ | 21 |
| Sleeve length..... | inches.. | 21 | 21 | 21½ | 22½ | 23½ |
| Collar..... | inches.. | 14 | 15 | 16 | 17 | 18 |

UNDERSHIRTS, COTTON AND WOOL.

| | | Sizes. | | | | | |
|------------|--|---------------|---------------|---------------|---------------|---------------|---------------|
| | | 1 | 2 | 3 | 4 | 5 | 6 |
| Chest..... | | Inches. 36 | Inches. 38 | Inches. 40 | Inches. 42 | Inches. 44 | Inches. 46 |

Belts, waist: Size 44 ins. (adjustable). Boots, rubber, half hip: Sizes 6, 7, 8, 9, 10, 11. Caps: Sizes 6½, 6¾, 6⅞, 7, 7⅛, 7¼, 7½, 7½. Collars: Sizes 14, 14½, 15, 15½, 16, 16½, 17, 17½, 18. Gauntlets, winter: Sizes 9, 10, 11. Gloves, cotton, white: Sizes 9, 10, 11, 12. Gloves, horsehide, yellow: 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12. Gloves, woolen, olive-drab: Sizes 9, 10, 11. Gloves, riding: Sizes 7½, 8, 8½, 9, 9½, 10. Hats, service: 6½, 6⅝, 6¾, 6⅞, 7, 7½, 7¼, 7½, 7½. Hats, denim: Sizes 6¾, 6⅞, 7, 7¼, 7¼, 7½, 7½, 7½. Overshoes, arctic: Sizes 6, 7, 8, 9, 10, 11, 12, 13. Shoes, gymnasium: Sizes 5, 5½, 6, 6½, 7, 7½, 8, 8½, 9, 9½, 10, 10½, 11, 11½, 12. Slickers: Sizes 1, 2, 3, 4. Stockings, cotton: Sizes 9½, 10, 10½, 11, 11½. Stockings, wool, heavy: Sizes 9½, 10½, 11½. Stockings, wool, light: Sizes 9½, 10, 10½, 11, 11½, 12. Suspenders: Sizes 36, 38, 40.

SHOES, SPECIFICATIONS NOS. 1206 AND 1237. [Inside measurements.]

| Widths. | | Sizes. | | | | | | | | | | | | | | |
|---------|------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | 5 | 5½ | 6 | 6½ | 7 | 7½ | 8 | 8½ | 9 | 9½ | 10 | 10½ | 11 | 11½ | 12 |
| A.. | Ball . . . | 7½ | 7¾ | 7⅞ | 8 | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ |
| | Waist.. | 7½ | 7½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9½ | 9½ | 9½ | 9½ |
| | Instep. | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |
| B.. | Ball . . . | 7½ | 8 | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ |
| | Waist.. | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ |
| | Instep. | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |
| C.. | Ball . . . | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ |
| | Waist.. | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 8½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ |
| | Instep. | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ | 10½ |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |
| D.. | Ball . . . | 8½ | 8½ | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ |
| | Waist.. | 8½ | 8½ | 8½ | 8½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10½ | 10½ | 10½ |
| | Instep. | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |
| E.. | Ball . . . | 8½ | 8½ | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ |
| | Waist.. | 8½ | 8½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10½ | 10½ | 10½ | 10½ |
| | Instep. | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ | 11 |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |
| EE | Ball . . . | 8½ | 9 | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ |
| | Waist.. | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 9½ | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ |
| | Instep. | 9½ | 9½ | 9½ | 9½ | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ |
| | Length | 10 | 10½ | 10½ | 10½ | 10½ | 10½ | 11 | 11½ | 11½ | 11½ | 11½ | 11½ | 12 | 12½ | 12½ |

General Orders, } Extract
No. 21. } from

War Department,
Washington, June 16, 1916.

II. The following instructions in regard to accounting for quartermaster property which an enlisted man takes with him when ordered to temporary duty, are published for the information and guidance of all concerned:

1. When an enlisted man is ordered away from his organization on duty which is definitely known to involve only a temporary period of absence, he will sign a receipt for all quartermaster property which he is to take with him and this receipt will accompany the descriptive list to the place of temporary duty. Regular memorandum receipts to cover the property will then be made up and sent to the commanding officer to whom the descriptive list is sent, and the latter will designate some officer of his command to sign the memorandum receipt and return the same directly to the accountable officer. The foregoing procedure will not be followed when an enlisted man is ordered to temporary duty of an indefinite duration, but in such case accountability for the property will be covered by regular invoices. Regular invoices will also be used to cover accountability for the property in the case of an enlisted man who, while on temporary duty, is transferred to another organization, separated from the service, or transferred to the reserve.

2. Responsibility for property which is lost during travel will, if necessary, be fixed by a surveying officer.

3. A statement of charges, Q. M. C. Form No. 208, for all property charged against the soldier on the pay rolls, and survey reports of all property authorized to be dropped and not charged, will be furnished the accountable officer, who will issue a credit memorandum to the responsible officer for such property.

General Orders }
No. 36. }

War Department,
Washington, August 23, 1916.

The following compilation, having reference to the instruction and training of the National Guard mustered into the service of the United States, is published for the information and guidance of all concerned:

General Orders, No. 17, War Department, 1913, is the basic order for the training of mobile troops. In prescribing a course of training, it divides the course into garrison training and field training, but states that no sharp line of distinction is to be drawn between the two. (See par. 85 for G. O. 17, p. 908.)

In the training of new organizations to meet any great emergency, it will be manifestly impossible to divide the time into periods of garrison and field training. These two, i.e., the theoretical and the practical, must necessarily go hand in hand in any system adopted for the training of new forces.

Methods of training may alter, but the basic principles remain the same. Only by enforcing strict discipline and using well-considered and correct methods can the greatest results be obtained in the shortest time.

FIELD TRAINING.

Field training, in its technical meaning, comprises the tactical or war training of units to fit them for the field against an enemy.

(1) In order to secure the best results possible, officers must be systematic in their instruction and be quite clear in their own minds as to the lessons they wish each day to teach. The daily detail of instruction should, therefore, be carefully thought out beforehand, and consideration given as to how the time is to be allotted. Subalterns and noncommissioned officers should

be informed of the next day's program of work so that the proper rest may be studied and other necessary preparation made in advance.

(2) Practical work in the field should be varied with short talks by the company commander or other instructor, the men in the meanwhile being allowed to rest on the ground, every effort being made to interest them and to fix their minds on the instruction in hand. Noncommissioned officers should, as far as possible, receive special training in troop leading and command in the field.

(3) Men must be made to understand the object and meaning of the exercise about to be practiced, and their individual intelligence and self-reliance fostered, so that in the absence of a leader, action will not be paralyzed.

(4) To lend reality to field training, each exercise should be based on a simple tactical idea, which should be thought out beforehand and explained to all taking part before commencing the exercise.

(5) In the solution of tactical exercises, interest will be greatly stimulated if the enemy is at least outlined.

DISCIPLINE.

In new regiments, discipline will be best taught and more easily attained on the part of both the official and enlisted personnel by the inculcation of patriotic determination on the part of every one to make the most of the training given and to give unquestioning and cheerful obedience to the orders and instructions emanating from above.

The meaning of discipline in its highest and most important sense should be explained and taught early in the soldier's career, as first impressions are generally lasting ones. This can best be done in the form of talks and lectures by the higher officers of the regiment, and especially by the colonel whose eyes of the soldier, is the embodiment of military knowledge and virtue.

PHYSICAL TRAINING.

Every effort should be made to develop soldiers physically. The requirements for a trained soldier are suppleness, skill, and rapidity of movement to enable him to respond quickly to the perceptions of the senses and execute promptly the commands of his officers. He must also be endowed with great resistance to avoid fatigue and disease.

This result is best accomplished by a systematic and regular training of the muscles, and for this purpose the prescribed "setting-up" exercises, combined with a few minutes' marching at "double time," or certain games to develop agility and quick perception, should be practiced daily. These regular exercises should be supplemented by practice marches of such length as will not overtax the soldier. As the physical development of the soldier progresses, the length of these marches may be increased. The ordinary life of a soldier, with its drill, manual of arms, bayonet combat, etc., furnishes a considerable amount of exercise, but does not accomplish the physical development that can be brought about by daily, systematic exercises.

HYGIENE AND SANITATION.

The importance of personal hygiene and camp sanitation in the maintenance of health in individuals and in armies should be taught thoroughly to every officer and enlisted man. This should be done by means of lectures by the

officers and by personal admonition and explanation by line officers when errors in hygiene or sanitation are discovered in their commands.

All lectures and explanations should be in simple language, easily understood by the soldier. Technical or scientific terms should be avoided. Personal hygiene should be taught in the following general manner: The soldier should be impressed with the facts that the general health of a man is largely dependent upon the care which he takes of himself and which is taken of his surroundings; that it is very difficult for those in authority to maintain the proper sanitary condition of his surroundings unless he himself does his share; that nearly all diseases are caused by germs which live in the earth, food, water, excretions from the human body, on one's skin or clothing, or on various objects which one touches; that these germs to cause disease must first enter the body, and that this entrance can be largely prevented if proper hygiene and sanitation are observed; that even if disease germs do accidentally find entrance to the body, their injurious effects may be modified or prevented when one has a sound and vigorous body.

The common rules of personal hygiene, e.g., cleanliness, moderation in eating and drinking, proper exercise, sufficient sleep, care of clothing, and regularity in bowel movements should be taught in detail, and the reasons why they all have a bearing on one's health explained.

In teaching the essentials of camp sanitation, stress should be laid on the habits and breeding places of flies, mosquitoes, lice, and other disease-bearing insects; and the especial danger to health of urine and feces not properly disposed of.

Every soldier should be thoroughly drilled in the proper application of the first-aid packet, and the necessity for its use when wounded explained.

Reference: Books for use in teaching hygiene, sanitation, and first aid are *Military Hygiene* (Havard) and *Drill Regulations and Service Manual for Sanitary Troops*. These are both furnished regimental surgeons upon application to The Adjutant General of the Army.

FIELD PRACTICE.

The instruction in rifle practice, fire direction, fire control, and fire discipline should include the solution of problems in field combat with service ammunition, where conditions will permit. Special attention must be given, therefore, to the training in sight setting, assignment of targets; transmission of target designation and elevation; rate of fire; fire direction; fire control; and ammunition supply. The solution of such problems will be exceedingly valuable to both officers and men, and the value and necessity of good fire direction, fire control, and fire discipline can be brought to their understanding so forcibly in no other way.

MARCHING.

Short practice marches should be undertaken for the purpose of teaching march discipline, for instruction in adjusting and carrying packs and equipment, for gaining information concerning the fit of men's shoes, for instruction in the protection and care of the feet, making and breaking camp, and

camp expedients, packing field wagons, issuing ammunition on the march previous to an attack, sanitation on the march and in camp, individual marching, and many other things incident to the march and camp. Practice marches are most interesting and instructive when combined with the solution of tactical problems.

In all route marches, whether in regular practice marches or when going from the place of the solution of tactical problems, rigid marching discipline should be enforced. There is no surer test of the discipline and efficiency of a command than its conduct on the march. Straggling and other vices on the march are especially characteristic of all new troops.

USE OF COVER.

The instruction of the recruit in the use of cover should be begun very early, and great stress should be laid on this important subject during the training period, and especially in all field exercises. The details of the instruction in the use of cover are very fully explained in the Infantry Regulations.

SCHOOLS FOR OFFICERS.

Schools for officers should be held at least three times during each week. The instructors should be qualified officers of the regiment. The program of study should be arranged so that the subjects taught in the school will parallel the same work on the drill ground and in the field. To effect this, several subjects must be carried in the school at the same time, the length of each being shorter than those usually assigned in the present garrison schools. Discrimination must be used in the assignment of subject matter. There must be little enough time for the study of essentials. Unessentials must be eliminated.

SCHOOLS FOR NONCOMMISSIONED OFFICERS AND SELECTED PRIVATES.

Schools for noncommissioned officers and selected privates should be held at least three times during each week of the training period, the company officers being the instructors, if they have had sufficient training. If they have not had, the field officers must act as the instructors, at least in the beginning of the training period.

The subjects taught in these schools must likewise precede the same work on the drill ground and in the field. If the officers are competent, the instruction can be best given by short, pointed talks, in which the subject of the day's lesson is explained and summarized.

WEEKLY PROGRAMS OF INSTRUCTION.

Weekly programs of instruction will be submitted by organization commanders to the next higher commanders. Regimental and battalion commanders will exercise close supervision over these programs of instruction to the end that the general scheme of instruction is followed and that the training will be uniform and progressive throughout the regiment.

It is not possible to prescribe a course of instruction to be followed strictly by all organizations.

Some are much more advanced than others and the proportions of inexperienced officers and men will vary greatly.

Some organizations may be required for active duty at once and there may be no opportunity to train systematically; others remote from the Border may have ample ground, target ranges, etc., where their whole time may be devoted to training under favorable conditions.

Wherever conditions permit, a systematic course of training should be conducted.

The following program for 10 weeks' instruction of an Infantry regiment is intended as suggestive only.

It is constructed on the supposition that the regiment is complete in men, officers, and equipment; that conditions are favorable and that the entire time may be devoted to training.

PROGRAM FOR 10 WEEKS' INSTRUCTION.

FIRST WEEK.

| Instruction. | Hours. | Details of instruction. |
|---|--------|--|
| <i>Company training.</i> | | |
| Physical training..... | 6 | Setting up exercises, calisthenics, and running, in ½-hour periods. |
| Infantry Drill Regulations... | 18 | 6 hours without arms; 12 hours with arms. Schools of the soldier and squad. By company officers and noncommissioned officers. |
| Nomenclature and care of the rifle; care of clothing and equipment; making up the pack. | 4 | Instruction by company officers and noncommissioned officers. |
| Guard duty..... | 4 | Instruction by company officers and noncommissioned officers. |
| Lectures..... | 2 | Two lectures by the colonel of ½ hour each on discipline and patriotism. One lecture by the regimental surgeon on care of the health and personal hygiene. |
| Articles of War..... | 1 | Articles of War read and explained by the battalion commander. |
| Inspection..... | 1 | Arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| First aid..... | 2 | Regimental sanitary personnel instructing officers, noncommissioned officers and selected privates to fit them as instructors of the company. |
| Company administration.... | 2 | Battalion commander instructing company officers, sergeants and clerks. |
| Battalion school..... | 4 | Theoretical and practical. Instruction by the battalion commander in Infantry Drill Regulations and the Small-Arms Firing Manual. |
| Noncommissioned officers' school. | 4 | Theoretical and practical. Instruction by company officers in Infantry Drill Regulations and Small-Arms Firing Manual. |
| Trumpet practice..... | 12 | Company musicians and selected privates. |
| Visual signaling..... | 6 | Semaphore. Officers, noncommissioned officers, and selected privates. |
| Cooking..... | | Selected men to be instructed by the regular cooks. These men to attend company instruction 4 hours per day. |

SECOND WEEK.

| Instruction. | Hours. | Details of instruction. |
|--|--------|---|
| <i>Company training.</i> | | |
| Physical training..... | 6 | Setting up exercise, calisthenics, and running $\frac{1}{2}$ -hour periods. |
| Infantry Drill Regulations... | 12 | Schools of the squad and company; extended order. |
| Instruction preliminary to range practice. | 15 | Sighting, position, and aiming drills; practice. |
| Bayonet exercises..... | 3 | Foot movements, $\frac{1}{2}$ -hour periods. |
| Articles of War..... | 1 | Continued from first week. |
| Lecture..... | 1 | By surgeon, care of the health and personal hygiene. |
| Inspection..... | 1 | Arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| First aid..... | 2 | Continued from first week. |
| Company administration.... | 2 | Continued from first week. |
| Battalion school..... | 4 | Theoretical and practical. Infantry Drill Regulations, Small-Arms Firing Manual, battle, combat, orders, and signals. |
| Noncommissioned officers' school. | 4 | Theoretical and practical. Infantry Drill Regulations, Small-Arms Firing Manual, battle, combat, orders, and signals. |
| Trumpet practice..... | 12 | Continued from first week. |
| Visual signaling..... | 6 | Continued from first week. |
| Cooking..... | | Continued from first week. |

THIRD WEEK.

| Instruction. | Hours. | Details of instruction. |
|--|--------|--|
| <i>Company training.</i> | | |
| Physical training..... | 6 | Continued from second week. |
| Infantry Drill Regulations... | 18 | Extended order, use of cover, attack and defense, patrolling, fire direction, fire control and discipline. Battalion commander instructs company officers, and the latter instructs companies. |
| Instruction preliminary to range practice. | 8 | Position and aiming drills, gallery practice, estimating distance. |
| Bayonet exercise..... | 3 | Conducted with poles weighing about 3 pounds and use of rings and figures to insure accuracy. |
| Lecture..... | 1 | By surgeon, on care of the feet and socks. |
| First aid..... | 2 | By regimental sanitary personnel, assistance to company officers and noncommissioned officers. |
| Night work..... | 3 | Scope of soldier's handbook. |
| Inspection..... | 1 | Marching and patrolling. In addition to regular day instruction. |
| | | Arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 4 | Theoretical and practical. Infantry Drill Regulations, Small-Arms Firing Manual. Position and transmission of orders and messages. Special attention to command and troop leading. |
| Noncommissioned officers' school. | 4 | Continued from second week. Special attention to troop leading. |
| Trumpet practice..... | 12 | Continued from second week. |
| Visual signaling..... | 6 | Continued from second week. |
| Nomenclature and use of the pistol. | 2 | Instruction by the battalion commander. Armed with the pistol. |
| Cooking..... | | Continued from second week. |

FOURTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|--|--------|--|
| <i>Company, battalion, and regiment.</i> | | |
| Infantry Drill Regulations... | 9 | By company. Attack, defense, and use of ground. |
| Infantry Drill Regulations... | 6 | Battalion (3 hours) and regiment (3 hours) in close order. |
| Fire direction, control, and discipline. | 3 | Instruction by commands and signals by company commander under the supervision of the battalion commander. |
| Instruction preliminary to range practice. | 3 | Gallery practice. |
| Bayonet exercises..... | 3 | Continued from third week. |
| Tactical walk..... | 3 | Instruction of the company officers in patrolling by the battalion commander. |
| Tactical walk..... | 3 | Instruction of the noncommissioned officers in patrolling by the company officers. |
| Pitching tents..... | 2 | Instruction by company officers. |
| First aid..... | 2 | Continued from third week. |
| Lecture..... | 1 | By the surgeon. Sanitation in camp and on the march. |
| Inspection..... | 1 | Arms, equipments, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 4 | Continued from third week. |
| Noncommissioned officers' school. | 4 | Continued from third week. |
| Trumpet practice..... | 12 | Continued from third week. |
| Visual signaling..... | 6 | Practice and test for qualification in the semaphore code, conducted by battalion commander. |
| Cooking..... | | Continued from third week. |

FIFTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|-----------------------------------|------------------|--|
| <i>Company and battalion.</i> | | |
| Target practice..... | 16 | Practice on the range. |
| Bayonet combat..... | 3 | With improvised or regular fencing outfit. |
| Practice march..... | (¹) | By company. Marches of not more than 6 miles each day. Instruction in march discipline, advance and rear guards, outposts, communication on the march by means of written and verbal messages and visual signaling, packing wagons, making and breaking camp, individual cooking, camp sanitation. |
| Security and information.... | 4 | By company. Solution of tactical problems. |
| Night work..... | 3 | By company. In addition to regular day instruction. Tactical problem in outpost and patrolling. |
| Inspection..... | 1 | By battalion commander. Arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| Battalion schools..... | 4 | Continued from fourth week. |
| Noncommissioned officers' school. | 4 | Continued from fourth week. |
| Trumpet practice..... | 6 | Continued from fourth week. |
| Visual signaling..... | 6 | General Service Code. Officers, noncommissioned officers, musicians, and selected privates who qualified in the semaphore code. |
| Cooking..... | | Continued from fourth week. |

¹ Two days.

SIXTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|-----------------------------------|------------------|---|
| <i>Company and battalion.</i> | | |
| Target practice..... | 16 | Practice on the range. |
| Bayonet combat..... | 3 | Continued from fifth week. |
| Practice march..... | (¹) | By battalion. March of not more than 6 or 7 miles each day. Instruction in march discipline, making and breaking camp, packing field wagons, camp sanitation, individual cooking; solution of simple problems involving advance and rear guards, outposts, attack and defense of positions, maintenance of communication between the elements of a command by means of written and verbal messages and visual signaling, the battalion to break camp after dark and return to the post or camp. |
| Intrenching..... | 4 | Construction of simple trenches. |
| Night work..... | 3 | In addition to the regular day instruction. Tactical problem-attack of a position. |
| Inspection..... | 1 | Company commander. Arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 4 | Use of signals in extended order, attack and defense, fire direction and control. Field engineering, construction of intrenchments, head and overhead cover, obstacles, bridges. |
| Noncommissioned officers' school. | 4 | Use of signals in extended order, attack and defense, fire direction and control. Simple field engineering. |
| Visual signaling..... | 6 | Continued from fifth week. |
| Cooking..... | | Continued from fifth week. |

¹ Two days.

SEVENTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|--|------------------|---|
| <i>Company, battalion, and regiment.</i> | | |
| Range practice..... | (¹) | Target practice and preliminary field practice; special attention to sight setting, assignment of target, transmission of target designation and elevation, rate of fire, ammunition supply, fire direction, discipline and control. |
| Bayonet combat..... | 3 | Fencing outfit or service rifle. |
| Intrenching..... | 4 | Simple problem in the occupation and strengthening of a defensive position. |
| Practice march..... | (²) | By regiment. Marches of not more than 7 or 8 miles each day; one march to be at night, camp to be broken and made after dark; marches and time in camp to be utilized in the solution of problems in advance and rear guards, outposts, convoys, meeting engagements, attack and defense of positions, etc. |
| Lecture..... | 1 | By battalion commander. "The Laws of War." |
| Swimming..... | 1 | Instruction in swimming with equipment. |
| Inspection..... | 1 | Inspection of arms and equipment by the battalion commander on the company parade. |
| <i>Special instruction.</i> | | |
| Battalion schools..... | 4 | Sketching and map reading. Field engineering continued from previous week. |
| Noncommissioned officers' schools. | 4 | Simple sketching and map reading. Field engineering continued from previous week. |
| Visual signaling..... | 6 | Continued from sixth week. |

¹ Two days.² Three days.

EIGHTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|-----------------------------------|------------------|--|
| <i>Company and battalion.</i> | | |
| Field firing..... | (¹) | Solution of problems with service ammunition; special attention to sight setting, assignment of target, transmission of target designation and elevation, rate of fire, ammunition supply, fire direction, control and discipline. |
| Bayonet combat..... | 3 | Continued from seventh week. |
| Tactical problems..... | 15 | By company. Solution of tactical problems involving attack and defense of positions, advance and rear guards, outposts, meeting engagements, use of cover, etc. |
| Obstacles..... | 3 | Instruction in the construction of wire entanglements and other forms of obstacles. |
| Lectures..... | 2 | By battalion commander. 1. "The Laws of War." 2. "Passing of Obstacles." |
| Night work..... | 3 | In addition to regular day instruction. Solution of a problem involving the reconnaissance of a hostile outpost. |
| Inspection..... | 1 | By company commander. Arms, equipment, clothing, camp or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 4 | Sketching and map reading; use of the range finder. |
| Noncommissioned officers' school. | 4 | Sketching and map reading; use of the range finder. |
| Visual signaling..... | 6 | Continued from seventh week. |

¹ Two days.

NINTH WEEK.

| Instruction. | Hours. | Details of instruction. |
|-----------------------------------|--------|---|
| <i>Battalion.</i> | | |
| Field problems..... | 30 | Solution of tactical problems involving the attack and defense of positions, including the reinforcement of troops under fire and the strengthening of a defensive position, advance and rear guards, meeting engagements, outposts, defense of a bridgehead, use of ground and cover, etc. |
| Passing of obstacles..... | 3 | Instruction. |
| Night work..... | 3 | Solution of a tactical problem involving marching to, taking up, and strengthening, a defensive position. |
| Lecture..... | 1 | Demolitions. By the battalion commander. |
| Review and inspection..... | 3 | With full field equipment; arms, equipment, clothing, camp or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 4 | Practical instruction and test in the use of the range finder. |
| Noncommissioned officers' school. | 4 | Practical instruction and test in the use of the range finder. |
| Visual signaling..... | 6 | Practice and test for qualification in the general service code. |

TENTH WEEK.

| Instruction. | Hours. | Details of Instruction. |
|-----------------------------------|------------------|---|
| <i>Regimental.</i> | | |
| Practice march..... | (¹) | March from 7 to 10 miles each day with assumed situations. |
| Problem..... | (²) | Taking the field for prolonged service in war. Special attention to packing wagons with only authorized equipment and to the enforcement of strict march discipline. |
| Problems..... | (³) | First problem: Regiment as the advance guard of a larger force. Second problem: Withdrawal from a defensive position and assumption of the duties of a rear guard of a larger force. |
| Problems..... | (⁴) | First problem: Outpost. Tactical ride conducted by the battalion commanders for the officers of their battalions. Second problem: Regiment as escort for a convoy; to arrive in camp after dark. |
| Problems..... | (⁵) | First problem: March to the front and attack of an enemy in a defensive position. Second problem: Establishment of an outpost, the instruction continuing during the night. |
| Problems..... | (⁶) | Withdrawal of the outpost and march to the post or permanent camp; special attention to march discipline and condition of the men's feet; inspection of shoes and feet on arrival in post or camp by the battalion commander. |
| Review and inspection..... | 4 | Full equipment; inspection of arms, equipment, clothing, camp, or quarters. |
| <i>Special instruction.</i> | | |
| Battalion school..... | 2 | { Lectures by the battalion commander on (1) "Troop leading and command in the field," (2) "Night operations." |
| Noncommissioned officers' school. | | |

¹ Five days.² First day.³ Second day.⁴ Third day.⁵ Fourth day.⁶ Fifth day.

It is not to be hoped that the above program of instruction will fully meet the needs of all organizations. It will no doubt be necessary to modify it in many ways to meet the existing conditions. It is believed, however, that it will form a basis on which to build a program suitable to the needs of the particular organization undergoing training. A period of 10 weeks is a very short time in which to train a regiment for the field. However, the program as submitted requires from six to eight hours per day of actual work on the part of the enlisted men, and of considerably more hours on the part of the officers. It is believed that if the instruction is of the high character that it should be, there will be no trouble in holding the interest of the men for even longer hours each day.

It is not expected that men with only 10 weeks' instruction will be trained and efficient soldiers, capable of meeting all the responsibilities of the modern battle field. If more time is available, the training should be perfected and instruction given in things that were necessarily omitted during the first 10 weeks.

In order to determine the progress of instruction and training of various tactical units from time to time, tests should be made by battalion and regimental commanders.

The following tests for tactical organizations in the Second Division were prescribed and used.

They are published herewith as a guide:

**INFANTRY.
COMPANY.**

| Noncommissioned officers. | Individual soldier. | Close order. | Tactical exercises. | Field exercise. |
|--|---|--|---|---|
| <p>(a) Map making. (b) Map reading. (c) Range finding. (d) Writing messages. (e) Method of locating points of compass by sun, watch, stars, etc.</p> | <p>(a) Estimating distance. (b) First aid. (c) Morse and semaphore signaling (at least two men per company in each). (d) Sighting, position and aiming, deflection and elevation correction exercises. (e) Bayonet exercise. (f) Calisthenic exercises. (g) Cooking. (h) Swimming. (i) Receiving and delivering verbal messages. (j) Preparation of packs for field service. (k) Packing (at least four men per company).</p> | <p>(a) School of the soldier. (b) School of the squad. (c) School of the company. (d) Inspection, equipped for the field. (e) Pitching shelter camp.</p> | <p>(a) Construction of standing, kneeling, and lying in trenches. (b) Advance guard. (c) Rear guard. (d) Outpost. (e) Patrolling. (f) Combat. (g) Company commander to prepare problem for and conduct company tactical walk. (h) Lieutenants to prepare problems for and conduct company one-side map maneuver (tactical talk). (i) Combat practice.</p> | <p>Solution of problem simulating field service conditions.</p> |

BATTALION.

| Close order. | Tactical exercises. | Field exercise. |
|-------------------------------------|--|---|
| <p>(a) School of the battalion.</p> | <p>(a) Advance guard. (b) Rear guard. (c) Outpost. (d) Patrolling. (e) Maintenance of communication between elements of command. (f) Night march of concentration. (g) Battalion commander to prepare problem for and conduct tactical walk for officers of his battalion.</p> | <p>Solution of problem simulating field-service conditions.</p> |

REGIMENT.

| Officers. | Close order. | Tactical exercises. | Field exercise. |
|--|--|--|---|
| <p>(a) Map reading.</p> <p>(b) Map making, road and position sketches (captains and lieutenants).</p> <p>(c) Estimating distances and range finding.</p> <p>(d) Reconnaissance and selection of position and in addition captains and lieutenants to stake out lines and formulate written instructions for construction of intrenchments.</p> <p>(e) Writing problem for field exercise.</p> <p>(f) Writing field orders.</p> | <p>(a) Close order.</p> <p>(b) Ceremonies.</p> | <p>(a) Advance guard.</p> <p>(b) Rear guard.</p> <p>(c) Outpost.</p> <p>(d) Patrolling.</p> <p>(e) Regiment, fully equipped for the field, including combat and field trains with prescribed quantities of baggage, rations and forage, to be formed up at least a mile from camp, within three hours after receipt of orders.</p> <p>(f) Maintenance of communication between elements of command.</p> <p>(g) Regimental commander to prepare problem for and conduct tactical walk for officers of his regiment.</p> | <p>Solution of problem simulating field service conditions.</p> |

ORDERLY SECTION, HEADQUARTERS COMPANY.

| Equitation. | Messenger service. |
|---|---|
| <p>(a) Use of the aids.</p> <p>(b) Care of equipment, watering and feeding.</p> | <p>(a) Receiving and delivering verbal messages.</p> <p>(b) Receiving and delivering messages by means of field and camp telephones.</p> <p>(c) Morse and semaphore signaling.</p> <p>(d) Maintenance of specified rate of speed over distance of not less than 5 miles.</p> <p>(e) Map reading.</p> <p>(f) Estimating distances.</p> |

MACHINE GUN COMPANY.

| Noncommissioned officers. | Individual soldier. | Close order. | Tactical exercises. |
|---|---|---|---|
| (a) Map making. (b) Map reading. (c) Range finding. (d) Selection of position for machine guns. (e) Writing messages. (f) Morse and semaphore signaling. | (a) Estimating distances. (b) First aid. (c) Cooking. (d) Packing machine guns and ammunition. (e) Taking apart and assembling guns (day and night). (f) Reduction of jams, replacing broken parts (noncommissioned officers and gunners). (g) Preparation of packs for field service. (h) Receiving and delivering verbal messages. | (a) Inspection, equipped for the field. (b) Pitching shelter camp. | (a) Advancing to position and going into action. (b) Supplying ammunition to guns. (c) Constructing hasty cover for guns and pits with head cover for men. (d) Company commander to prepare problem for and conduct company tactical walk. (e) Combat practice. |

BRIGADE.

| Tactical exercises. | Field exercise. |
|--|--|
| (a) Formation of brigade. (b) Advance guard. (c) Rear guard. (d) Outpost. (e) Maintenance of communication between elements of command. (f) Brigade commander to prepare problem for and conduct tactical walk for officers of his command. | Solution of a problem simulating field-service conditions. |

Company and other commanders will be held responsible for results obtained. By frequent inspections, observation of methods, and by tests, the progress of organizations will be determined.

By order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

General Orders,
No. 40.

War Department,
Washington, August 30, 1916.

The instructions for the preparation of Army pay rolls and authorized abbreviations published as Quartermaster Corps Form No. 70, and model remarks for Army pay rolls published as Quartermaster Corps Form No. 69, are hereby rescinded, and the following is published in their stead for the information of all concerned:

INSTRUCTIONS FOR THE PREPARATION OF ARMY PAY ROLLS.

1. The pay rolls are not only the guide for the immediate payment of the troops interested, but when filed in the Treasury Department they become the record to which reference will thereafter be had in the investigation and settlement of claims or questions affecting the pay of the men whose names are borne thereon for the period involved. All officers are therefore enjoined to exercise every care to make the pay rolls with which they are concerned complete in every detail.

2. COMPOSITION OF A PAY ROLL.

A pay roll will be made up of one copy of War Department Form No. 366 and as many forms 366a as may be necessary, fastened together along the edge indicated by sewing or by means of a stapling machine or other permanent fastening, but not by use of glue or mucilage.

3. NUMBER OF COPIES AND DISPOSITION OF SAME.

Pay rolls will be made out in triplicate, and dated from the first to the last day of the month. Two of the three copies (one being the signed roll) will be forwarded to the quartermaster and the third copy duly extended will be retained with the records of the organization.

4. SIGNING OF ROLLS.

Only one copy will be signed by the men, and when carbon copies are made the original will always be the copy to be signed. The roll to be signed will always be completed and fastened together before being signed. When it is known that payment is to be made by check none of the rolls will be signed by the men. Only men who are to be paid will sign the roll; those who for any reason are not to be paid will not sign; if, however, in such case, the roll be inadvertently signed, the signature will be erased. In cases of stoppages equaling or exceeding the pay due, complete data will be carried to the next succeeding rolls until a sufficient amount of pay is due to satisfy all stoppages and leave a balance for the soldier. (See par. 15 below.) If for any reason a soldier whose name appears on the pay roll does not sign the roll and is not to be paid by check, a line will be drawn through the space intended for his signature.

5. TYPEWRITTEN AND CARBON COPIES AUTHORIZED.

The preparation of pay rolls on a typewriting machine is authorized provided a record ribbon is used. The making of carbon copies is also authorized, but they must be clear and legible throughout, and the original copy and the first carbon copy must be forwarded to the quartermaster, who will in turn forward the original copy, with his account current, to the Quartermaster General of the Army. Quartermasters will not be required to accept carbon copies that are not clear and legible throughout, and they are authorized to return illegible copies with request for legible ones.

6. NAMES TO BE ENTERED ON ROLL.

The names of officers of the Regular Army will not be entered on the roll, but all enlisted men will be taken up thereon from the date of receipt of notice of their assignment, whether or not they have yet joined, and will be entered in the column "Names, Present and Absent, and Rank," in the following order: First, noncommissioned officers, in the order of the grade given in paragraph 9, Army Regulations, 1913, the names under each grade-heading appearing in the order of the dates of warrants; second, all others, except buglers, first-class privates, and privates in alphabetical order of grade; third, buglers; fourth, first-class privates; fifth, privates. The names of the men under each grade-heading, except noncommissioned officers, will appear alphabetically. Lance corporals will be carried under the heading of "First-class privates" or "Privates," depending on the actual grade held.

The names and the headings will follow one another without interval, except when made necessary by the use of two or more lines, in the column of "Remarks" after a name.

Men on detached service will be carried on the roll of the organization to which they belong in their proper place with remarks showing them on detached service and place, if known.

In all cases the last name will be written first, e.g., Smith, John A., and not John A. Smith. Care will be taken to have the names correctly spelled and the dates of enlistment correct, and the signatures must correspond exactly with the names in the column, "Names, Present and Absent, and Rank."

7. DETACHMENT ROLLS.

The names of men mustered for pay at stations where their companies or organizations are not mustered may be borne on one consolidated pay roll.

All detachment pay rolls for detachments composed of various organizations will show in a column ruled for that purpose the company, battery, troop, or other organization to which each man belongs.

8. RULING EXTRA COLUMNS.

The use of dots and the word "ditto" is prohibited, but when items of the same character, such as subsistence credit sales, clothing due United States, post exchange, and post laundry, are to be made against a sufficiently large number of men, columns may be ruled therefor in the space under "Remarks."

9. BY WHOM AND TO WHAT DATE PAID.

In the cases of soldiers who were last paid to a date different from that to which the organization was last paid, or by a different quartermaster, as shown by the certificate of the commanding officer on the first page, the date to which last paid and the name of the quartermaster will be stated against their names under "Remarks."

10. COLUMN "REMARKS"—DATA OPPOSITE NAMES.

All data affecting a soldier's pay will be entered in the column "Remarks" in the manner indicated under the caption "Model Remarks" below.

Only such remarks as affect a soldier's pay will be entered.

Opposite the name of the person concerned will be carefully noted—

(a) All changes of rank or grade. In case of appointment the number, date, and source of order will be stated; in case of reduction the date of receipt of order at soldier's station will also be stated.

(b) All authorized stoppages, fines, sentences, with number, date, and source of order.

(c) All cases of absence of enlisted men without leave or absence sick without pay for one day or more.

(d) All cases of confinement of one day or more by civil authorities and whether such prisoners have been held for trial, tried, or discharged without trial, and, when tried, whether acquitted or convicted, with dates of absence.

(e) Everything else affecting the pay of every enlisted man, so as to insure justice to him and to the United States.

As many lines as may be necessary to avoid crowding will be taken after each name, and only one line of written matter will be placed on one ruled line. When the matter is typewritten, remarks exceeding one line will be single spaced without regard to the ruled lines on the paper.

11. CLOTHING ACCOUNT.

For regulations concerning the settlement of a soldier's clothing account, see paragraphs 1159-1169, Army Regulations, 1913.

12. RETENTION IN SERVICE BEYOND DATE OF ENLISTMENT.

When soldiers are retained in the service with the colors to make good time lost, the cause of such retention must be stated. In case a soldier who must be kept in the service beyond the date of expiration of term of enlistment in order to make good time lost and is in confinement at or after date of expiration of term of enlistment, the date of restoration to duty status, if so restored, will be stated.

13. CHANGES SINCE LAST MUSTER FOR PAY.

(a) Names of men belonging to a command will be immediately followed by those of the men who have ceased to belong to it since last muster for pay. These will be classed in the following order: (1) Discharged, (2) furloughed to the reserve, (3) transferred, (4) died, (5) retired, (6) deserted, (7) missing. Under each heading the names will appear in the order prescribed in paragraph 6 above.

(b) The character of discharge (honorably discharged, discharged, or dishonorably discharged) will be noted on the roll.

(c) In these cases: (1) Desertion; (2) dishonorable discharge; (3) discharged for desertion; (4) missing; (5) and discharge, honorable discharge, or furlough to the reserve when the stoppages equal or exceed the amount due soldier; the soldier's account will be stated in full, showing rank or grade, date to which last paid, and by whom. All stoppages and charges (special care being taken to note all dues to post exchanges, company fund, etc.), and credits for deposits, etc., and the balance due the United States or due the soldier on account of clothing, and when the desertion, discharge, or furlough occurs within the first six months of enlistment, the money value of clothing drawn since enlistment must also be stated; also dates and places will be given, and number, date, and source of order or other authority.

(d) In case of honorable discharge (except as prescribed in (c) above and (e) below), discharge or furlough (except as prescribed in (c) above), transfer, death, or retirement, only the rank or grade, the date of discharge, furlough, transfer, death, or retirement, and the number, date, and source of the order or other authority will be given.

(e) The names of men who are discharged during the period covered by the pay roll and who reenlist in the same company during that time will be carried in the body of the roll only.

14. DESERTERS.

The name of a soldier who has joined from desertion since last muster for pay will be placed in the body of the roll only. The following data will appear on the first roll: The same data that appeared on the rolls on which the soldier was dropped as a deserter; a statement of his new account opened after date of return to military control (the account at date of desertion and the account since return to military control being stated separately); the place and date of return to military control; and whether he was apprehended or surrendered. On subsequent rolls until the result of the trial has been published, or the case otherwise disposed of, will appear the remark, "Awaiting trial (or result of trial) for desertion. For statement of account, see rolls for ———, 191—." On the rolls following the final disposition of the case will appear a complete statement of the soldier's account at the date of such disposition of the case, the ante-desertion and post-desertion accounts to be stated separately, including the number, source, and date of the order announcing his return to duty, or the result of the trial.

The restoration to duty of a deserter by competent authority, namely, by the commander who would be authorized to direct that he be brought to trial, can be ordered only in case the desertion is admitted, and must not be confused with the removal (by the order of such commander or the War Department) of a charge of desertion erroneously entered on the rolls against a soldier.

15. When a soldier is not paid on a pay roll the organization commander must not attempt to settle the account by striking a balance between the undrawn pay and indebtedness, but the account as a whole must, except as provided in paragraph 14, be carried forward to succeeding rolls until the quartermaster can collect all dues to the United States and pay a balance to the soldier. (See A. R. 1374, 1913.)

16. Where changes occur in a quartermaster's figures in the "Balance paid" column, the company commander or officer witnessing the payment must certify in the margin of the roll the amount actually paid the soldier.

MODEL REMARKS FOR ARMY PAY ROLLS.

17. These model remarks are meant to cover only the more common cases. Cases arising not covered herein will be stated according to facts of record.

Any pay or allowances that may have accrued during a previous enlistment can not be paid by a quartermaster, but a claim for same must be made on the Auditor for the War Department.

18. ABSENCE.

(a) In hands of civil authorities. In hands CAuth fr Jan 10 to Feb 3/16, convicted (acquitted, released on bail, or released without trial).

(b) Without leave. Awol Jan 10 to 15/16.

(1) Absence in the hands of civil authorities or without leave will be stated by dates of departure and return as above. The day of departure is a day of

absence and day of return is a day of duty, without regard to hours, in case of enlisted men absent without leave or in hands of civil authorities. For example, "Awol Jan 10 to 15/16," is an absence of five days, January 10 the day the soldier left post being a day of absence and January 15 the day he returned to post being considered a day of duty. Hours of departure and return will not be stated. An absence of less than 24 hours will not be entered on the pay roll.

(c) Sick, not in line of duty, G. O. 31, 1912, and 45, 1914. Sick, not LDGO 31/12 and 45/14, Jan. 1 to 15/16, inc.

(1) G. O. 31, 1912, requires the inclusive dates sick to be stated as distinguished from the method of stating absence without leave indicated above. In deducting pay for time sick, quartermasters will treat the dates given as inclusive whether stated so or not.

19. ALLOTMENTS.

(a) Commencement. Alot \$12 per mo for 20 mos fr Jan 1/16 to Aug 31/17.

(1) Allotments should begin with the first day of a month, except that no allotment will begin prior to date of current enlistment.

(2) An allotment should be entered on the pay roll for the month in which it commences without waiting for any report from the Quartermaster General that the allotment papers have been received.

(3) A soldier should not be allowed to allot his entire monthly pay, except for good reasons warranting such action, so that he may have at least a small balance due him each month to meet unforeseen indebtedness.

(b) Discontinuance. (1) Alot \$12 per mo for 20 mos fr Jan 1/16; almt discontd with Apr 30/17, letter QMG Apr 15/17.

(2) Almt of \$12 per mo for 20 mos fr Jan 1/16, collected to Aug 31/17, discontd with May 31/17, letter QMG June 15/17. Due Sol \$36 deducted for almt for June, July, and Aug/17.

(3) Discontinuances close on the last day of the month, unless a soldier deserts, severs his connection from active duty with the Army, or the allotment is discontinued before the end of the period of allotment. In all such cases his commanding officer will make immediate report direct to the Quartermaster General, as required by Army Regulation 1350, stating the date to which the allotment has been collected, and in case of desertion, discharge, furlough to the reserve, death, etc., the date thereof.

(4) An allotment should not be entered on pay rolls subsequent to the expiration of the period for which the allotment was originally made, except when necessary to secure deduction or collection of the allotment for a month or months within such period yet due.

20. APPOINTMENTS.

(a) Aptd Sgt fr Corp R O 10 Jan 15/16.

(b) Aptd 1st Sgt fr Sgt O 5 Jan 10/16.

(c) Aptd Ck fr Pvt O 6 Jan 10/16.

(d) Aptd Corp fr Pvt O 7 Jan 20/16, under AR 275, the Co being absent from Regtl Hq (or AR 256 or 271, with statement that the company or battalion is serving away from regimental headquarters).

21. APPOINTMENTS CONTINUED IN FORCE.

(a) Disch Jan 5/16 wrnt as Sgt contd.

(b) Disch Jan 4/16 wrnt as Sgt and apmt as 1st Sgt contd.

(c) Disch Jan 5/16 apmt as Ck contd.

(d) Warrants and appointments may be continued only when reënlistment is accomplished within 20 days after discharge.

22. BONUS FOR FIRST REENLISTMENT.

(a) Due Sol bonus for reenl. Former service: Enl Jan 3/13; disch in US (give reason) Jan 2/17 from Co A 1st Inf as Pvt 1st enl period; SbO at date of disch drawing 35c. per day ED pay.

(b) Reason for discharge must always be stated.

23. CERTIFICATE OF MERIT.

(a) When Awarded in Current Enlistment. On first roll and all subsequent rolls until first payment: C of M fr Jan 5/16 (giving date of meritorious service, not date of order promulgating same). On subsequent rolls: C of M.

(b) When Awarded in Previous Enlistment. On first roll and on all subsequent rolls until first payment: C of M fr Jan 10/10; pay due for same fr enl. On subsequent rolls: C of M.

24. DAMAGE TO PRIVATE PROPERTY.

(a) Due Harvey J. Thompson, Lake City, Minn., under 105th AW \$8.65 for damage to private property per approved finding board of officers.

25. DESERTION.

(a) When within six months of enlistment a soldier deserts, is discharged, or furloughed to the reserve under the circumstances named in section (c) of paragraph 13 above, the money value of clothing drawn since enlistment will be stated in remarks on the pay roll, in addition to the balance due the United States or the soldier. Also in such cases the remarks will show the amount due post exchanges, company fund, etc.

(b) Simply Desertion. Deserted at Ft Jay N Y Jan 10/16. Due US at date of desertion, Ord \$1.52, C&GE \$1.75; due Sol Clo \$10; money value of clo drawn since enl \$35 (having deserted in first six months of enlistment); due PE Ft Jay N Y \$3. Last pd to Dec 31/15 by Capt. Howard. Awol during current enlistment Jan 5 to 8/16 (or No awol).

(c) Acquittal. Deserted at Ft Jay N Y Aug 10/15. Surrendered at Ft Sheridan Ill Aug 30/15. Tried for desertion and acquitted GCMO 60 C Dept Oct 5. 15. Last pd to June 30/15 by Maj Howard.

(d) Not Guilty of Desertion, But Guilty of Absence Without Leave. Deserted at Ft Sheridan Ill Oct 10/15. Apprehended by C Auth and delivered at Madison Bks N Y Jan 5/16. Tried, found guilty of awol only and sentd to forfeit 2/3 of his pay per mo for 2 mos GCMO 70 E Dept Feb 1/16. Last pd to Sep 30/15 by Capt Smith.

(e) Sentence of Desertion Not Involving Dishonorable Discharge. Deserted at Ft Missoula Mont June 5/15. Apprehended by C Auth and delivered at Ft McPherson Ga Jan 10/16. \$50 reward pd for apprehension and delivery. Due US at date of desertion: Clo \$10.50; PE Ft Missoula Mont \$5; due sol for depts \$10. (In case soldier deserts after six months from enlistment, statement of money value of clothing drawn at date of desertion not required.) Convicted of desertion and sentenced to be confined at hard labor for 6 mos and forfeit 2/3 of his pay per mo for like period GCMO 150 E Dept Apr 5/16. Last pd to May 31/15 by Maj Howard.

(f) Sentence of Desertion Involving Dishonorable Discharge. Deserted at Ft Jay N Y Feb 5/16. Apprehended by C Auth and delivered at Ft Sheridan Ill Feb 27/16. \$50 reward pd for apprehension and delivery. Due US at date of desertion: Clo \$10; money value of clo drawn to date of desertion \$35 (having deserted in first six months of enlistment). Clo drawn since apprehension \$2 (or no clo drawn since apprehension); due PE Ft Jay N Y \$3. Convicted of desertion and sentd to be dishonorably disch forfeiting all pay

and allowances due and to be confined at hard labor for two years GCMO 36 C Dept Apr 3/16. Dishonorably disch at Ft Sheridan Ill Apr 5/16. Last pd to Jan 31/16 by Capt Taylor.

(g) Restoration to Duty Without Trial. Deserted at Ft Snelling Minn Jan 20/16. Surrendered at Vancouver Bks Wash Feb 5/16. Restored to duty without trial SO 64 West Dept Mch 6/16. Due US at date of desertion: Clo \$10.50, PE Ft Missoula Mont \$5; due sol for deps \$10. (In case soldier deserts after six months from enlistment, statement of money value of clothing drawn at date of desertion not required.) Last pd to Dec 31/15 by Capt Hood.

(h) Removal of Charge of Desertion. Deserted Jan 12/16. Surrendered to military control Feb 10/16. Charge of desertion removed as erroneously made par 5 SO 30 E Dept Feb 25/16. Awol Jan 12 to Feb 10/16. Last pd to Dec 31/15 by Maj Jones.

26. DISCHARGE, OR FURLOUGH TO THE RESERVE.

(See sec. (a) par. 25, above.)

(a) Honorable. Honorably disch (or furloughed to the reserve) Jan 6/15 per (give reason).

(1) In case of retention in active service to make good time lost, or for other reason, the reason for retention must be stated. Thus: Held to make good time lost by awol fr Jan 2 to 10/16.

(b) Discharge. Disch Mch 4/16 by reason of imprisonment under sentence of a civil court par 6 SO 45 W D Feb 25/16.

(c) Dishonorable, for Offenses Other Than Desertion. Dishonorably disch at Ft Sam Houston Tex Mch 5/16, forfeiting all pay and allowances due GCMO 110 S Dept Mch 1/16. Due Sol: Deps \$150 Clo \$16. D&FS for deps given. Last pd to Jan 31/16 by Capt Smith.

(d) On Surgeon's Certificate of Disability. Disch Jan 12/16 on SCD par 5 SO 7 WD Jan 10/16.

(e) By Purchase. Disch Jan 10/16 by purchase par 2 SO 3 C Dept Jan 4/16.

(f) On account of a Dependent Parent. Disch Jan 25/16 on account of a dependent parent par 5 SO 20 W D Jan 24/16.

27. EXTRA DUTY.

(a) SbO Jan 1 to 31/16 26 days worked 1 holiday.

(b) SbO Jan 1 to 31/16 31 days worked 5 Sundays and 1 holiday.

(c) Clerk office C Def Art Engr Jan 1 to 31/16 26 days worked 1 holiday.

28. FOREIGN SERVICE.

(a) Left US for PI Jan 5/16.

(b) Arrived in US from Alaska Jan 10/16.

(c) Foreign service increase begins on date of leaving US for foreign service and continues to date of return to US both dates inclusive.

29. GUNNERS, RATED POSITIONS AND MARKSMANSHIP PAY.

(a) Pay due soldier under these headings will be entered as the first remark on pay roll.

(b) Remarks should be entered on the pay rolls as prescribed by paragraphs 1343, 1344, and 1345, A. R.

30. OVERPAYMENT.

- (a) Due US \$5 overpaid as ER for Jan/16 on Vou 200 of Capt Doe for Feb/16.
- (b) The nature of an overpayment must always be stated.

31. QUARTERMASTER SUPPLIES.

- (a) Due US Clo \$6.50.
- (b) Due US C&GE \$1.25.
- (c) Due US RS 50c.

32. REDUCTIONS.

- (a) Rd fr 1st Sgt to Sgt O 6 Jan 10/16.
- (b) Rd fr Sgt to Pvt RO 10 Jan 13/16 O recd sd.
- (c) Rd fr Ck to Pvt O 7 Jan 12/16.
- (d) Rd fr Corp to Pvt SC Jan 6/16.
- (e) Rd fr Sgt to Pvt and to forfeit 2/3 of his pay per mo for 2 mos GCMO 150 E Dept Mch 2/16.

33. RETIREMENT.

Retired Jan 25/16 par 1 S O 20 WD Jan 24/16.

34. SENTENCES.

- (a) Forfeit 3 days pay SC Jan 5/16. (Date of approval by post commander.)
- (b) To be confined for 3 mos and to forfeit 2/3 of his pay per mo for a like period GCMO 50 E Dept Mch 2/16. \$20 deducted for Feb and Mch on Mch/16 roll. Unexecuted portion of sent remitted SO 55 E Dept Apr 5/16.
- (c) In a case where the full amount of the sentence has not been deducted, the sum already stopped should be shown on next roll.

35. SUBSISTENCE CHARGES.

- (a) All charges entered against enlisted men on account of subsistence must be concisely noted.
- (b) Due US credit sales Sub/16 \$1.50.
- (c) Due US refundment of Sub/16 \$3.
- (d) Due US increased cost of rations Sub/16 \$1.25.
- (e) Due US com of rations \$3 furnished by Capt Doe Ft Myer Va June 5/16.

36. TRANSFER.

- (a) Transferred to 24th Inf Jan 20/16 par 1 SO 10 WD Jan 15/16. (Under loss, transferred.)
- (b) Transferred as Sgt fr Sgt Co B this Regt RO 7 Jan 25/16.
- (c) Transferred as Pvt fr Sgt Co B this Regt RO 8 Jan 27/16. O recd at station of Sol Jan 30/16.
- (d) Date of receipt of order at station where soldier is serving is the date the transfer takes effect. If the transfer of a soldier from one organization to another changes his rate of pay, the date of the receipt of the order at the post where he is serving must always be shown.

37. TRANSPORTATION.

Due US \$20 for trans fr New York City to Ft Snelling Minn furnished by Capt Doe QM T/R No 7565 Feb 1/16.

AUTHORIZED ABBREVIATIONS.

38. The following abbreviations cover most of the names, grades, or terms commonly used in the preparation of pay rolls, and under no circumstances will any other abbreviations be used for those stated following:

Branches of the service:

Cavalry—Cav
 Coast Artillery—CA
 Dental Corps—DC
 Engineers—Engrs
 Field Artillery—FA
 Infantry—Inf
 Medical Corps—MC
 Medical Department—Med Dept

Departments, etc.:

Eastern Department—E Dept
 Central Department—C Dept
 Hawaiian Department—H Dept
 Philippine Department—P Dept
 Southern Department—S Dept

Grades, etc.:**Company—**

Artificer—Art
 Chief Mechanic—Ch Mec
 Cook—Ck
 Corporal—Corp
 Farrier—Far
 First Sergeant—1st Sgt
 Horseshoer—Hs
 Mechanic—Mec
 Mess Sergeant—Mess Sgt

Battalion, Squadron, and Regimental—

Battalion (Squadron) Supply Sergeant—Bn (Sq) Sup Sgt
 Battalion (Squadron) Sergeant Major—Bn (Sq) Sgt Maj
 Color Sergeant—Col Sgt

Miscellaneous—

Assistant Engineer—Asst Engr
 Casemate Electrician—Cm Elec
 Chief Loader—Ch Load
 Chief Planter—Ch Plan
 Coxswain—Coxn
 Electrician Sergeant, first class—Elec Sgt 1cl
 Electrician Sergeant, second class—Elec Sgt 2cl
 Engineer—Engr
 Expert Rifleman—ER
 Fireman—Fm
 First-class Gunner—1cl Gun
 First-class Sergeant—1cl Sgt
 Gun Commander—Gn Comdr
 Gun Pointer—Gun Ptr
 Hospital Sergeant—Hosp Sgt
 Marksman—Mm
 Master Electrician—Mr Elec
 Master Engineer, junior grade—Mr Engr jr gr

Medical Reserve Corps—M
 Ordnance Department—Or
 Philippine Scouts—PS
 Porto Rico Regiment of
 try—PRRI
 Quartermaster Corps—QM
 Signal Corps—Sig Cps
 Veterinary Corps—VC

Western Department—We
 War Department—WD
 Coast Defenses—C Def
 District—Dist
 Divisions—Div

Musician—Mus

Private—Pvt
 Private, first class—Pvt 1c
 Saddler—Sad
 Sergeant—Sgt
 Sergeant Major—Sgt Maj
 Stable Sergeant—Stab Sgt
 Supply Sergeant—Sup Sgt
 Wagoner—Wag

Regimental Supply Sergeant—Regtl Sup Sgt
 Regimental Sergeant Major—Regtl Sgt Maj

Master Engineer, senior grade—Mr Engr sr gr
 Master Gunner—Mr Gun
 Master Hospital Sergeant—Hosp Sgt
 Master Signal Electrician—Sig Elec
 Observer, first class—Obs
 Observer, second class—Obs
 Plotter—Plot
 Quartermaster Sergeant—QM
 Quartermaster Sergeant, grade—QM Sgt sr gr
 Second-class Gunner—2cl Gun
 Sergeant Major, senior grade—Sgt Maj sr gr
 Sergeant Major, junior grade—Sgt Maj jr gr
 Sergeant, first class—Sgt 1c
 Sharpshooter—Ss

Months:

January—Jan
 February—Feb
 March—Mch
 April—Apr
 August—Aug

September—Sep
 October—Oct
 November—Nov
 December—Dec

Orders:

Battery orders—O
 Company orders—O
 Current Series—Cs
 Field Orders—FO
 General Orders—GO
 General Orders, Coast Defenses—
 GO C Def
 General Orders, Post—GOP
 Regimental Orders—RO
 Special Orders—SO
 Special Orders, Coast Defenses—
 SO C Def

Special Orders, Post—SOP
 Troop Orders—O
 Verbal Orders, Battery Com-
 mander—VOBC
 Verbal Orders, Company Com-
 mander—VOCC
 Verbal Orders, Post Commander
 —VOPC
 Verbal Orders, Regimental Com-
 mander—VORC
 Verbal Orders, Troop Command-
 er—VOTC

Organizations:

Battalion—Bn
 Battery—Btry
 Company—Co
 Headquarters Company—Hq Co
 Machine Gun Company—MG Co
 Noncommissioned Staff—NCS
 Noncommissioned Staff, Coast Ar-
 tillery—NCSCA

Post Noncommissioned Staff—
 PNCS
 Regiment—Regt
 Squadron—Sq
 Supply Company—Sup Co
 Troop—Tr

Titles, designations, and officers:

Adjutant General—AG
 Adjutant General's Office—AGO
 Captain—Capt
 Colonel—Col
 Lieutenant—Lt
 Lieutenant Colonel—Lt Col
 Major—Maj

Quartermaster—QM
 Quartermaster General—QMG
 Quartermaster General's Office—
 QMGO
 The Adjutant General, U. S. Army
 —AGA.

Miscellaneous:

Absent without leave—Awol
 Allotted—Alot
 Allotment—Almt
 Appointed—Aptd
 Appointment—Apmt
 Article of War—AW
 Artillery District—ADist
 Assistant—Asst
 Barracks—Bks
 Cent (s)—¢
 Certificate of merit—CofM
 Civil authorities, in hands of—In
 hands CAuth.
 Classification—Class
 Clothing—Clo
 Clothing and garrison equipage—
 C&GE

Commanding—Comdg
 Commutation—Com
 Continued—Contd
 Descriptive list—DL
 Department—Dept
 Deposits—Deps
 Detached service—DS
 Detachment—Det
 Discharge } Disch
 Discharged }
 Discontinued—Discontd
 Enlistment—Enl
 Extra duty—ED
 Expiration of term of service—
 ETS
 Fort—Ft
 From—fr
 Garrison court-martial—Gar CM

| | |
|---------------------------|---|
| General court-martial—GCM | Regimental—Regtl |
| Hawaiian Islands—HI | Regular supplies—RS |
| Headquarters—Hq | Relieved—Reld |
| Hospital—Hosp | Requalified—Requal |
| Inclusive—Inc | Same date—sd |
| Indorsement—Ind | Sentence of summary court—Sent SC |
| Line of duty—LD | Sentenced—Sentd |
| Month(s)—mo(s) | Soldier—Sol |
| Ordnance—Ord | Special Court Martial—Sp CM |
| Panama Canal Zone—Pan CZ | Special duty—SD |
| Paid—Pd | Submarine mine property—SMP |
| Paragraph—Par | Subsistence—Sub |
| Philippine Islands—PI | Summary court—SC |
| Post Exchange—PE | Surgeon's certificate of disability —SCD |
| Post Hospital—PH | Switchboard operator—SbO |
| Post laundry—PL | Transportation—Trans |
| Qualification—Qual | Transportation Request—TR |
| Quarters—Qrs | United States—US |
| Reappointed—Reaptd | United States Army—USA |
| Reduced—Rd | Voucher—Vou |
| Received—Rcd | Warrant—Wrnt |
| Reënlistment—Reënlt | |

By order of the Secretary of War:

Official:

H. P. McCAIN,
The Adjutant General.

H. L. SCOTT,
Major General, Chief of Staff.

General Orders,
No. 45.

War Department,
Washington, September 11, 1916.

The following sanitary regulations are published for the guidance of all concerned:

1. Division Surgeon. The division surgeon is charged, under the commanding general, with the general conduct and supervision of the Medical Department of the division, in the performance of its duties and will make recommendation concerning all matters pertaining to the sanitary welfare of the command.

2. Sanitary Inspector. The sanitary inspector is assistant to the division surgeon and is charged especially with the supervision of the sanitation of the command to which he is assigned. It is the duty of organization commanders to remedy defects reported to them by the inspector.

3. Water Supply. Precaution must be taken to prevent contamination of the camp water supply by keeping all containers scrupulously clean and protected from dust and other sources of infection.

An appliance carried on the supply table as "Water Bag, Field, Sterilizing," consists of a canvas bag of specially woven flax, 20 inches in diameter and 28 inches in length, sewn to a flat galvanized iron ring, hinged so it folds at one diameter. Spliced at four equidistant points on the ring are two crossed pieces of hemp rope, enabling the bag to be suspended on any convenient support capable of holding the weight of the bag when filled with water, which is about 330 pounds. Five nickel, spring faucets are placed at equal spaces about the bottom edge of the bag. The neck of these faucets is small enough to enter a canteen, which can be filled in 10 seconds. The self-closing faucets prevent wastage.

The purpose of the bag is not for transporting water, but to provide a stationary receptacle in which water can be held long enough to sterilize and then distribute it. The empty bag weighs from 7 to $7\frac{1}{2}$ pounds and folds into a convenient package for carriage in the field.

After the bag is suspended and filled with water, it is sterilized by the addition of a small amount of hypochlorite of calcium. This is carried in measured doses, sealed in glass tubes. A package of 60 of these tubes weighs 10 ounces and measures $7\frac{1}{2}$ by $3\frac{1}{2}$ by $4\frac{1}{4}$ inches. Packed in corrugated paper it will stand rough usage.

The tubes themselves are 3 inches in length by three-fifths of an inch in diameter and are marked with a file, enabling them to be easily broken in the fingers without fragments. They contain from 14 to 15 grains of calcium hypochlorite. This chemical contains from 30 to 32 per cent. chlorin, which forms in the water hypochlorous acid and results in sterilizing the water. The process is one of oxidation. In the strength used, waters highly infected are rendered safe. Of course, in such strengths (1-500,000) grossly polluted water, such as sewage, will not be rendered safe. Water ordinarily used will be entirely safe after being so treated. As the chemical acts more efficiently in clear waters, a filter cloth, to be fastened over the opening of the bag and weighing 1 ounce, is provided, or water may be strained through a blanket. The bag is filled after it is in place. Suspended matter, such as clay, is largely removed and not left to interfere with the action of the chlorin.

Comprehensive experiments demonstrate the bacteriological efficiency of the appliance. The organisms causing typhoid fever, the dysenteries, including amoebic or tropical dysentery, and ciliates are promptly destroyed. Even in the vegetative form amoebæ are killed in 15 minutes—ordinarily 5-10 minutes suffices after the addition of the powder to render the water safe to drink. Exposure of 30 minutes has been found to destroy all amoebæ and ciliates under most severe conditions in a test.

4. Disposal of Garbage. For detachments or companies in camps, or in isolated locations where other means are not available, the incinerator will be installed.

If wood is plentiful and medium-sized stones can be obtained, both liquid and solid refuse can be disposed of by using incinerators improvised for each company as follows:

A pit is dug about 5 feet long, $2\frac{1}{2}$ feet wide, and 6 inches deep at one end and 12 inches at the other; the excavated earth is banked around the pit and the latter is then filled with stones on which a fire is built; when the stones have become heated, liquid refuse is poured into the pit (shallow end), where it gradually evaporates; solid matter is burned on the fire.

The efficiency of this type of incinerator depends largely upon the fact that porous earth absorbs a very large part of the liquid slops, but it is not considered practicable to destroy the usual accumulation of slops every day without using an extravagant amount of fuel.

A type of incinerator having a fire bed of rock 1 foot deep will not permit the heat from the fire to penetrate beyond that depth. The rock wall on three sides of the fire bed absorbs much heat that otherwise might be dissipated into space, which increases the evaporating capacity of the incinerator enormously, and requires a comparatively very small amount of fuel. Incinerators built of large rocks are considered to be most efficient.

About one-sixth of a cord of wood per day per company is considered more than sufficient for the destruction of all slops and garbage if ordinary care and attention are given the incinerator. Liquid slops should be evaporated by being poured slowly along the vertical walls of the incinerator, not upon the fire bed, and the solid garbage should be placed on top of the fuel. It has

been determined that a skilled attendant can destroy 100 gallons of liquid and 23 cubic feet of solid garbage in about 12 hours by using one-six cord of wood.

Where rock is not available, material (brick 340, lime three-fourths b be obtained on requisition from the quartermaster. Where disposal in tary way can be made by means of carts, the garbage can may be use cans will be thoroughly cleaned, scalded, and coated with crude pe after emptying.

5. Disposal of Manure and Care of Picket Lines. All manure will be to the camp dump. Picket lines will be kept broom swept, and all and straw hauled off daily. A weekly incineration of the picket lines accomplished with crude oil at the rate of 10 gallons to each line. C may be obtained from the Quartermaster Corps on usual requisition.

6. Disposal of Excreta. Where a water-carriage system is not feasi Havard box will be used over the earth latrines. Daily inspection system is enjoined on the part of the medical officer of the organizati will see that the following plan is carried out:

(a) The latrine will be burned out daily with crude oil and hay. (Eac ing, 1 gallon crude oil and 15 pounds of hay or straw.)

(b) The boxes will be at all times kept fly tight; this implies closur cracks, care of the hinges and a back construction so that the lids dro matically. The latrine seats will be washed off twice weekly with a o hundredths solution of cresoline, or other disinfectant, and whitewashe twice weekly.

(c) When filled to within 2 feet of the top, latrines will be filled w their position marked, and new latrines constructed.

(d) Where water-carriage system is in vogue, either the automatic t rough system will be installed.

7. Kitchens and Mess Rooms. Kitchens and mess rooms will be s screened and an efficient fly trap provided for catching such flies entrance thereto. An effective fly trap consisting of a light wooden covered with wire gauze, extending to about one-eighth of an inch of t of the trap, is readily constructed. It has been found that sweetene slightly acidulated with vinegar is an excellent bait.

Ice boxes installed will be inspected daily and drip pans empti scalded out.

Garbage cans will be kept on wooden racks and elevated from the and cans burned out daily with oil to prevent fouling, and kept clean with a coat of whitewash.

8. Arrangements will be made for the installation of shower baths troops, and a careful inspection will be made daily to see that waste therefrom is so disposed of as to prevent mosquito breeding.

9. The use of the mosquito bar is imperative, and it will be used in tricts where mosquitoes are prevalent.

10. Food and Drinks. No food, drinks, or like commodities will be camp except in the authorized exchanges.

Attention is called to the use of the following foods, the elimina which from the messes will serve to prevent a variety of intestinal diso

(a) Canned milk and fish opened the day before. (Fish and milk pois

(b) Hashes of meats and potatoes prepared the night previous. (Pt poisoning of severe type.)

(c) Locally grown green vegetables, uncooked. (Dysenteries and diar

11. Malaria. When malaria prevails, the daily use of 3 grains of s of quinine, to be increased as indicated, as a malarial prophylactic is compulsory.

12. Inspections. Surgeons of organizations will make a daily inspection of the commands to which they pertain, covering the following: Picket lines, latrines, kitchens, barracks, inclosed toilets, baths, garbage receptacles, incinerators, and all food supplies; they will make a verbal report at once to their respective commanding officers for the correction of any sanitary defects noted, and a similar report, with the action taken, to the sanitary inspector on his next visit.

13. Special reports will be made at once by the surgeon of each organization to the organization commander and the division surgeon in the following cases:

- (a) Acute infectious or contagious diseases developing in barracks or camps.
- (b) Cases of fever of 101° or over, attended with albuminuria.
- (c) Unusual prevalence of mosquitoes in vicinity.
- (d) Development of amœbic or bacillary dysentery or malaria in the command.

14. Venereal prophylaxis and venereal inspections will be carried out thoroughly, and the required monthly report of the number of new cases of venereal diseases will be sent to the division surgeon each month.

15. Areas about camps in which mosquitoes could breed, such as cisterns, tanks, woods, gutters, pools, and drains, will be kept under close observation by the surgeon, and the proper remedies applied, i.e., screening, draining, oiling, etc.

16. Sanitary squads composed of medical officers, noncommissioned officers, and privates of the Medical Department will be organized by the division surgeon. The sanitary squad will supervise and assist in the disposal of camp wastes. Civilians employed as sanitary laborers will be hired by the Quartermaster Corps for the Medical Department.

17. Flies. All possible breeding places of flies, accumulations of wastes, and filth should be destroyed by incineration and particular attention given to the manure and refuse from the picket lines and stables.

An energetic campaign must be begun at once against the mature flies.

Each company or organization will provide itself with several large fly traps, to be placed near kitchen doors, store tents, and wherever flies are present.

INFECTIOUS DISEASES.

Certain infectious diseases are of primary importance in military sanitation and will be mentioned briefly in the following notes.

Typhoid Fever. Is caused by a specific organism, the typhoid bacillus. When the bacillus finds an entrance into man's intestinal tract, typhoid fever is likely to result.

The excreta, and particularly the stools and urine of the victim of typhoid, are loaded with the typhoid bacilli. Hence the necessity for extreme care in properly disposing of excreta and the strict avoidance of camp pollution.

Typhoid fever is chiefly a filth disease and one widely distributed over the world. Its presence in a camp or community is chiefly determined by the personal cleanliness of the occupants and largely by their method of disposing of human excreta.

Through careless means of disposing of feces and urine, water, milk, and food become infected, very largely through the agency of insects, principally the fly, which, breeding in accumulations of refuse, manure, and various forms of filth, transfer the disease germ mechanically on their bodies and in their secretions from the infected source to the food. Absolute protection of food supply of all kinds and persistent warfare on the fly are imperative.

The most common mode of infection in typhoid is by contact, direct and indirect, with the infected individual. About 60 per cent of all cases are believed to be due to contact infection.

Direct contact infection follows intimate association with the infected person.

Indirect contact infection results from clothing, bedding, drinking cups, dishes, etc., which may serve to carry the infection from one person to another.

The necessity for great care as to personal cleanliness is obvious.

Frequent bathing, the washing of hands before eating, attention to laundry, underclothing, and general personal cleanliness are obligatory, as well as the prompt sterilization of all articles which have been used by those suffering from the disease, as well as by "carriers," those excreting typhoid germs though presenting no active symptoms of the disease.

These "carriers" are an insidious menace, an even greater one than a case of typhoid fever, because so frequently unrecognized. The greatest cautions must be taken by medical officers for the prompt recognition, isolation, and treatment of these "carriers."

The regulations direct that all soldiers, immediately on entrance into service, be protected against typhoid fever by vaccination, as well as against smallpox. This regulation will be strictly enforced.

Malaria. Is caused by a microorganism (*Plasmodium malarie*) which gains access to the body through the bites of mosquitoes, belonging to the genus *Anopheles*.

The predisposing causes of the disease are those that favor the development of mosquito life.

On account of the nocturnal habits of the malaria-bearing mosquito, the disease is more likely to be contracted at night.

Camps should not be located near swamps, or in places where stagnant water favors the development of the mosquito. Every precaution will be taken to destroy these breeding places by draining and filling, or by oiling the water, or by the cutting away of all grass or undergrowth for a distance of 200 feet about camps and habitations, in order that the adult mosquitoes may not find lodgment and protection there.

Since the malarial mosquito is chiefly a night biter, the regulation requiring the use of the mosquito bar at night will be enforced and frequent inspection made to see that no evasion of this order occurs.

In certain conditions the use of preventive doses of quinine may be required and administered by order under the supervision of the medical officer. Cases of malaria will be promptly isolated for treatment and protected from further attacks by mosquitoes.

Yellow Fever. Is transmitted by the bite of the yellow fever mosquito (*Stegomyia calopus*).

Yellow fever is essentially a disease of the Tropics and its existence is entirely dependent upon the distribution of this single species of mosquito. It is a small and silver-striped, active principally at evening time, and breeds generally in small accumulations of water close to the habitations of man.

The prevention of this disease, as in malaria, depends chiefly on the destruction of the mosquito and its breeding places, the proper protection against the bites of the insects, at all times, and the early isolation, protection, and treatment of each case of yellow fever as soon as suspected.

Cholera. Is an acute infectious disease caused by a comma-shaped microorganism—the cholera bacillus.

These germs breed in the intestine of man and find their way into the mouth of another individual through the medium of infected water, milk, food, or the germs can be conveyed by carriers, by flies, and by other means of infection as in typhoid fever.

In every case this connection is certain and absolute. The disease is not spread in any other manner.

In the cholera patient practically the only infected discharge is the stool. It is, therefore, essentially a filth disease.

As in typhoid fever, contaminated food, dirty hands, flies, and infected clothing and bedding are frequent sources of danger. All the sanitary precautions used in the prevention of typhoid fever should be exercised, including the careful searching out of carriers, those individuals having the germs of cholera in their intestines and excreting them in their stools, thus scattering the infection and unknowingly infecting those about them and greatly assisting in the rapid spread of the disease.

These "carriers" in an infected district are often numerous, ranging in numbers from 5 to 10 per cent of the apparently normal population in a community where an epidemic prevails. "Carriers" are specially dangerous if connected in any way with the handling of the food supply.

In cholera, as in typhoid fever, dysentery, and other so-called diarrhœal diseases, great care should be exercised to provide that—

- (1) Only sterilized water is used.

- (2) Only recently cooked and properly served food is allowed.

- (3) All kitchens are screened.

- (4) All refuse burned and constant warfare made against the fly and its breeding places.

Anticholera vaccination has been proved an effective preventive measure also, but again, as in typhoid fever, the application of vaccination in these diseases does not lessen in any degree the responsibility or importance of rigidly enforcing all the general sanitary rules which have been here briefly stated.

Dysentery. Under this head are included at least two severe specific diseases—bacillary dysentery and amœbic dysentery—each caused by distinctive organisms.

In addition there may be mentioned under this heading all the various forms of diarrhœa and colitis, characterized by colic, bloody stools, and tenesmus.

Some of these are undoubtedly of a nonspecific and temporary nature, due to chill or to indiscretions in eating and drinking.

Prevention is the same as in typhoid fever and cholera, since there is no doubt that in the specific bacillary and amœbic dysenteries the cause of the infection leaves the infected man by his excreta, largely in his feces.

Attention is again directed to what has already been said, to the great importance of strict attention to the disposal of all excreta and wastes and to the careful investigation and protection of the water supply.

The three diseases—typhoid fever, cholera, and dysentery—may, from the standpoint of prevention, be considered as forming a well-marked group.

In all the mode of departure from the infected man is in his dejecta; in all it enters the infected man in food and drink and in all three the fly very often provides the most important link.

Typhus fever is an acute infectious disease, caused by a specific germ, characterized by sudden onset, high fever, marked nervous symptoms, and macular eruption. It has prevailed in Mexico since the middle of the sixteenth century.

Typhus fever is transmitted to man only by the bite of the louse, which infests the body and clothing of the victims.

The prevention of typhus fever depends, therefore, upon personal cleanliness and the avoidance and destruction of infected lice.

Frequent bathing and cleansing of clothing, with repeated inspections of garments, particularly the seams where the eggs of the louse are deposited, are imperative precautions.

The body louse lays its eggs among and attached to the fibers of cloth with a special preference for seams and linings, a point to be remembered in the destruction of lice.

These eggs are the size of a small pinhead, yellowish white in color, pear-shaped, and attached at the lower end to the cloth by a cement excrement. The female. They can be destroyed by boiling water or kerosene.

The avoidance of buildings, places, and persons known to be infected with lice is of first importance.

In case troops are sent into a typhus area, a railway disinfecting and bathing train will be provided and stationary plants of like character at the base.

Smallpox. All soldiers will be vaccinated against this disease on enlistment. Vaccination confers immunity against smallpox for a number of years.

Any case occurring among recruits will be isolated and contacts notified and protected by recent successful vaccination will be revaccinated.

Epidemic Cerebro-Meningitis. Preventive measures in this disease consist of prompt recognition, isolation, and treatment of the patient.

"Carriers" will be also carefully sought for and kept under close observation.

Measles, Mumps, and Scarlet Fever. When these diseases appear in a command, all cases will be immediately isolated, all "contacts" inspected and, where the diseases show a tendency to spread, a detention camp will be established where all recently arrived recruits will be detained under observation for a period of 12 days before being permitted to join their organizations.

Venereal Diseases. The cause of these diseases is a matter of common knowledge. They are entirely preventable and the government punishes those who expose themselves and contract venereal disease, by prompt stoppage of pay and restriction of privileges while under treatment.

All preventive measures prescribed by Army Regulations against infection of this character will be rigidly enforced.

By order of the Secretary of War:

Official:

H. P. McCAIN,
The Adjutant General.

H. L. SCOTT,
Major General, Chief of Staff.

General Orders, }
No. 54. }

War Department,
Washington, October 10, 1916.

I. The following extracts from a decision of the Comptroller of the Treasury of August 28, 1916, regarding longevity and continuous-service pay of officers and enlisted men of the militia or National Guard brought into the service of the United States under the acts of January 21, 1903 (32 Stat., 776) and May 27, 1908 (35 Stat., 400), and the instructions relative thereto are published for the information and guidance of all concerned:

1. (a) Question. "Whether officers and enlisted men of the militia or National Guard brought into the actual service of the United States under section 4 of the act of January 21, 1903, as amended by section 3 of the act of May 27, 1908, are entitled to count their services in the militia or National Guard, either before or after the date when brought into the actual service of the United States, for the purpose of longevity or continuous-service pay."

Answer. "Neither officers nor enlisted men are entitled to count their services in the militia or National Guard before the date when brought into the actual service of the United States for the purpose of longevity or continuous-service pay; that officers are entitled to count their service after the date when brought into the actual service of the United States for the purpose of longevity or continuous-service pay; and that enlisted men are not entitled to count such service for the purpose of continuous-service pay."

(b) Question. "Whether said officers or enlisted men who had prior service in the Regular Army, or the Marine Corps, are entitled to count such service for the purpose of increase of pay."

Answer. "Officers who had prior service in the Regular Army or Marine Corps are entitled to count such service for the purpose of increase of pay, but enlisted men who had such prior service are not entitled to count it for such purpose, except for one enlistment period as provided in the above act of May 11, 1908."

(c) Question. "Whether an enlisted man discharged from the Regular Army, who enlists or is given a commission in a militia or National Guard organization which has been brought into the actual service of the United States, under the acts of 1903 and 1908, is entitled to count his service in the Regular Army for the purpose of increase of pay as an enlisted man or commissioned officer of the militia or National Guard. If this question be answered in the negative will the soldier, in the event that he remains out of the Regular Army for a period of more than three months, lose his right to count the continuous service which he had when discharged from the Regular Army in the event that he again enlists in the Regular Army."

Answer. "An enlisted man discharged from the Regular Army who is given a commission in a militia or National Guard organization brought into the actual service of the United States as aforesaid is entitled to count his service in the Regular Army for the purpose of increase of pay as a commissioned officer of the militia or National Guard, but an enlisted man so discharged who enlists in such an organization is not entitled to count his service in the Regular Army for the purpose of such increase of pay; and that in either case if he remains out of the Regular Army for a period of more than three months he loses his right to count the continuous service which he had when discharged from the Regular Army in the event that he again enlists in the Regular Army."

(d) Question. "Whether a commissioned officer of the Regular Army who holds a commission in a higher grade in the militia or National Guard brought into the actual service of the United States under the acts of 1903 and 1908 is entitled to longevity increase on pay of his grade in the Regular Army or to longevity increase on pay of his grade in the militia or National Guard."

Answer. " * * * A commissioned officer of the Regular Army who holds a commission in a higher grade in the militia or National Guard brought into the actual service of the United States under the acts of 1903 and 1908, is entitled to the pay of the grade he holds in the militia or National Guard and for such time as he holds it he is not entitled to pay of his grade under his commission in the Regular Army. The pay in the higher grade is his 'annual pay' within the meaning of the act of May 11, 1908, and it is on that pay that such officer is entitled to have his longevity increase of pay computed. * * *"

2. In the case of an officer of the militia or National Guard in the service of the United States, entitled to increase of pay for length of service under the foregoing decision, remarks showing the following information will be entered on the pay roll or individual pay account if not paid on pay rolls:

(a) On first pay roll on which longevity increase of pay is claimed and on subsequent pay rolls until paid (or on individual pay account, if not paid on pay rolls) the remarks will show a full statement of the prior service the officer is entitled to count for purposes of longevity pay with dates of beginning and ending of such service and names of organizations in which such service was rendered.

(b) On pay rolls (or on individual pay account, if not paid on pay rolls) subsequent to first payment of longevity increase, remarks will be stated as follows: "Entitled to longevity pay for over ——— years' service; for state-

ment of service see pay roll (or pay account) for month of ———,

3. In the case of an enlisted man of the militia or National Guard in service of the United States who is entitled to continuous-service pay during the second enlistment period on account of having been honorably discharged from the Regular Army or the Marine Corps at the termination of an enlistment period, prior to his entry into the militia or National Guard, his name will be entered on the pay rolls as follows:

(a) On the first pay roll on which continuous-service pay is claimed and on subsequent pay rolls until paid the remarks will show the soldier served during the second enlistment period and a full statement of prior service in the Regular Army or Marine Corps with dates of enlistment and discharge and names of organizations in which such service was rendered.

(b) On pay rolls subsequent to first payment of continuous-service pay the remarks will be stated as follows: "Entitled to pay as of 2d enlistment period for statement of prior service see pay rolls for month of ———, 191—."

4. Quartermasters will make payment of the increase in pay for longer enlistment continuous service to which the officer or enlisted man is entitled upon the statement of service entered upon the first pay roll (or individual pay account) and the notations on subsequent pay rolls or pay accounts and the responsibility for the correctness of the statement and notations will rest with the quartermaster certifying to the correctness of the roll or pay account.

By order of the Secretary of War:

H. L. SCOTT

Official:

Major General, Chief of

H. P. McCAIN,

The Adjutant General.

No. 60. }
General Orders, }

War Department,
Washington, November 10,

In order to comply with the provisions of section 24 of the National Infantry Act approved June 3, 1916, paragraph 2, General Orders, No. 64, War Department, 1915, is amended to read as follows:

2. (a) Vacancies in the grade of second lieutenant created or caused by the act of June 3, 1916, in the Infantry, Cavalry, Field Artillery, and the Artillery Corps occurring in any fiscal year will be filled by appointment required by law, first, of cadets graduated from the United States Military Academy during the preceding fiscal year, for whom vacancies did not exist during the fiscal year in which they were graduated; second, of the provisions of existing law, of enlisted men, including officers of the United States Marine Scouts, whose fitness for promotion shall have been determined by competitive examination; third, of members of the Officers' Reserve Corps between the ages of 21 and 27 years; fourth, of commissioned officers of the National Guard between the ages of 21 and 27 years; fifth, of such honor graduates between the ages of 21 and 27 years, of distinguished colleges as are named hereafter may hereafter be entitled to preference by general orders of the War Department; and sixth, of candidates from civil life between the ages of 21 and 27 years.

Candidates from the second class will be selected by the competitive examination prescribed for this class by Paragraph I, General Orders, No. 2, War Department, July 20, 1916, from those designated by the War Department. Candidates of this class must be under 30 years of age and unmarried. Candidates from the third, fourth, fifth, and sixth classes will be selected by competitive examination prescribed in General Orders, No. 64, War Department, 1915, from those designated by the War Department, and candidates from these classes must be between the ages of 21 and 27 years at date of appointment.

Paragraph 7, General Orders, No. 64, War Department, 1915, is amended to read as follows:

7. A soldier to be eligible to compete for provisional appointment to the grade of second lieutenant for vacancies not caused or created by the act of June 3, 1916, must be a citizen of the United States, unmarried, and under 30 years of age at the date of the commencement of the competitive examination and must have served honorably not less than two years in the Army as an enlisted man on or before that date; for vacancies caused or created by the act of June 3, 1916, an enlisted man of the Regular Army or officer of the Philippine Scouts must comply with the same conditions except that only one year's service is required; in either case he must also be physically sound and of good moral character before and after entering the Army, and must be an enlisted man or officer of the Philippine Scouts when he submits his application and when he appears for examination, and if appointed a second lieutenant he must be an enlisted man of the Regular Army or officer of the Philippine Scouts at the date of his appointment.

Paragraph 39, General Orders, No. 64, War Department, 1915, is amended to read as follows:

39. Vacancies created or caused by the act of June 3, 1916, remaining after the appointment of qualified candidates from (1) enlisted men and officers of the Philippine Scouts, (2) Officers' Reserve Corps, (3) officers of the National Guard, and (4) honor graduates of "distinguished colleges," will be filled in order of merit as determined by their general average, first, from those candidates whose general average is 85 per cent or more, by taking first those from Class B, second those from Class C, third those from Class D; second, the remaining available vacancies will then be filled in order of merit from the remaining qualified candidates without regard to the classification.

By order of the Secretary of War:

Official:

H. P. McCAIN,
The Adjutant General.

H. L. SCOTT,
Major General, Chief of Staff.

General Orders, }
No. 21. }

War Department,
Washington, February 9, 1917.

I. Section IV, General Orders, No. 69, War Department, 1916, is amended to read as follows:

Until further orders, persons holding provisional appointments to the grade of second lieutenant will be required to provide themselves only with the service and dress uniforms, and with the arms and personal equipments pertaining to their rank and duty. Horse equipments will be furnished under the laws and regulations governing issues to officers of the Army.

II. Until further orders, members of the Officers' Reserve Corps will be required to provide themselves only with the service uniform, and with the arms and personal and horse equipments pertaining to their rank and duty, except that members of the Medical Officers' Reserve Corps, when on active duty at posts, will provide themselves also with the dress uniform. Horse equipments will be furnished to officers below the grade of major under the same laws and regulations governing issues to officers of the Army.

By order of the Secretary of War:

Official:

H. P. McCAIN,
The Adjutant General.

H. L. SCOTT,
Major General, Chief of Staff.

229. Stoppage of Pay for Absence from Duty on Account of Disease Resulting from Intemperate Use of Drugs, Liquors, or Other Misconduct. 1. The statute provides that no officer or enlisted man in active service, who shall be absent from duty on account of disease resulting from his own intemperate use of drugs, or alcoholic liquors, or other misconduct, shall receive pay for the period of such absence from any part of the appropriation in this act. In the case of officers or enlisted men, the time so absent and the cause thereof shall be ascertained under such procedure and regulation as may be prescribed by the Secretary of War.

2. Absence from duty because of the intemperate use of drugs or alcoholic liquors, or because of incapacity resulting from venereal diseases not contracted in line of duty, is within the purview of the statute quoted above; and an officer or enlisted man who is absent from duty for any such cause or for any other cause is not entitled to pay, as distinguished from allowances, for the period of such absence.

3. Whenever an officer or enlisted man is absent from duty due to causes within the purview of the statute quoted above, the Company commander shall state in the "Daily Sick Report" his opinion to that effect by noting "G. O. 31, 1912," in the column headed "In line of duty" of the "Company Commander's Report," and the surgeon will in like manner record his opinion in the column "In line of duty" of the "Medical Officer's Report." Notice that when an entry has been made will at once be brought to the attention of the Company Commander or enlisted man concerned by the Company Commander.

When the Company Commander and the surgeon are in accord, the stoppage of pay, if approved by the Commanding Officer, shall be final. Should the Company Commander and the surgeon disagree, or should the Commanding Officer dissent, the latter will call a Board of Officers of not less than two members, one of whom shall be a Medical Officer, to report upon and make recommendations in the case. Approval by the Commanding Officer of the findings of this Board shall be final; but if the Commanding Officer disapprove the findings of the Board the proceedings will be forwarded for the action of the next higher authority.

In the case of a Company Commander or of an Officer or enlisted man who has been carried upon the rolls of a Company, the duties hereinbefore required of the Company Commander will be performed by the next superior officer in command whose command or direction the Officer or enlisted man concerned is serving.

The terms "company" and "company commander" will be understood to include including a troop, battery, band, or detachment and the commanding officer thereof.

4. When it has been determined in the manner hereinbefore prescribed that an officer has been absent from duty due to causes within the purview of the statute quoted above, the proper commanding officer will forward to the next higher command commander a report showing the inclusive dates of the absence and the cause thereof. This report will be forwarded to the Adjutant General of the Army for transmission to the Quartermaster General, who will take the necessary action looking to stoppage of pay for the period of absence from duty. In cases arising in the Philippine Department, the department commander will, at the time of sending of the original report to the Adjutant General, will transmit a copy thereof to the department quartermaster, Philippine Department, who will take the necessary action toward securing the proper stoppage of pay.

When it has been determined in the manner hereinbefore prescribed that an officer or enlisted man has been absent from duty due to causes within the purview of the statute quoted above, the proper commanding officer will take notation

effect on the pay rolls or on final statements giving the inclusive dates of the absence, and the quartermaster will make deduction of pay for such period. If it is impracticable to determine within the month in which the absence from duty occurs that such absence was due to causes which should deprive the soldier of his pay, he will not be permitted to draw pay for that or any subsequent month-until the cause of the absence from duty has been determined.

When cases marked not in line of duty are transferred to a general, division, or district hospital, and the commanding officer of such hospital shall have reason to doubt the justice of the notation, he will report the matter to the department commander, who will call a board of three medical officers to consider and determine whether the disease was incurred in the line of duty or not. The proceedings of the board, with all the papers in the case will be forwarded to the department commander for final decision. Similar action will be taken when a patient from a post enters a general, division, or district hospital and the surgeon of such hospital is the first medical officer to express an opinion and he and the company commander are not in accord as to the finding.

Circular }
No. 2. }

War Department,
The Adjutant General's Office,
Washington, November 1, 1916.

UNITED STATES ARMY RECRUITING CIRCULAR.

Note: The following instructions sent to recruiting officers by the Adjutant General of the Army apply to the present war:

Telegram April 10, 1917.

"Requirements maximum age and educational qualifications do not apply to enlistments for Regular Army in time of war. You are authorized to accept for Regular Army, applicants under forty years if they can speak English and to accept subject to examination at Depot, applicants whom you deem fit for Military Service, without regard to minor physical defects, using proper care to send only good risks.

"This authority does not apply to enlistments for National Guard; Enlistment of applicants under sixteen will not be made without special authority from this office. All applicants under eighteen must have proper consent."

Telegram, April 13, 1917.

"It is the policy of the War Department to discharge from service at the termination of the emergency all men who have enlisted in the Regular Army since the declaration of war or who now enlist. This policy also applies to National Guard."

Telegram, May 30, 1917.

Act approved May 18th, 1917, provides: "Commencing June 1, 1917, and continuing until the termination of the emergency, all enlisted men of the Army of the United States in active service whose base pay does not exceed twenty-one dollar per month shall receive an increase of fifteen dollars per month; those whose base pay is twenty-four dollars, an increase of twelve dollars per month; those whose base pay is thirty, thirty-six, or forty dollars, an increase of eight dollars per month; and those whose pay is forty-five dollars, or more, an increase of six dollars per month; provided that the increase of pay herein authorized shall not enter into the computation of continuous service pay. Twenty per centum foreign service increase does not accrue on increases herein mentioned. Advise all posts and stations, including independent stations, within geographical limits, of your department.

McCain."

The following instructions will govern recruiting for the Regular Army:

Applicants for first enlistment must be under 35 years of age, of good character and temperate habits, able-bodied, free from disease, and must be able to speak, read, and write the English language.

No person under 18 years of age will be enlisted, reënlisted, or accepted with a view to enlistment without the written consent of the father, only surviving parent, or legally appointed guardian to the minor's enlistment.

No man who has been a member of the Organized Militia or National Guard of any State, Territory, or the District of Columbia will be enlisted in the Regular Army until he presents satisfactory evidence that he has been honorably discharged therefrom. In no case shall an applicant known to be a member of the Organized Militia or National Guard be accepted with a view to enlistment. Recruiting officers will question carefully all applicants regarding membership in militia or National Guard organizations, and will require those who acknowledge themselves to be or to have been members of such organizations to exhibit their discharges therefrom before accepting them.

Original enlistments will be confined to persons who are citizens of the United States or of Porto Rico, or who have made legal declaration of their intention to become citizens of the United States. Applicants for original enlistment who claim to have been naturalized or to have declared their intention to become citizens of the United States will not be accepted for enlistment nor enlisted unless they exhibit to the recruiting officer documentary evidence, under the seal of a court of competent jurisdiction, of their naturalization or their declaration of intention to become citizens. The notation "certificate of naturalization exhibited" or "copy of declaration of intention exhibited," with date, serial number, and title of court from which issued, will be made by the accepting officer, under the head of remarks, on the report of physical examination, Form No. 135, A. G. O., in the case of each such applicant who is accepted.

Married men will be enlisted only upon the approval of a regimental commander, or other proper commanding officer if for other than a regimental organization.

Applicants will be required to satisfy the recruiting officer regarding age and character and should be prepared to furnish the necessary evidence.

For Infantry, Coast Artillery, and Engineers, the height of applicants 21 years of age or over must be not less than 5 feet 4 inches and weight not more than one hundred and ninety (190) pounds.

For Cavalry, the height of applicants 21 years of age or over must be not less than 5 feet 4 inches and not more than 5 feet 10 inches and weight not to exceed one hundred and sixty-five (165) pounds.

For Field Artillery the height of applicants 21 years of age or over must be not less than 5 feet 4 inches and not more than 6 feet and weight not more than one hundred and ninety (190) pounds. For the mountain batteries the height must be not less than 5 feet 8 inches.

A variation not exceeding a fraction of an inch above the maximum or below the minimum height given for Cavalry and Field Artillery is permissible if the applicant is in good health and is in other respects desirable as a recruit.

The minimum weight of applicants 21 years of age or over for all arms of the service is one hundred and twenty-eight (128) pounds, subject to variations below that standard as explained herein, but in no case will an applicant whose weight falls below one hundred and twenty (120) pounds be accepted without special authority from the Adjutant General of the Army.

PHYSICAL PROPORTIONS FOR HEIGHT, WEIGHT, AND CHEST MEASUREMENT
OF APPLICANTS 21 YEARS OF AGE OR OVER.

| Height. | | Weight. | Chest measurement. | |
|---------|---------|----------------|--------------------|----------------|
| Feet. | Inches. | | At expiration. | Mobility. |
| | | <i>Pounds.</i> | <i>Inches.</i> | <i>Inches.</i> |
| | 64 | 128 | 32 | 2 |
| | 65 | 130 | 32 | 2 |
| | 66 | 132 | 32½ | 2 |
| | 67 | 134 | 33 | 2 |
| | 68 | 141 | 33¼ | 2½ |
| | 69 | 148 | 33½ | 2½ |
| | 70 | 155 | 34 | 2½ |
| | 71 | 162 | 34¼ | 2½ |
| | 72 | 169 | 34¾ | 3 |
| | 73 | 176 | 35¼ | 3 |

PHYSICAL PROPORTIONS FOR HEIGHT, WEIGHT, AND CHEST MOBILITY FOR
APPLICANTS UNDER 21 YEARS OF AGE.

| | Minimum height. | Minimum weight. | Chest mobility. |
|-------------------|-----------------|-----------------|-----------------|
| | <i>Inches.</i> | <i>Pounds.</i> | <i>Inches.</i> |
| years of age..... | 62 | 110 | 2 |
| rs of age..... | 64 | 115 | 2 |
| rs of age..... | 64 | 120 | 2 |
| rs of age..... | 64 | 125 | 2 |

Calculating the proportional weight and chest measurements of an applicant, any fractional part of an inch in height equal to or greater than a half inch will be counted as a full inch; any fractional part of an inch less than a half inch will be disregarded.

It is not necessary that the applicant should conform exactly to the figures in the foregoing table. The following variations below the standard in the table are permissible when the applicant is active, has firm muscles, and is physically vigorous and healthy:

| Height. | Chest at expiration. | Weight. |
|----------------|----------------------|----------------|
| <i>Inches.</i> | <i>Inches.</i> | <i>Pounds.</i> |
| Under 68..... | 2 | 8 |
| Under 69..... | 2 | 12 |
| Under 70..... | 2 | 15 |
| Over 70..... | 2 | 20 |

A disproportion of weight over height is not a cause for rejection unless the applicant is manifestly obese.

Applicants must defray their own expenses while traveling to the recruiting station.

The term of enlistment for all enlistment contracts made on or after November 1, 1916, is seven years; the first three years to be in the service with the regular Army and the last four years to be on furlough and attached to the Army Reserve.

Following alternatives are open to a soldier who may be thus enlisted: (1) After the expiration of three years' continuous service with organizations, upon the expiration of a first or any subsequent enlistment, he may be reënlisted for a period of seven years, as above, in which event he shall receive his final discharge from his prior enlistment; or

(b) After the expiration of one year's honorable service any enlistee serving within the continental limits of the United States whose company, troop, battery, or detachment commander shall report him as proficient and sufficiently trained, may, in the discretion of the Secretary of War, be furloughed to the Regular Army Reserve under such regulations as the Secretary may prescribe, but no man furloughed to the Reserve shall be eligible to reënlist in the service until the expiration of his term of seven years.

(c) In addition to military training, soldiers while in the active service hereafter be given the opportunity to study and receive instruction upon educational lines of such character as to increase their military efficiency and enable them to return to civil life better equipped for industrial, commercial, and general business occupations. Civilian teachers may be employed by the Army officers in giving such instruction, and part of this instruction may consist of vocational education either in agriculture or the mechanic arts.

When any soldier is furloughed to the Reserve his accounts will be settled and he will be paid in full to the date such furlough becomes effective. He will receive travel allowances as provided for in the case of discharged soldiers.

Subject to such regulations as the President may prescribe for their identification and location and physical condition, the members of the Regular Army Reserve shall be paid semiannually at the rate of \$24 a year while in the Reserve. The President may summon the Regular Army Reserve or any part thereof for field training for a period not exceeding 15 days in each year. Reservists to receive travel expenses and pay at the rate of their regular grades in the Regular Army during such periods of training, and in the event of actual or threatened hostilities he may mobilize the Regular Army Reserve in such manner as he may determine, and thereafter retain it, or any part thereof, in active service for such period as he may determine the commander in chief may demand.

For all enlistment contracts made on and after June 3, 1916, three years shall be counted as an enlistment period in computing continuous service for pension service rendered on and after that date.

All soldiers receive from the government, during active service, with their pay (in addition to their pay), rations, clothing, bedding, medicines, and medical attendance.

The following are the rates of pay during the first enlistment as fixed by law:

| Grade. | |
|---|-------|
| Quartermaster sergeant, senior grade—Quartermaster Corps. | ..... |
| Band leader. | ..... |
| Master signal electrician. | ..... |
| Master electrician—Coast Artillery, Quartermaster Corps. | ..... |
| Master engineer, senior grade—Engineers. | ..... |
| Master hospital sergeant—Medical Department. | ..... |
| Band sergeant and assistant band leader—Military Academy. | ..... |
| Hospital sergeant—Medical Department. | ..... |
| Master engineer, junior grade—Engineers. | ..... |
| Engineer—Coast Artillery. | ..... |
| Sergeant, first class—Medical Department. | ..... |
| Sergeant, field musician—Military Academy. | ..... |
| Regimental sergeant major—Cavalry, Field Artillery, Infantry, Engineers. | ..... |
| Regimental supply sergeant—Cavalry, Field Artillery, Infantry, Engineers. | ..... |
| Sergeant major, senior grade—Coast Artillery. | ..... |
| Quartermaster sergeant—Quartermaster Corps. | ..... |
| Ordnance sergeant. | ..... |
| First sergeant—Cavalry, Artillery, Infantry, Engineers. | ..... |
| Battalion sergeant major—Engineers. | ..... |
| Battalion supply sergeant—Engineers. | ..... |

| Grade. | Monthly pay. |
|---|--------------|
| Electrician sergeant, first class—Coast Artillery..... | 45 |
| Sergeant, first class—Engineers, Quartermaster Corps, Signal Corps..... | 45 |
| Assistant engineer—Coast Artillery..... | 45 |
| Musician, first class—Military Academy..... | 45 |
| Battalion sergeant major—Field Artillery, Infantry..... | 40 |
| Squadron sergeant major..... | 40 |
| Sergeant major, junior grade—Coast Artillery..... | 40 |
| Master gunner—Coast Artillery..... | 40 |
| Sergeant bugler—Cavalry, Artillery, Engineers..... | 40 |
| Assistant band leader—Cavalry, Artillery, Infantry, Engineers..... | 40 |
| Sergeant—Engineers, Ordnance, Signal Corps, Quartermaster Corps, Medical Department..... | 36 |
| Stable sergeant—Engineers..... | 36 |
| Supply sergeant—Engineers..... | 36 |
| Mess sergeant—Engineers..... | 36 |
| Color sergeant—Cavalry, Field Artillery, Infantry, Engineers..... | 36 |
| Electrician sergeant, second class—Coast Artillery..... | 36 |
| Band sergeant..... | 36 |
| Musician, first class—Cavalry, Artillery, Infantry, Engineers..... | 36 |
| Musician, second class—Military Academy..... | 36 |
| Sergeant—Cavalry, Artillery, Infantry..... | 30 |
| Stable sergeant—Cavalry, Field Artillery, Infantry..... | 30 |
| Supply sergeant—Cavalry, Artillery, Infantry..... | 30 |
| Mess sergeant—Cavalry, Artillery, Infantry..... | 30 |
| Cook..... | 30 |
| Horseshoer..... | 30 |
| Radio sergeant—Coast Artillery..... | 30 |
| Fireman—Coast Artillery..... | 30 |
| Band corporal..... | 30 |
| Musician, second class—Cavalry, Artillery, Infantry, Engineers..... | 30 |
| Musician, third class—Military Academy..... | 30 |
| Corporal—Engineers, Ordnance, Signal Corps, Quartermaster Corps, Medical Department..... | 24 |
| Mechanic—Coast Artillery..... | 24 |
| Chief mechanic—Field Artillery..... | 24 |
| Musician, third class—Cavalry, Artillery, Infantry, Engineers..... | 24 |
| Corporal—Cavalry, Artillery, Infantry..... | 21 |
| Saddler—Cavalry, Field Artillery, Infantry, Engineers, Medical Depart- ment..... | 21 |
| Mechanic—Cavalry, Field Artillery, Infantry, Medical Department..... | 21 |
| Farrier—Medical Department..... | 21 |
| Wagoner—Cavalry, Field Artillery, Infantry, Engineers..... | 21 |
| Private, first class—Cavalry, Artillery, Infantry, Engineers, Signal Corps, Ordnance, Quartermaster Corps, Medical Department..... | 18 |
| Private—Second class, and bugler..... | 15 |

For continuous service the pay of enlisted men is increased as follows, viz.: For those whose initial pay as set forth herein is \$36 or more an increase of \$4 a month for and during the second enlistment period, and a further increase of \$4 a month for and during each subsequent enlistment period up to and including the seventh. For those whose initial pay as set forth herein is \$18, \$21, \$24, or \$30, an increase of \$3 a month for and during the second enlistment period, and a further increase of \$3 a month for and during each subsequent enlistment period up to and including the seventh. For those whose initial pay as set forth herein is \$15, an increase of \$3 a month for and during the second and third enlistment periods each, and a further increase of \$1 a month for and during each subsequent enlistment period up to and including the seventh. When a soldier reenlists within three months from the date of discharge at the termination of an enlistment period, his service is continuous for the purpose of increase of pay provided herein. When a soldier has been honorably dis-

- charged at the termination of his first or any succeeding enlistment period and reënlists after the expiration of three months, he is regarded as in his second enlistment period, and a soldier who receives an honorable discharge for the convenience of the government after having served more than half of his enlistment is considered as having served an enlistment period.

Any private soldier, or bugler, honorably discharged at the termination of his first enlistment period who reënlists within three months of the date of said discharge is entitled upon such reënlistment to an amount equal to three months' pay at the rate he was receiving at the time of his discharge.

Qualified gunner, first class, Artillery, \$3 a month additional; qualified gunner, second class, Artillery, \$2 a month additional; qualified expert rifleman, \$5 a month additional; qualified sharp shooter, \$3 a month additional; qualified marksman, \$2 a month additional. In the Coast Artillery Corps: Casemate electrician, observer, first class, plotter and coxswain, \$9 a month additional; chief planter, chief loader, observer, second class, gun commander-gun pointer, \$7 a month additional. Mess sergeant, \$6 a month additional in organizations in which such grade does not exist by law.

The pay of enlisted men "serving beyond the limits of the States comprising the Union and the territories of the United States contiguous thereto (excepting Porto Rico, Hawaii, and the Canal Zone, Panama)" is increased 20 per cent, and the time of such service is counted from the date of departure from the United States to the date of return thereto. Increase accrues on additional pay for length of service, gunners, expert riflemen, casemate electricians, etc.

Whenever a soldier is honorably discharged at the expiration of his term of enlistment, or on account of disability, or when furloughed to the reserve, his travel allowances are ample to carry him to the place of enlistment.

By care and economy a soldier can save from his clothing allowance a considerable sum, payable to him on his discharge or when furloughed to the reserve.

The soldier can deposit his savings in sums of not less than \$5 with any Army paymaster, and for sums so deposited for the period of six months or longer the soldier, on his discharge, or when furloughed to the reserve, will be paid interest at the rate of 4 per cent per annum.

Soldiers who have served honestly and faithfully for 20 years, or who have been discharged on account of wounds received or disease contracted in the line of duty, are entitled to admission to the Soldier's Home in the city of Washington, D. C.

After 30 years' service enlisted men are entitled to be retired, and upon retirement will receive three-fourths of the monthly pay allowed to them by law in the grade they held when retired, \$9.50 a month additional as commutation for clothing and subsistence, and \$6.25 a month additional in lieu of quarters, fuel, and light.

A certificate of merit for distinguished service entitles a soldier to \$2 a month additional while in the Army, whether on the active or the retired list.

In case an enlisted man on the active list dies from wounds or disease not the result of his own misconduct, his widow or any other person previously designated by him is entitled to an amount equal to six months' pay at the rate received by him at the date of death, less \$35 or such part thereof as is expended by the Government for interment.

With the regiments recently organized, and those authorized under existing law to be organized during the succeeding four years, there is an excellent opportunity for active, intelligent young men of temperate habits, who may enlist as privates and develop the necessary qualifications, to secure promotion to the grade of noncommissioned officer. Unmarried soldiers, between the ages

of 21 and 30 years, who are citizens of the United States, who are physically sound, and who have served honorably not less than one year in the Army, and who have borne a good moral character before and after enlistment, are permitted to compete, by examination, for promotion to the rank of second lieutenant. The present and prospective increases in the authorized commissioned personnel make this opportunity unusually attractive.

Young men between the ages of 19 and 22, who have served in the Regular Army or the National Guard as enlisted men for not less than one year, have an opportunity for appointment by the President as cadets to the United States Military Academy.

H. P. McCAIN,
The Adjutant General.

Approved by order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

EXTRACTS FROM BULLETINS OF THE ARMY TO MAY, 1917 (BULLETIN 28).

Bulletin } Washington, February 5th, 1914.
No. 3. } War Department,

1. The articles named in List A and List B herein are supplied by the Quartermaster Corps for issue to troops, and are considered as expendable under the conditions set forth in the heading of each list.

LIST A.

2. List of articles of supplies of the Quartermaster Corps of minor quality to be expended when worn out by fair wear and tear in the public service when, in the opinion of the commanding officer, they have no material salable value. The certificate of expenditure submitted by the accountable officer and approved by the commanding officer should be supported by a certificate of a disinterested officer that the property has been destroyed in his presence. When, however, any of the articles specified in List A have, in the opinion of the commanding officer, a salable value, such articles should be submitted to an inspector. Articles ordered destroyed may be broken up and serviceable parts thereof used in making repairs.

| | |
|---------------------------------|---|
| Adzes. | Bellows, hand, insect powder. |
| Aprons, rain (ambulance). | Bells, call, desk. |
| Aprons, blacksmiths'. | Belts, lineman's. |
| Axes. | Bits, for braces. |
| Ax slings. | Blotters, hand. |
| Arresters, lightning. | Blowers, stove. |
| Atomizers, insect exterminator. | Blow pipes. |
| Augers, hollow and adjustable. | Boards: |
| Augers, post-hole. | Clip. |
| Awls, assorted. | Drain. |
| Bags, plumbers', carpet. | Stove. |
| Bailers, boat. | Boats: |
| Barrels, assorted. | Gravy, china. |
| Barometers. | Mess. (Transports and harbor boats only.) |
| Baskets, assorted. | Cabin. |
| Basins, assorted. | Boilers, cooking, except those with copper bottoms. |
| Baths, blotter. | |
| Beaters, egg. | |

- Books:
 School.
 Dictionary.
 Boots, rubber, hip.
 Borers, tap.
 Bouncers, saddlers'.
 Bowls:
 Soup, china.
 Cabin.
 Mess.
 Enamel.
 Sugar, china.
 Wash.
 Copying.
 Boxes, shoeing.
 Broilers, assorted.
 Brushes:
 Artists'.
 Copying, letter.
 Dusting.
 Dynamo.
 File.
 Floor.
 Flue.
 Horse.
 Kalsomine or whitewash.
 Lettering.
 Marking.
 Paint.
 Plasterers'.
 Roof.
 Shellac.
 Sink.
 Stencil.
 Tar.
 Tube.
 Typewriter.
 Varnish.
 Window.
 Buckets:
 Ash.
 Fire.
 Galvanized.
 Calipers.
 Candlesticks.
 Cans:
 Ash.
 Oil.
 Sprinkling.
 Caps, cooks'.
 Cases, pillow.
 Chains, hobble.
 Chairs, folding, camp.
 Chairs, desk.
 Chips, butter, china. (T
 harbor boats only.)
 Choppers, food.
 Clamps:
 Lineman's, assorted.
 Pipe.
 Saw.
 Woodworkers'.
 Cleaners, assorted.
 Cleavers, meat.
 Climbers, pole.
 Clips:
 Board.
 Letter.
 Cloths:
 Copying.
 Dusting.
 Sweat and sponge.
 Wiping.
 Collars, dog.
 Combs, curry.
 Compasses.
 Cookers, porridge.
 Coolers, water.
 Corkscrews.
 Covers:
 Mattress. (Transport
 boats.)
 Pot.
 Creasers.
 Crimpers.
 Cups:
 Coffee, china. (Transp
 bor boats.)
 Color.
 Custard, china. (Tra
 harbor boats.)
 Egg, china.
 Force, plumbers'.
 Sponge.
 Curtains:
 Boat.
 Shower bath.
 Curves, drafting.
 Cuspidors (except brass
 Cutters:
 Biscuit.
 Cake.
 Doughnut.
 Glass, wheel.
 Glass, diamonds, glazier
 Diggers, post-hole.
 Dippers, enamel-ware.

| | |
|-------------------------------|----------------------------------|
| china. | Hardies. |
| , china. (Transports and har- | Hatchets. |
| boats.) | Hobbles. |
| able, china. | Hods, coal. |
| , assorted. | Hoes, assorted. |
| s, assorted. | Holders: |
| s: | Bit. |
| ood. | Copying or manuscript. |
| y. | Distress signal. |
| stone. | Pipe. |
| (edge tools). | Signal, carton. |
| steel. | Toilet paper. |
| ers, tube. | Tumbler. |
| ment box. | Twine. |
| , box. | Hoods, boat. |
| anics'. | Horses, stitching. |
| on or board. | Hose, assorted. |
| makers'. | Inkstands or wells, assorted. |
| oil can. | Irons: |
| . | Branding. |
| . | Calking. |
| g. | Clinching. |
| (Transports and harbor | Firing. |
| ts.) | Pricking. |
| re. | Rounding. |
| ing, saddlers'. | Soldering. |
| rint. | Jackets, cooks', and waiters'. |
| aw. | Jacks, wagon. |
| tone. | Jars, slop. |
| blacksmiths'. | Kettles, tea, enamel ware. |
| : | Knives: |
| el-ware. | Butcher. |
| rdinary. | Carving, common. (Transports and |
| assorted. | harbor boats.) |
| rubber. | Chopping. |
| kitchen. | Drawing. |
| . | Farriers'. |
| , emery. | Food chopper. |
| nes, complete. | Mast. |
| s, tinnern', hand. | Packing. |
| assorted. | Pruning. |
| rs. | Putty. |
| fs. | Saddlers'. |
| | Sheath. |
| | Ladders. |
| | Ladles: |
| | Melting. |
| | Plumbers'. |
| | Soup, enameled ware. |
| | Lamps, street. |
| | Lanterns. |
| | Mallets. |
| | Marlin spikes. |
| | Mattocks. |

- Mauls.
 Measures:
 Tin, not copper bottom.
 Tape.
 Mills, paint.
 Mimeographs or duplicators.
 Muzzles, dog.
 Napkins. (Transports and harbor boat only.)
 Nets, fly, horse.
 Nippers:
 Hoof.
 Nail cutting.
 Saddlers'.
 Nozzles, hose.
 Oars.
 Oilstones.
 Openers, box.
 Padlocks.
 Pans, assorted (except copper pans).
 Parers, hoof.
 Picks:
 Ice.
 Masons'.
 Pike poles.
 Pincers.
 Planes.
 Plates, breakfast, china. (Transports and harbor boats.)
 Pliers.
 Pointers, spoke.
 Pokers:
 Fire and stove.
 Oven.
 Pots:
 Coffee, enamel ware.
 Enamel.
 Glue.
 Marking.
 Mustard, china. (Transports and harbor boats.)
 Solder.
 Tea (other than with copper bottoms).
 Preservers, life.
 Presses, staple.
 Prickers, saddlers', and sailmakers'.
 Pritchels.
 Pullers, nail.
 Pulleys.
 Punches (except bond or check).
 Racks:
 Ax.
 Bucket.
 Hose.
 Pen.
 Stamp, revolving.
 Towel.
 Whip.
 Rakes.
 Rasps.
 Reamers.
 Reels:
 Chalk-line.
 Hose.
 Rounders, rein.
 Rivet sets.
 Rulers:
 Carpenters'.
 Office.
 Saucers, china. (Transports and harbor boats.)
 Scoops, assorted.
 Scrapers:
 Boat.
 Box.
 Floor.
 Paint.
 Plumbers'.
 Store.
 Screw-drivers.
 Screw-plates.
 Scythes.
 Sets, carving. (Transports and harbor boats.)
 Shackles.
 Sharpeners, pencil.
 Sheets, bed. (Transports and harbor boats.)
 Sickles.
 Sieves, flour.
 Skillets.
 Slates:
 Blackboard.
 Mimeograph.
 Slickers, saddlers'.
 Snips, tinnners', hand.
 Spokeshaves.
 Spoons:
 Basting.
 Mustard. (Transports and harbor boats.)

rs, lawn.
 rs, lemon.
 s.
 lar.
 -cooler.
 bung.
 s, for boilers.
 arving. (Transports and har-
 ats.)
 (outfits for marking boxes).
 :
 ,
 rs, wire.
 folding.
 rs', folding.
 hopping.
 s, meat.
 g.
 .
 r.
 g.

Tampers.
 Tanks, oil and assorted.
 Tap borers.
 Tapes, measuring linen.
 Thermometers, except over.
 Ticklers, saddlers'.
 Tongs:
 Blacksmiths'.
 Fire.
 Ice.
 Towels.
 Traps, rat.
 Triers, grain.
 Trowels.
 Tubs.
 Turners, cake.
 Weeders.
 Weights:
 Hitching.
 Paper.
 Wringers, mop.

KITCHEN UTENSILS.

hopping.
 s, meat.
 g.
 .
 r.
 g.

Ladles, soup.
 Openers, can.
 Pans:
 Dish.
 Frying.
 Sieves, flour.
 Skimmers.
 Spoons:
 Basting.
 Mustard.
 Steels, carving.

CAMP AND GARRISON EQUIPAGE.

c.
 clothing.
 kit.
 squito.
 .
 arrack.
 ffs.
 mattress.
 a, mosquito.
 t, all kinds.

Sacks:
 Bed.
 Pillow.
 Sheets, bed.
 Slings:
 Bugle.
 Color.
 Drum.
 Stamps, company marking.
 Stands, music.
 Sticks:
 Drum.
 Shoe size.
 Stretchers, shoe.
 Tape, foot measure.
 Tent chains.
 Tent tripods.
 Whistles.

VETERINARY SUPPLIES.

| | |
|-----------------------------|------------------|
| Basins, granite. | Needles: |
| Blades, for dental floats. | Seton. |
| Blowers, powder. | Suture. |
| Bottles, drenching. | Operating hood. |
| Charts, veterinary. | Rasps, tooth. |
| Droppers, medicine. | Razors. |
| Funnels, enamel. | Roller, bandage. |
| Gloves, rubber. | Shakers, powder. |
| Glasses, graduate. | Spatulas. |
| Holders, needle. | Syringes. |
| Hone, oil. | Tiles, pill. |
| Knives, hoof, horseshoers'. | Trays: |
| Mallets, rawhide. | Enameled. |
| Needle holders. | Tin. |

ARTICLES USED UNDER PROVISIONS, PAR. 1218, A. R., 1913.

| | |
|----------------|-------------------|
| Brooms, whisk. | Combs, medium. |
| Brushes: | Towel, huckabuck. |
| Blacking. | |
| Hair. | |

LIST B.

3. List of expendable articles of supplies of the Quartermaster Corps expended only when actually issued for use in the maintenance and of the public service and when issued to troops.

| | |
|--|---|
| Acetone, paint and varnish dissolvent. | Bands for wagons and harness. |
| Acids, all kinds. | Bands, rubber (stationery). |
| Adjusters, lamp cord. | Barrels for packing and shipping property. |
| Alcohol. | Bars: |
| Alum. | Grate, for furnaces, heaters, like. |
| Ammonia. | Wagon. |
| Asbestos: | Baths, shower, repair parts for. |
| Cement (see Cement). | Batteries: |
| Millboard. | Wet and dry. |
| Packing (see Packing). | Electric, repair parts. |
| Wicking. | Beams, assorted, for wagons. |
| Asphaltum. | Beds, assorted for wagons. |
| Ax helves. | Beeswax. |
| Axles, assorted. | Bells, assorted, when installed permanent fixtures. |
| Bags: | Belt: |
| Canvas, ash. | Compound. |
| Carbon. | Dressing. |
| Coal. | Fasteners. |
| Coffee, for portable gas-cooker equipment. | Lacings. |
| Cotton. | Belting, when installed with machinery. |
| Gunny. | Bends, assorted, for pipe. |
| Paper. | Benzine. |
| Ball stems. | Bibbs, assorted. |
| Balls: | Binders, staple (see Fasteners). |
| Float. | Binding posts, electric bell. |
| Fuller. | |
| Steel bearing. | |
| Assorted. | |

le and harness.
 edge.
 assorted.
 idle.
 wagon.
 , assorted (stationery).
 insect powder.
 assorted for wagons and carts.
 lier, parts of.
 and cart.
 repairs parts for.
 wagon.
 orted.
 blank, letter copying, memo-
 , etc.
 ed, wagon and cart.
 g.
 , plumbers'.
 wagon.
 wheel, wagon and cart.
 ry. } When installed to
 closet. } replace broken
 } and unserviceable
 } bowls of a like
 } class, or when
 } for new installa-
 } tion.
 assorted for wagons and carts.
 assorted.
 sorted.
 wagon.
 , sewer and iron pipe.
 gs, harness.
 assorted.
 od.
 assorted.
 easing loaves of bread.
 ing.
 harness and assorted.
 s.

Bulbs for gasoline furnace.
 Bumpers, rubber.
 Bunting.
 Burlap.
 Burners, lamp, street lamp, and gas.
 Burrs, assorted.
 Bushings, assorted.
 Buttons:
 Assorted, for vehicles.
 Door.
 Push.
 Buzzers.
 Cable, electric light.
 Cable to connect carbon holders.
 Calcium chloride.
 Calendars:
 Desk.
 Pad.
 Calks, toe.
 Candles.
 Canopies, wall and ceiling.
 Canvas.
 Caps.
 Brass (see Fittings).
 Galvanized iron (see Fittings).
 Hydrant (see Fittings).
 Iron (see Fittings).
 Carbons, electric.
 Cards:
 Index.
 Record, etc.
 Cardboard.
 Cases, fuse.
 Casters, furniture, etc.
 Castings, range, stove, heaters, etc.
 Catches, door, cupboard, transom, etc.
 Cement all kinds.
 Centers, neck yoke.
 Chains, assorted, except measuring
 chains.
 Chalk.
 Chalkline.
 Charcoal.
 Charge, fire extinguisher.
 Charts, assorted.
 Checks, door.
 Chimneys, lamp, assorted.
 Chucks, assorted.
 Cinchas.
 Clamps:
 Basin.
 Belting.
 Hose.
 Clasps, assorted.

- Clay, fire.
- Cleats.
- Clevises, wagon, etc.
- Clips:
 - Harness and wagon.
 - Spring.
- Closets, water:
 - Complete, when installed as permanent fixtures.
 - Repair parts for.
- Cloth.
- Clothespins.
- Clusters, electric, when installed.
- Cocks, assorted (see Bibbs) and repair parts.
- Coffins.
- Coils, spark.
- Collars:
 - Stovepipe.
 - Harness.
- Columns, water.
- Compound, all kinds.
- Composition, seam.
- Compressors, repair parts.
- Connections, assorted.
- Copper.
- Copper, soldering.
- Cords, assorted.
- Cotters, assorted.
- Cotton, calking.
- Couplings, assorted.
- Covering, pipe.
- Covers:
 - Barrel.
 - Canvas oven.
 - For pots and kettles.
 - Trough.
- Crayons.
- Crocks.
- Crosses (see Fittings, pipe).
- Cross arms.
- Cross covers.
- Crowns, bridle.
- Cruppers.
- Cups:
 - Leather.
 - Grease, drip and oil.
- Curtains, sets.
- Cushions, seat.
- Cut outs.
- Dampers, stovepipe.
- Dash boards.
- Daters, rubber.
- Dees, assorted.
- Deflectors.
- Denim.
- Dials, clock.
- Diaphragms.
- Disks, valve.
- Disinfectant.
- Dogs, cam.
- Doubletrees.
- Drains, boat and floor.
- Dressing, assorted.
- Drier, Japan and patent.
- Duck, cotton and rubber.
- Dust, emery.
- Dynamos, repair parts for.
- Eccentrics for cocks.
- Elbows, assorted.
- Electroliers.
- Electrolyte.
- Electro silicon.
- Ells.
- Emery, powdered.
- Enamel, stove.
- Engine, repair parts for.
- Envelopes.
- Erasers, rubber.
- Erasing fluid.
- Excelsior.
- Exterminators, insect.
- Eyelets.
- Eyes, bolt, etc.
- Fasteners, assorted.
- Faucets.
- Feeders, salt, roto.
- Felloes, assorted.
- Felt.
- Fenders.
- Ferrules.
- Fids.
- Files, general order and special.
- Fillers, book.
- Filter, material.
- Finish, hard oil.
- Fittings, pipe and assorted.
- Fixtures:
 - Ceiling.
 - Grindstone.
 - Showerbath.
 - Assorted.
- Flags:
 - Advertising, recruiting.
 - Other special flags.
- Flagpoles, recruiting.
- Flagstuffs, when erected.
- Flanges.

or flush tanks.
 sorted.
 pers.
 paper.
 lamp and lantern.
 assorted.
 riddle.
 , repair parts for.
 , office, repair parts for.
 sorted.
 chimney.
 except when used as fuel.
 classes.
 gon.
 classes.
 repair parts for.
 addle.
 ndow.
 ance.
 ole.
 lamp.
 mp.
 ns.
 lamp.
 lamp.
 .
 t.
 .
 ks.
 s, pump.
 s.
 washer supports.
 assorted.
 assorted.
 , hand.
 e.
 s.
 amp, wire.
 ent.
 orted.
 assorted.
 all kinds.
 assorted.
 d staples.
 sers.
 hower.
 feed water, repair parts for.

Heating apparatus, repair parts for.
 Hectograph compound.
 Hinges, all kinds.
 Hose.
 Holders, lamp.
 Holystones.
 Hoods, forge, range and arc lamp.
 Hooks and eyes.
 Hooks and staples.
 Hooks, assorted.
 Hoops, barrel.
 Hounds, wagon.
 Housings, harness.
 Hubs, wagon.
 Hydrants, when installed.
 Injectors, repair parts for.
 Ink.
 Insecticide.
 Inspirators, repair parts for, when in-
 stalled.
 Insulators.
 Iron, assorted.
 Ironers, parts of.
 Irons, wagon.
 Jars, battery.
 Jaws, assorted.
 Jointers, pipe.
 Jute.
 Kegs, assorted.
 Kingbolts.
 Knobs, assorted.
 Labels.
 Lacing, belt.
 Lacquer.
 Lamps, Army, repair parts for.
 Lampblack.
 Lashes, whip.
 Latches.
 Latrines, when permanently installed.
 Lavatories, when permanently in-
 stalled.
 Lead, sheet and calking.
 Leads:
 Pencil (refills).
 Sounding.
 Leather, assorted.
 Levers for pumps.
 Levers, brake.
 Lifts, sash and transom.
 Lifters, stove.
 Lime.
 Lime, chloride.
 Linchpins.

Lines:

Chalk.
 Lacing.
 Lead.
 Log.
 Other lines.
 Links, assorted.
 Linings, range.
 Linoleum.
 Litharge.
 Lock poles.
 Locks, assorted, except padlocks.
 Loops and rings.
 Lubricating compound.
 Lumber.
 Lye.
 Magnesia.
 Magnets.
 Mangles, parts of.
 Mantles, gas.
 Maps, wall.
 Marline.
 Martingales.
 Mashers, potato.
 Matches.
 Matting.
 Mats.
 Medicines, dog and horse.
 Menders, hose.
 Metal.
 Mica.
 Mineral oil, except when used as fuel.
 Mixture, paraffin.
 Mops.
 Moss.
 Mucilage.
 Nails, assorted.
 Needles, assorted, except veterinary,
 seton and suture.
 Nipples, pipe.
 Nuts, assorted.
 Oakum.
 Oil board, mimeograph.
 Oil, all kinds, except mineral and
 crude when used for fuel or lighting.
 Oilcloth.
 Ornaments, harness.
 Overflows.
 Packing, assorted.
 Pads, desk and assorted.
 Paints.
 Palms, assorted.
 Paper, assorted (stationery, etc.).
 Paraffin.

Parts, for repairs (all kinds)

Paste, assorted.
 Patches, curtain.
 Pearline.
 Pencils, assorted.
 Penholders.
 Pendants.
 Pens, assorted.
 Pickets, fence.
 Pins, assorted.
 Pipe, assorted.
 Pipes, assorted (blow, hose).
 Piston rods.
 Pitch, coal.
 Pitchers, water, porcelain,
 china.
 Plaster of Paris.
 Platens, typewriting.
 Plates:
 Floor and step.
 Wagon.
 Plugs, assorted.
 Plumsoil.
 Plungers, pump.
 Points, assorted.
 Poles, assorted.
 Polish, assorted.
 Posts, fence.
 Potash.
 Pounce.
 Powder, insect, washing and
 Protectors, pencil-point.
 Pulls, door, etc.
 Pumice.
 Pushes, floor.
 Putty.
 Radiators, repair parts for.
 Ranges, repair parts for.
 Ratchets, brake.
 Reducers.
 Reins, harness.
 Reflectors, lamp.
 Regulators, pressure, repair
 Remover, paint or varnish.
 Renewals, battery.
 Resin.
 Risers, seat.
 Ribbons, typewriter and ad
 chine.
 Rings, harness, etc., assorted.
 Rivets.
 Rivets and burrs.
 Rockets, distress.
 Rods, wagon.

- Rollers, assorted.
- Rope.
- Rosettes, harness and ceiling.
- Rosin (resin).
- Rottenstone.
- Rowlocks.
- Rubber, assorted.
- Runner, sleigh and wagon.
- Sal ammoniac.
- Sal soda.
- Salt.
- Sapolio.
- Savogan.
- Sawdust.
- Screw eyes.
- Screws:
 - Lag or coach.
 - Lamp.
 - Machine.
 - Thumb.
 - Wood.
- Seals, adhesive or wax.
- Seats, assorted.
- Shackles, screw.
- Shades:
 - Lamp.
 - Window.
- Shades, window, when installed.
- Shafting.
- Shafts, wagon, etc.
- Shakers, grate and stoye.
- Shellac.
- Shields, buckle and erasing.
- Shoes:
 - Brake.
 - Horse and mule.
 - Pipe, down spout.
- Sides, wagon.
- Signals, distress.
- Silk:
 - Mimeograph and neostyle.
 - Sewing.
- Singletrees, wagon.
- Skeins, wagon.
- Skins:
 - Buck.
 - Chamois.
 - Sheep.
- Slabs, basin.
- Slate, roofing.
- Slates, school.
- Slats, ambulance top.
- Slides, assorted.
- Snaps, assorted.
- Snaths, scythe.
- Soap, assorted.
- Socket, assorted.
- Soda.
- Soil, plumbers'.
- Solder.
- Spanners, assorted.
- Specter.
- Spikes.
- Splices, trace.
- Spokes, wheel.
- Sponges.
- Spots, harness.
- Sprouts, oil can.
- Sprayers, insecticide.
- Spreaders, lamp.
- Stamps, rubber and rubber dating.
 - Postage (for registry purposes only).
- Squares, bridle and halter.
- Staples and burrs.
- Staples, assorted.
- Starch.
- Stationery.
- Stay:
 - Chain.
 - Winker.
- Steel, assorted.
- Stems, fuller with balls.
- Steps, wagon.
- Sterilizers, repair parts for.
- Sticks, spreader.
- Stirrups.
- Stocks, wood.
- Stones:
 - Emery.
 - Grind.
 - Oil.
 - Rotten.
 - Scythe.
- Stoppers:
 - Basin and bath.
 - Flue.
- Stops:
 - Door.
 - Waste, etc.
- Stovepipe.
- Straps:
 - Harness.
 - Calking.
 - Hose.
 - Pipe.
- Strings, hame.

| | |
|----------------------------------|--------------------------------------|
| Sulphur. | Trimmings, bath room, eng boiler. |
| Surcingles. | Troughs, eave. |
| Swabs, cotton, etc. | Tubes, boiler, etc. |
| Switches. | Tubing. |
| Swivels. | Tugs, harness. |
| Tacks. | Tumblers. |
| Tags. | Turnbuckles. |
| Tallow. | Turns, cupboard. |
| Tanks, assorted. | Turpentine. |
| Tape, except measuring. | Tuyere irons. |
| Taps, assorted. | Twine. |
| Tar. | Urinals, repair parts for. |
| Tees. | Unions. |
| Tees and ells. | Valves, assorted. |
| Test plugs. | Varnish. |
| Thimbles: | Vaseline. |
| Saddlers'. | Ventilators and bases for. |
| Stovepipe. | Wadding, cotton. |
| Thinner, anticorrosive. | Washers, assorted. |
| Thread. | Waste, cotton. |
| Tickets, street car, badge, etc. | Wax. |
| Ticking. | Webbing, assorted. |
| Tin. | Wheels, assorted. |
| Tires. | Whetstones. |
| Toggles. | Whips. |
| Toilet paper. | Whiting. |
| Tongues, wagon. | Wicking. |
| Traces. | Wicks. |
| Traps, lead. | Wire. |
| Trees: | Wool, mineral. |
| Double. | Yokes, neck. |
| Single. | Zinc, battery and sheet. |
| Whiffle. | |
| Tripods, lamp shade. | |

CAMP AND GARRISON EQUIPAGE.

| | |
|-------------------------------|--------------------------------|
| Bedsteads, parts for. | Handles—Con. |
| Brackets, flagpole. | Pickax. |
| Brooms, corn. | Shovel and spade. |
| Brushes, scrubbing. | Lockers, parts for. |
| Cords and tassels for colors. | Naphthaline. |
| Covers, cot. | Oil, neatsfoot. |
| Flags: | Paint for bedsteads. |
| Advertising. | Pins, tent. |
| Post. | Rings, national color and stan |
| Storm. | Staffs, color, parts for. |
| Recruiting. | Sticks, drum. |
| Handles: | Stovepipe, tent. |
| Ax. | Tent parts. |
| Hatchet. | Trumpet crooks and mouthpi |

VETERINARY SUPPLIES.

| | |
|----------------|-----------------------|
| ges. | Labels. |
| s, medicine. | Oakum. |
| tin, ointment. | Plaster, adhesive. |
| es. | Silk for ligatures. |
| | Soap, castile. |
| , absorbent. | Sponges. |
| antiseptic. | Veterinary medicines. |

uch other supplies of the Quartermaster Corps of minor value which consumed in the maintenance and upkeep of the public service. Also such s as are not listed herein which become permanent fixtures to public gs, machinery, etc. These and all other articles in List B herein to be ed by the accountable officer only when issued to troops or for repairs hen installed as permanent fixtures.

rticles in List A will be dropped from accountability only under con- set forth in paragraph 2 of this circular.

ems of bedding for animals, bedding for enlisted men, fuel, gasoline, oil, and mineral oil when used as fuel or for lighting purposes are not ed in List B for the reason that the issue of these articles is directed lowances fixed in Army regulations or by authority of department anders.

order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

l:
EO. ANDREWS,
The Adjutant General.

**FACTS FROM BULLETIN NO. 16, WAR DEPARTMENT,
JUNE 22, 1916, CONTAINING THE ACT OF CONGRESS
OF JUNE 3, 1916, GENERALLY KNOWN AS THE
"NATIONAL DEFENSE ACT."**

17. Composition of Infantry Units. Each regiment of Infantry shall t of one colonel, one lieutenant colonel, three majors, fifteen captains, first lieutenants, fifteen second lieutenants, one headquarters company, achine-gun company, one supply company, and twelve Infantry com- organized into three battalions of four companies each.

a battalion shall consist of one major, one first lieutenant, mounted ion adjutant), and four companies. Each Infantry company in battalion onstist of one captain, one first lieutenant, one second lieutenant, one rgeant, one mess sergeant, one supply sergeant, six sergeants, eleven als, two cooks, two buglers, one mechanic, nineteen privates (first class), ty-six privates.

a Infantry headquarters company shall consist of one captain, mounted ental adjutant); one regimental sergeant major, mounted; three bat- sergeants major, mounted; one first sergeant (drum major); two color ts; one mess sergeant; one supply sergeant; one stable sergeant; one nt; two cooks; one horseshoer; one band leader; one assistant band one sergeant bugler; two band sergeants; four band corporals; two ns, first class; four musicians, second class; thirteen musicians, third our privates, first class, mounted; and twelve privates, mounted.

Each Infantry machine-gun company shall consist of one captain, mounted; one first lieutenant, mounted; two second lieutenants, mounted; one first sergeant, mounted; one mess sergeant; one supply sergeant, mounted; one stable sergeant, mounted; one horseshoer; five sergeants; six corporals; two cooks; two buglers; one mechanic; eight privates, first class; and twenty-four privates.

Each Infantry supply company shall consist of one captain, mounted; one second lieutenant, mounted; three regimental supply sergeants, mounted; one first sergeant, mounted; one mess sergeant; one stable sergeant; one corporal, mounted; one cook; one saddler; one horseshoer; and one wagoner for each authorized wagon of the field and combat train: Provided, That the President may in his discretion increase a company of Infantry by two sergeants, six corporals, one cook, one mechanic, nine privates (first class), and thirty-one privates; an Infantry machine-gun company by two sergeants, two corporals, one mechanic, four privates, first class, and twelve privates.

The commissioned officers required for the Infantry headquarters, supply, and machine-gun companies and for the companies organized into battalions shall be assigned from those hereinbefore authorized.

Sec. 27. Enlistments in the Regular Army. On and after the first day of November, nineteen hundred and sixteen, all enlistments in the Regular Army shall be for a term of seven years, the first three years to be in the active service with the organizations of which those enlisted form a part and, except as otherwise provided herein, the last four years in the Regular Army Reserve hereinafter provided for: Provided, That at the expiration of three years' continuous service with such organizations, either under a first or any subsequent enlistment, any soldier may be reenlisted for another period of seven years, as above provided for, in which event he shall receive his final discharge from his prior enlistment: Provided further, That after the expiration of one year's honorable service any enlisted man serving within the continental limits of the United States whose company, troop, battery, or detachment commander shall report him as proficient and sufficiently trained may, in the discretion of the Secretary of War, be furloughed to the Regular Army Reserve under such regulations as the Secretary of War may prescribe, but no man furloughed to the reserve shall be eligible to reenlist in the service until the expiration of his term of seven years: Provided further, That in all enlistments hereafter accomplished under the provisions of this Act three years shall be counted as an enlistment period in computing continuous-service pay: Provided further, That any noncommissioned officer discharged with an excellent character shall be permitted, at the expiration of three years in the active service, to reenlist in the organization from which discharged with the rank and grade held by him at the time of his discharge if he reenlists within twenty days after the date of such discharge: Provided further, That no person under the age of eighteen years shall be enlisted or mustered into the military service of the United States without the written consent of his parents or guardians, provided that such minor has such parents or guardians entitled to his custody and control: And provided further, That the President is authorized in his discretion to utilize the services of postmasters of the second, third, and fourth classes in procuring the enlistments of recruits for the Army, and for each recruit accepted for enlistment in the Army, the postmaster procuring his enlistment shall receive the sum of \$5.

In addition to military training, soldiers while in the active service shall hereafter be given the opportunity to study and receive instruction upon educational lines of such character as to increase their military efficiency and enable them to return to civil life better equipped for industrial, commercial, and general business occupations. Civilian teachers may be employed to aid

the Army officers in giving such instruction, and part of this instruction may consist of vocational education either in agriculture or the mechanic arts. The Secretary of War, with the approval of the President, shall prescribe rules and regulations for conducting the instruction herein provided for, and the Secretary of War shall have the power at all times to suspend, increase, or decrease the amount of such instruction offered as may in his judgment be consistent with the requirements of military instruction and service of the soldiers.

Sec. 29. Final Discharge of Enlisted Men. No enlisted man in the Regular Army shall receive his final discharge until the termination of his seven-year term of enlistment except upon reenlistment as provided for in this Act or as provided by law for discharge prior to expiration of term of enlistment, but when an enlisted man is furloughed to the Regular Army Reserve his account shall be closed and he shall be paid in full to the date such furlough becomes effective, including allowances provided by law for discharged soldiers: Provided, That when by reason of death or disability of a member of the family of an enlisted man occurring after his enlistment members of his family become dependent upon him for support, he may, in the discretion of the Secretary of War, be discharged from the service of the United States or be furloughed to the Regular Army Reserve, upon due proof being made of such condition: Provided further, That when an enlisted man is discharged by purchase while in active service he shall be furloughed to the Regular Army Reserve, unless, in the discretion of the Secretary of War, he is given a final discharge from the Army.

Sec. 30. Composition of the Regular Army Reserve. The Regular Army Reserve shall consist of, first, all enlisted men now in the Army Reserve or who shall hereafter become members of the Army Reserve under the provisions of existing law; second, all enlisted men furloughed to or enlisted in the Regular Army Reserve under the provisions of this Act; and, third, any person holding an honorable discharge from the Regular Army with character reported at least good who is physically qualified for the duties of a soldier and not over forty-five years of age who enlists in the Regular Army Reserve for a period of four years.

Sec. 31. The President is authorized to assign members of the Regular Army Reserve as reserves to particular organizations of the Regular Army, or to organize the Regular Army Reserve, or any part thereof, into units or detachments of any arm, corps, or department in such manner as he may prescribe, and to assign to such units and detachments officers of the Regular Army or of the Officers' Reserve Corps herein provided for; and he may summon the Regular Army Reserve or any part thereof for field training for a period not exceeding fifteen days in each year, the reservists to receive travel expenses and pay at the rate of their respective grades in the Regular Army during such periods of training; and in the event of actual or threatened hostilities he may mobilize the Regular Army Reserve in such manner as he may determine, and thereafter retain it, or any part thereof, in active service for such period as he may determine the conditions demand: Provided, That all enlistments in the Regular Army, including those in the Regular Army Reserve, which are in force on the date of the outbreak of war shall continue in force for one year, unless sooner terminated by order of the Secretary of War, but nothing herein shall be construed to shorten the time of enlistment prescribed: Provided further, That subject to such regulations as the President may prescribe for their proper identification, and location, and physical condition, the members of the Regular Army Reserve shall be paid semi-annually at the rate of \$24 a year while in the reserve.

Sec. 32. Regular Army Reserve in Time of War. When mobilized by order

of the President, the members of the Regular Army Reserve shall, so long as they may remain in active service, receive the pay and allowances of enlisted men of the Regular Army of like grades: Provided, That any enlisted man who shall have reenlisted in the Regular Army Reserve shall receive during such active service the additional pay now provided by law for enlisted men in his arm of the service in the second enlistment period: Provided further, That upon reporting for duty, and being found physically fit for service, members of the Regular Army Reserve shall receive a sum equal to \$3 per month for each month during which they shall have belonged to the reserve, as well as the actual necessary cost of transportation and subsistence from their homes to the places at which they may be ordered to report for duty under such summons: And provided further, That service in the Regular Army Reserve shall confer no right to retirement or retired pay, and members of the Regular Army Reserve shall become entitled to pension only through disability incurred while on active duty in the service of the United States.

Sec. 34. Reenlistment in Time of War. For the purpose of utilizing as an auxiliary to the Regular Army Reserve the services of men who have had experience and training in the Regular Army, or in the United States Volunteers, outside of the continental limits of the United States, in time of actual or threatened hostilities, and after the President shall, by proclamation, have called upon honorably discharged soldiers of the Regular Army to present themselves for reenlistment therein within a specified period, subject to such conditions as may be prescribed, any person who shall have been discharged honorably from said Army, with character reported as at least good, and who, having been found physically qualified for the duties of a soldier, if not over fifty years of age, shall reenlist in the line of said Army, or in the Signal, Quartermaster, or Medical Department thereof, within the period that shall be specified in said proclamation, shall receive on so reenlisting a bounty which shall be computed at the rate of \$8 for each month for the first year of the period that shall have elapsed since his last discharge from the Regular Army and the date of his reenlistment therein under the terms of said proclamation; at the rate of \$6 per month for the second year of such period; at the rate of \$4 per month for the third year of such period; and at the rate of \$2 per month for any subsequent year of such period; but no bounty in excess of \$300 shall be paid to any person under the terms of this section.

Sec. 37. The Officers' Reserve Corps. For the purpose of securing a reserve of officers available for service as temporary officers in the Regular Army, as provided for this Act and in section eight of the Act approved April twenty-fifth, nineteen hundred and fourteen, as officers of the Quartermaster Corps and other staff corps and departments, as officers for recruit rendezvous and depots, and as officers of volunteers, there shall be organized, under such rules and regulations as the President may prescribe not inconsistent with the provisions of this Act, an Officers' Reserve Corps of the Regular Army. Said corps shall consist of sections corresponding to the various arms, staff corps, and departments of the Regular Army. Except as otherwise herein provided, a member of the Officers' Reserve Corps shall not be subject to call for service in time of peace, and whenever called upon for service shall not, without his consent, be so called in a lower grade than that held by him in said reserve corps.

The President alone shall be authorized to appoint and commission as reserve officers in the various sections of the Officers' Reserve Corps, in all grades up to and including that of major, such citizens as, upon examination prescribed by the President, shall be found physically, mentally, and morally qualified to hold such commissions: Provided, That the proportion of officers

in any section of the Officers' Reserve Corps shall not exceed the proportion for the same grade in the corresponding arm, corps, or department of the Regular Army, except that the number commissioned in the lowest authorized grade in any section of the Officers' Reserve Corps shall not be limited.

All persons now carried as duly qualified and registered pursuant to section twenty-three of the Act of Congress approved January twenty-first, nineteen hundred and three, shall, for a period of three years after the passage of this Act, be eligible for appointment in the Officers' Reserve Corps in the section corresponding to the arm, corps, or department for which they have been found qualified, without further examination, except a physical examination, and subject to the limitations as to age and rank herein prescribed: Provided, That any person carried as qualified and registered in the grade of colonel or lieutenant colonel pursuant to the provisions of said Act on the date when this Act becomes effective may be commissioned and recommissioned in the Officers' Reserve Corps with the rank for which he has been found qualified and registered, but when such person thereafter shall become separated from the Officers' Reserve Corps for any reason the vacancy so caused shall not be filled, and such office shall cease and determine.

No person shall, except as hereinafter provided, be appointed or reappointed a second lieutenant in the Officers' Reserve Corps after he shall have reached the age of thirty-two years, a first lieutenant after he shall have reached the age of thirty-six years, a captain after he shall have reached the age of forty years, or a major after he shall have reached the age of forty-five years. When an officer of the Reserve Corps shall reach the age limit fixed for appointment or reappointment in the grade in which commissioned he shall be honorably discharged from the service of the United States, and be entitled to retain his official title and, on occasions of ceremony, to wear the uniform of the highest grade he shall have held in the Officers' Reserve Corps: Provided, That nothing in the foregoing provisions as to the ages of officers shall apply to the appointment or reappointment of officers of the Quartermaster, Engineer, Ordnance, Signal, Judge Advocate, and Medical sections of said Reserve Corps.

One year after the passage of this Act the Medical Reserve Corps, as now constituted by law, shall cease to exist. Members thereof may be commissioned in the Officers' Reserve Corps, subject to the provisions of this Act, or may be honorably discharged from the service. The Secretary of War may, in time of peace, order first lieutenants of the medical section of the Officers' Reserve Corps, with their consent, to active duty in the service of the United States in such numbers as the public interests may require and the funds appropriated may permit, and may relieve them from such duty when their services are no longer necessary. While on such duty they shall receive the pay and allowances, including pay for periods of sickness and leaves of absence, of officers of corresponding rank and length of active service in the Regular Army.

The commissions of all officers of the Officers' Reserve Corps shall be in force for a period of five years unless sooner terminated in the discretion of the President. Such officers may be recommissioned, either in the same or higher grades, for successive periods of five years, subject to such examinations and qualifications as the President may prescribe and to the age limits prescribed herein: Provided, That officers of the Officers' Reserve Corps shall have rank therein in the various sections of said Reserve Corps according to grades and to length of service in their grades.

Sec. 38. The Officers' Reserve Corps in War. In time of actual or threatened hostilities the President may order officers of the Officers' Reserve Corps,

subject to such subsequent physical examinations as he may prescribe, to temporary duty with the Regular Army in grades thereof which can not, for the time being, be filled by promotion, or as officers in volunteer or other organizations that may be authorized by law, or as officers at recruit rendezvous and depots, or on such other duty as the President may prescribe. While such reserve officers are on such service they shall, by virtue of their commissions as reserve officers, exercise command appropriate to their grade and range in the organizations to which they may be assigned, and shall be entitled to the pay and allowances of the corresponding grades in the Regular Army, with increase of pay for length of active service, as allowed by law for officers of the Regular Army, from the date upon which they shall be required by the terms of their orders to obey the same: Provided, That officers so ordered to active service shall take temporary rank among themselves, and in their grades in the organizations to which assigned, according to the dates of orders placing them on active service; and they may be promoted, in accordance with such rank, to vacancies in volunteer organizations or to temporary vacancies in the Regular Army thereafter occurring in the organizations in which they shall be serving: Provided further, That officers of the Officers' Reserve Corps shall not be entitled to retirement or retired pay, and shall be entitled to pension only for disability incurred in the line of duty and while in active service.

Any officer who, while holding a commission in the Officers' Reserve Corps, shall be ordered to active service by the Secretary of War shall, from the time he shall be required by the terms of his order to obey the same, be subject to the laws and regulations for the government of the Army of the United States, in so far as they are applicable to officers whose permanent retention in the military service is not contemplated.

Sec. 39. Instruction of Officers of the Officers' Reserve Corps. To the extent provided for from time to time by appropriations for this specific purpose, the Secretary of War is authorized to order reserve officers to duty with troops or at field exercises, or for instruction, for periods not to exceed fifteen days in any one calendar year, and while so serving such officers shall receive the pay and allowances of their respective grades in the Regular Army: Provided, That, with the consent of the reserve officers concerned, and within the limit of funds available for the purpose, such periods of duty may be extended for reserve officers as the Secretary of War may direct; Provided further, That in time of actual or threatened hostilities, after all available officers of any section of the Officers' Reserve Corps corresponding to any arm, corps, or department of the Regular Army shall have been ordered into active service, officers of Volunteers may be appointed in such arm, corps, or department as may be authorized by law: Provided further, That nothing herein shall operate to prevent the appointment of any officer of the Regular Army as an officer of Volunteers before all the officers of the Officers' Reserve Corps or any section thereof shall have been ordered into active service: And provided further, That in determining the relative rank and the right to retirement of an officer of the Regular Army, active duty performed by him while serving in the Officers' Reserve Corps shall not be reckoned.

Sec. 57. Composition of the Militia. The militia of the United States shall consist of all able-bodied male citizens of the United States and all other able-bodied males who have or shall have declared their intention to become citizens of the United States, who shall be more than eighteen years of age and, except as hereinafter provided, not more than forty-five years of age, and said militia shall be divided into three classes, the National Guard, the Naval Militia, and the Unorganized Militia.

Sec. 58. Composition of the National Guard. The National Guard shall

consist of the regularly enlisted militia between the ages of eighteen and forty-five years organized, armed, and equipped as hereinafter provided, and of commissioned officers between the ages of twenty-one and sixty-four years.

Sec. 59. Exemptions from Military Duty. The Vice President of the United States; the officers, judicial and executive, of the Government of the United States and of the several States and Territories; persons in the military or naval service of the United States; customhouse clerks; persons employed by the United States in the transmission of the mail; artificers and workmen employed in the armories, arsenals, and navy yards of the United States; pilots; mariners actually employed in the sea service of any citizen or merchant within the United States, shall be exempt from militia duty without regard to age, and all persons who because of religious belief shall claim exemption from military service, if the conscientious holding of such belief by such person shall be established under such regulations as the President shall prescribe, shall be exempted from militia service in a combatant capacity; but no person so exempted shall be exempt from militia service in any capacity that the President shall declare to be noncombatant.

Sec. 69. Enlistments in the National Guard. Hereafter the period of enlistment in the National Guard shall be for six years, the first three years of which shall be in an active organization and the remaining three years in the National Guard Reserve, hereinafter provided for, and the qualifications for enlistment shall be the same as those prescribed for admission to the Regular Army: Provided, That in the National Guard the privilege of continuing in active service during the whole of an enlistment period and of reenlisting in said service shall not be denied by reason of anything contained in this Act.

Sec. 70. Federal Enlistment Contract. Enlisted men in the National Guard of the several states, territories, and the District of Columbia now serving under enlistment contracts which contain an obligation to defend the Constitution of the United States and to obey the orders of the President of the United States shall be recognized as members of the National Guard under the provisions of this Act for the unexpired portion of their present enlistment contracts. When any such enlistment contract does not contain such obligation, the enlisted man shall not be recognized as a member of the National Guard until he shall have signed an enlistment contract and taken and subscribed to the following oath of enlistment, upon signing which credit shall be given for the period already served under the old enlistment contract: "I do hereby acknowledge to have voluntarily enlisted this — day of —, 19—, as a soldier in the National Guard of the United States and of the State of —, for the period of three years in service and three years in the reserve, under the conditions prescribed by law, unless sooner discharged by proper authority. And I do solemnly swear that I will bear true faith and allegiance to the United States of America and to the State of —, and that I will serve them honestly and faithfully against all their enemies whomsoever, and that I will obey the orders of the President of the United States and of the governor of the State of —, and of the officers appointed over me according to law and the rules and articles of war."

Sec. 71. Hereafter all men enlisting for service in the National Guard shall sign an enlistment contract and take and subscribe to the oath prescribed in the preceding section of this Act.

Sec. 72. Discharge of Enlisted Men from the National Guard. An enlisted man discharged from service in the National Guard shall receive a discharge in writing in such form and with such classification as is or shall be prescribed for the Regular Army, and in time of peace discharges may be given prior to the expiration of terms of enlistment under such regulations as the President may prescribe.

Sec. 73. Federal Oath for National Guard Officers. Commissioned officers of the National Guard of the several states, territories, and the District of Columbia now serving under commissions regularly issued shall continue in office, as officers of the National Guard, without the issuance of new commissions: Provided, That said officers have taken or shall take and subscribe to the following oath of office: "I, ———, do solemnly swear that I will support and defend the Constitution of the United States and the constitution of the State of ———, against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I will obey the orders of the President of the United States and of the governor of the State of ———; I make this obligation freely, without any mental reservation or purpose of evasion, and that I will well and faithfully discharge the duties of the office of ——— in the National Guard of the United States and of the State of ——— upon which I am about to enter, so help me God."

Sec. 74. Qualifications for National Guard Officers. Persons hereafter commissioned as officers of the National Guard shall not be recognized as such under any of the provisions of this Act unless they shall have been selected from the following classes and shall have taken and subscribed to the oath of office prescribed in the preceding section of this Act: Officers or enlisted men of the National Guard; officers on the reserve or unassigned list of the National Guard; officers, active or retired, and former officers of the United States Army, Navy, and Marine Corps; graduates of the United States Military and Naval Academies and graduates of schools, colleges, and universities where military science is taught under the supervision of an officer of the Regular Army, and, for the technical branches and staff corps or departments, such other civilians as may be especially qualified for duty therein.

Sec. 75. The provisions of this Act shall not apply to any person hereafter appointed an officer of the National Guard unless he first shall have successfully passed such tests as to his physical, moral, and professional fitness as the President shall prescribe. The examination to determine such qualifications for commission shall be conducted by a board of three commissioned officers appointed by the Secretary of War from the Regular Army or the National Guard, or both.

Sec. 76. Filling of Vacancies When Drafted Into Federal Service. All vacancies occurring in any grade of commissioned officers in any organization in the military service of the United States and composed of persons drafted from the National Guard under the provision of this Act shall be filled by the President, as far as practicable by the appointment of persons similarly drafted from said guard, and in the manner prescribed by law for filling similar vacancies occurring in the volunteer forces.

Sec. 77. Elimination and Disposition of Officers. At any time the physical character, capacity, and general fitness for the service of any National Guard officer may be determined by an efficiency board of three commissioned officers senior in rank to the officer whose fitness for service shall be under investigation, and if the findings of such board be unfavorable to such officer and not approved by the official authorized to appoint such an officer, he shall be discharged. Commissions of officers of the National Guard may be vacated by resignation, absence without leave for three months, upon the recommendation of an efficiency board, or pursuant to sentence of a court-martial. Officers of said guard rendered surplus by the disbandment of their organizations shall be placed in the National Guard Reserve. Officers may, upon their own application, be placed in the said reserve.

Sec. 78. The National Guard Reserve. Subject to such rules and regulations as the President may prescribe, a National Guard Reserve shall be organized in each state, territory, and the District of Columbia, and shall consist

such organizations, officers, and enlisted men as the President may prescribe, or members thereof may be assigned as reserves to an active organization of the National Guard: Provided, That members of said reserve, when engaged in field or coast-defense training with the active National Guard, shall receive the same Federal pay and allowances as enlisted men of like grade on the active list of said guard when likewise engaged: Provided further, That, except as otherwise specifically provided in this Act, no commissioned or enlisted reservist shall receive any pay or allowances out of any appropriation made by Congress for National Guard purposes.

Sec. 79. Reserve Battalions for Recruit Training. When members of the National Guard and the enlisted reserve thereof of any state, territory, or the District of Columbia shall have been brought into the service of the United States in time of war, there shall be immediately organized, either from such enlisted reserve, or from the unorganized militia, in such state, territory, or district, one reserve battalion for each regiment of Infantry or Cavalry, or each nine batteries of Field Artillery, or each twelve companies of Coast Artillery, brought into the service of the United States, and such reserve battalion shall constitute the fourth battalion of any such regiment or twelve companies of Coast Artillery. Reserve battalions shall consist of four companies of such strength as may be prescribed by the President of the United States. When the members of three or more regiments of the National Guard of any state, territory, or district shall have been brought into the service of the United States, the reserve battalions of such regiments may be organized into provisional regiments and higher units. If for any reason there shall not be enough voluntary enlistments to keep the reserve battalions at the prescribed strength, a sufficient number of the unorganized militia shall be drafted into the service of the United States to maintain each of such battalions at the proper strength. As vacancies occur from death or other causes in any organization in the service of the United States and composed of men taken from the National Guard, men shall be transferred from the reserve battalions to the organizations in the field so that such organizations may be maintained at war strength. Officers for the reserve battalions provided for herein shall be drafted from the National Guard Reserve or Coast Artillery companies of the National Guard or the Officers' Reserve Corps, such officers to be taken, if practicable, from the states, respectively, in which the battalions shall be organized. Officers and noncommissioned officers returned to their home stations because of their inability to perform active field service may be assigned to reserve battalions for duty, and all soldiers invalided home shall be assigned to and carried on the rolls of reserve battalions until returned to duty or until discharged.

Sec. 101. National Guard, When Subject to Laws Governing Regular Army. The National Guard when called as such into the service of the United States shall, from the time they are required by the terms of the call to respond thereto, be subject to the laws and regulations governing the Regular Army, so far as such laws and regulations are applicable to officers and enlisted men whose permanent retention in the military service, either on the active list or on the retired list, is not contemplated by existing law.

Sec. 111. National Guard When Drafted Into Federal Service. When Congress shall have authorized the use of the armed land forces of the United States, for any purpose requiring the use of troops in excess of those of the Regular Army, the President may, under such regulations, including such physical examination, as he may prescribe, draft into the military service of the United States, to serve therein for the period of the war unless sooner discharged, any or all members of the National Guard and of the National Guard Reserve. All persons so drafted shall, from the date of their draft, stand

discharged from the militia, and shall from said date be subject to such orders and regulations for the government of the Army of the United States as may be applicable to members of the Volunteer Army, and shall be employed in such organizations corresponding as far as practicable to those of the Regular Army, or shall be otherwise assigned as the President may direct. The commissioned officers of said organizations shall be appointed from among the ranks of the Regular Army, thereof, officers with rank not above that of colonel to be appointed by the President alone, and all other officers to be appointed by the President, with the advice and consent of the Senate. Officers and enlisted men of said organizations in the service of the United States under the terms of this section shall receive the same pay and allowances as officers and enlisted men of the Regular Army of the same grades and the same prior service.

Sec. 112. Rights to Pensions. When any officer or enlisted man of the Regular Army or National Guard drafted into the service of the United States in time of war, is disabled by reason of wounds or disability received or incurred while in the active service of the United States in time of war, he shall be entitled to the benefits of the pension laws existing at the time of his service, and if such officer or enlisted man dies in the active service of the United States in time of war or in returning to his place of residence after being mustered out of such service, or at any other time in consequence of wounds or disability received in such active service, his widow and children, if any, shall be entitled to all the benefits of such pension laws.

Sec. 114. Temporary Vacancies in Regular Army Due to Details. In time of war the temporary vacancies created in any grade or rank not above that of colonel among the commissioned personnel of any arm, corps, or department of the Regular Army, through appointments of officers thereof to higher rank in organizations composed of members taken from the National Guard, shall be filled by temporary promotions according to such regulations as may be prescribed by the President, with the advice and consent of the Senate, in rank from officers holding commissions in the next lower grade in the arm, staff corps, or department, and all vacancies created in any grade or rank by such temporary promotions shall be in like manner filled from, and thus the temporary vacancies in, the next lower grade, and the vacancies that may thereafter exist in said arm, staff corps, or department and that can not be filled by temporary promotions, as prescribed in this section, may be filled by temporary appointment of officers of such number and grade or grades as may be necessary to maintain said arm, corps, or department at the full commission strength authorized by law: Provided, That in the staff corps and departments subject to the provisions of sections twenty-six and twenty-seven of the Act of February 26, 1901, second, nineteen hundred and one, and Acts amendatory thereof, temporary vacancies that can not be filled by temporary promotions as hereinbefore prescribed shall be filled by temporary details in the manner prescribed in sections twenty-six and twenty-seven, and Acts amendatory thereof, and the resulting temporary vacancies in the branches of the Army from which such details shall be so made shall be filled as hereinbefore in this section prescribed. Provided further, That officers temporarily promoted or appointed under the terms of this section shall be promoted or appointed by the President, with the advice and consent of the Senate, for terms that shall not extend beyond the war or the passing of the emergency for which additional forces were brought into the military service of the United States, and at the termination of the war or the passing of the emergencies said officers shall be discharged from the positions held by them under their temporary commissions or appointments, and officers detailed as herein authorized shall be relieved from their temporary details: And provided further, That officers temporarily promoted or appointed under the provisions of this section shall not vacate their permanent commissions.

sions nor be prejudiced in their relative or lineal standing in the Regular Army.

Sec. 115. Physical Examination. Every officer and enlisted man of the National Guard who shall be called into the service of the United States as such shall be examined as to his physical fitness under such regulations as the President may prescribe without further commission or enlistment: Provided, That immediately preceding the muster out of an officer or enlisted man called into the active service of the United States he shall be physically examined under rules prescribed by the President of the United States, and the record thereof shall be filed and kept in the War Department.

Bulletin }
No. 49. }

War Department,
Washington, November 20, 1916.

1. A slide rule showing the percentage of accuracy of an estimate of distance, designed by Capt. Parker Hitt, Nineteenth Infantry, has been adopted for use in the military service, and the following information with reference thereto is published for the information and guidance of all concerned. These rules are to be issued at the rate of one to each company of Infantry, troop of Cavalry, headquarters company or troop and machine gun company or troop. Instructions for their use, with illustrations, follow.

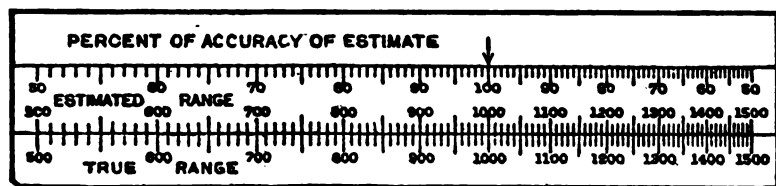


FIG. 1.

2. Figure 1 shows the general idea of the slide rule. The bottom scale is the scale of the true range. The next scale is the scale of the estimate, while the next scale in connection with the arrow gives the percentage of accuracy of the estimate. To use the rule, set the slide section so that the estimate comes opposite the true range; the arrow will then point to the percentage of accuracy of the estimate.

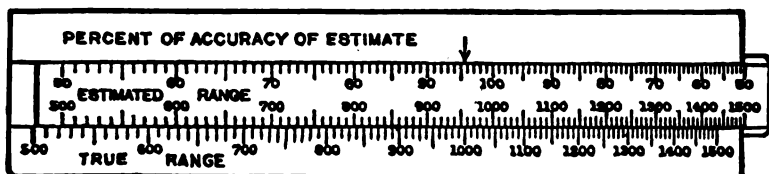


FIG. 2.

3. Figure 2 shows how the slide rule is used in finding the percentage of accuracy of an estimate. The true range is 900 yards, while the estimate is 860 yards. The percentage of accuracy of the estimate is shown to be 95.5 per cent.

By order of the Secretary of War:

Official:

H. P. McCAIN,
The Adjutant General.

H. L. SCOTT,
Major General, Chief of Staff.

EXTRACTS FROM ENGINEER FIELD MANUAL

- I. RECONNAISSANCE**
- II. BRIDGES**
- III. ROADS**
- V. FIELD FORTIFICATION**
- VI. ANIMAL TRANSPORTATION**

FROM

FOURTH (REVISED) EDITION, 1912

The following extracts are taken from the Engineer Field Manual, States Army, prepared under the direction of the Chief of Engineers, Army, and published to the Army in the fourth and revised edition, 1911.

EXTRACTS FROM ENGINEER FIELD MANUAL PART I.

RECONNAISSANCE.

Topographical reconnaissance, as here treated, includes suitable means for finding and recording all needful information of a terrain in the shortest possible time, and within the limits of accuracy required for the operations of war in the field.

Also, the interpretation of a record when made, to determine from it the probable or unfavorable effect of the terrain, for the purpose of directing military operations with reference thereto.

The information to be obtained in a topographical reconnaissance may be divided under the headings of **time, cover, resources and nomenclature**. The reconnaissance should permit a determination of the time which a column will require to pass between any two given points by showing the distance between them and the condition of the road or country which must be traversed, as regards its effect on the rate of march; the accidents of ground which will afford cover to an army or to the enemy; the location, quantity, and quality of water, fuel, and other resources, etc., and should give to each feature its local name. The last requirement is of great importance and is the one most often neglected.

The fundamental topographical operation is the determination of the position and distance of one point from another point.

The direction of one point from another is composed of two elements: First, the angle made by the line joining the two points, with a vertical plane passing through one of them. This angle is measured in a horizontal plane and is called the **azimuth**; second, the angle made by the line joining the two points, with a horizontal plane passing through one of them. This angle is measured in a vertical plane passing through both points, and for convenience will be called the **gradient**.

Azimuths. As an infinite number of vertical planes may pass through a given point, it is necessary to select one as the origin of azimuths. In topographical reconnaissance the plane selected is that of the magnetic meridian at the point. Its direction in a horizontal plane is the line of rest of a freely suspended and balanced magnetic needle, and this line is the origin of azimuths. From this origin azimuths are measured in degrees of arc from 0 to 360,

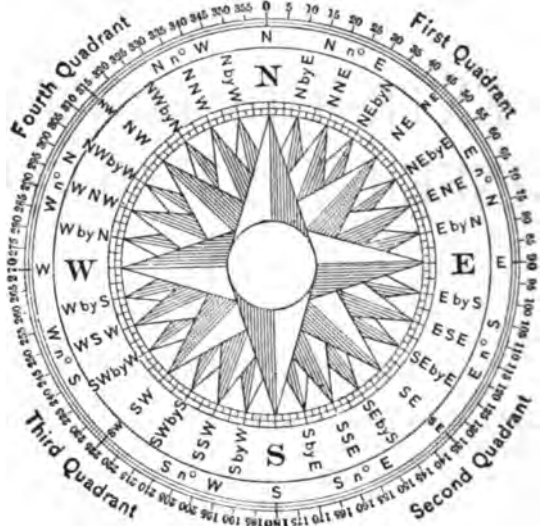


FIG. 1.

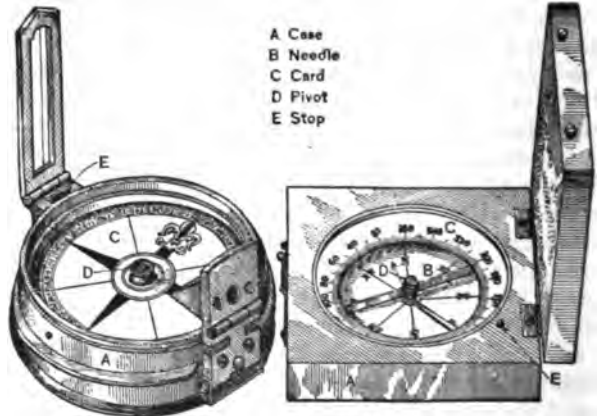


FIG. 3.

FIG. 2.

passing from the north point through the east, south, and west to north again. Azimuths of 0° to 90° are in the northeast or first quadrant, Fig. 1; those of 90° to 180° are in the southeast or second quadrant; those from 180° to 270° in the southwest or third quadrant, and those from 270° to 360° in the northwest or fourth quadrant.

Azimuths are bearings between stations taken in the direction of progress of the reconnaissance. Bearings taken in the other direction are called **back azimuths**. If the stations are numbered in the order they are occupied, a bearing from a lower to a higher numbered station is an azimuth, and a bearing from a higher to a lower numbered station is a back azimuth.

The method of stating azimuths described above is that commonly used in surveying when direction is maintained by carrying an azimuth. It is the simplest to understand and use, and permits the angle between any two lines to be read at a glance.

There are other ways of expressing azimuths, adapted to special conditions or circumstances. In astronomical work and tables the azimuth is reckoned from the south, through W., N., and E., 360° to south again. Any astronomical azimuth differs from the corresponding survey azimuth by 180° .

In navigation azimuths are reckoned from the mariner's compass, and are called bearings. The dial is divided into 32 points and each point into quarter points. The names of the points and their relation to survey azimuths are shown in Fig. 1.

Land surveyors reckon bearings in both directions from N. and S. Their compasses are graduated 90° in each direction from the N. and S. points, and a bearing is stated by giving the angle and direction from N. or S., whichever may be nearest; as N. 46° W., S. 29° E.

Formerly such bearings were reckoned from the nearest cardinal point, N., S., E., or W., as W. 44° N., which corresponds to N. 46° W. This method is very convenient for giving directions in orders and reports. It is shown in the middle circle of Fig. 1.

A special method of azimuth measurement has been adopted for use in the fire control of field artillery. The unit, called a mil, is the arc whose length is one one-thousandth of the radius. By computation this arc is $3'.437+$. This length is not commensurate with the length of the circle being contained in it 6,283.24 times. For convenience of graduation, the circle is divided into 6,400 equal parts, assumed to be mils, the angular value of each of which is $3'.375$, differing from the computed value by nearly 2 per cent, which error enters into all determinations and is neglected.

Each change of 1 mil in az. corresponds to a change in position in a direction perpendicular to the line of sight of one one-thousandth of the range. This method reduces all elements of fire control to functions of the range.

5. The **compass** is the standard instrument for the determination of azimuths in topographical reconnaissance. It consists of case, needle, card, pivot, and stop, Figs. 2 and 3.

The **card** may be **fixed** to the case or movable, attached to the needle and revolving with it. The stop raises the needle from the pivot and clamps it against the glass cover. A good compass must have a needle sufficiently magnetized to settle accurately and a pivot free from rust and roughness. If the needle becomes too weak, it may be remagnetized by rubbing gently from pivot to point on a permanent or electro magnet, each end of the needle to be rubbed on the pole which attracts it. In returning the needle for another

stroke, carry it a foot or more from the magnet. The pivot may be polished with Putz pomade or similar substances on a soft stick.

If possible, however, turn in the defective compass and get a good one in place of it.

A needle loses part of its magnetism if kept for a long time out of the plane of the magnetic meridian. In storing a compass, care should be taken to place it in the case or on the shelf with the N. end of its needle pointing north.

6. **Dip.** The earth's magnetic poles are beneath the surface, and the end of a symmetrical needle is drawn downward out of the horizontal plane so as to point to the nearest pole. This displacement from the horizontal plane is called **dip**, and is measured in degrees of arc. The dip increases generally with the latitude. Immediately over a magnetic pole the needle stands vertical, or has a dip of 90°. Near the equator, where north and south poles exert an equal influence, the needle may be horizontal, or the dip 0.

For reading azimuths the needle must be kept in a horizontal plane, which is done by a small movable counterweight. For considerable changes in latitude, as in passing from the United States to the Philippine Islands, the counterweight will require adjustment to keep the needle horizontal; and in passing from the northern to the southern hemisphere, the counterweight must be changed to the opposite side of the pivot.

7. There are two adopted forms of compass for topographical reconnaissance, one of the fixed and one of the movable card type.

The box compass is shown in Fig. 2. The card is fixed and graduated counter-clockwise from No. 360° to N. again. The E. and W. points, if marked, are reversed. The stop is operated by opening and closing the lid. The lid is hinged parallel to the north and south line, and when open its upper edge forms a convenient line of sight. The needle when stationary can be read to the nearest degree by the eye, and to half a degree with a reading glass.

Another pattern which has been issued has the lid on an E. and W. side, and the sighting line is a fine line drawn across the lid.

Some of the box compasses in use are graduated clockwise. Care must be taken in using these. The true azimuth is 360° minus the reading of the needle. The actual reading of such a compass should never be recorded; the corresponding azimuth only should be set down. It will be safer to add a rough graduation in the proper direction.

8. The prismatic compass is shown in Fig. 3. It is of the movable-card type. It is read through a reflecting inverting magnifying prism. The prism revolves on an axis and is over the circumference of the card for reading, and against the edge of the case for carrying. It slides up and down in the support which attaches it to the case, which motion permits it to be focussed on the scale. The focus for each observer should be determined when the compass is resting on a level surface, and not thereafter varied. If, when so adjusted, the scale is out of focus when the sight is taken, it shows that the card is not horizontal, and the case must be tilted until the scale comes into focus. The needle may be compensated for dip by a bit of sealing wax stuck on the underside of the card. The leaf sight folds down for carrying, and in so doing stops the needle.

In the pattern illustrated, the metal cover goes on outside the leaf sight when folded down. When the compass is used, the cover is removed and placed for convenience on the bottom of the case, where it fits closely. In another pattern, the metal cover has a window in it opposite the prism, and is not

removed when sighting. The leaf sight folds down outside the cover and is not protected.

9. Compass Errors. The magnetic and true meridians generally do not coincide. The angle which the needle makes with the true north at any place is called the declination of the needle, or magnetic declination at that place. For latitudes of 60° and less the declination ordinarily varies between limits of 20° east and 20° west. For high latitudes the declination is greater and more irregular.

There are daily and secular variations of declination at every place, but they are too small to have any bearing on the class of work now under consideration, and for purposes of topographical reconnaissance the declination at any place may be considered constant for the period of the survey.

A close watch must be kept for the change in declination from place to place, and for local disturbances of the needle due to the proximity of magnetized substances, natural or artificial.

Change of declination or normal direction of the needle should be checked frequently. If a change is observed, it is certain to have taken place gradually, and, if desired, may be distributed among the courses run, though the change will seldom be great enough in a single day's work to make its distribution practicable.

Abnormal deflections of the needle, due to local disturbances, are sudden and erratic and should not be distributed among all the courses, but only among those in which there is reason to believe the disturbance occurs.

A simple way to detect—not measure—such disturbances is to take frequent back azimuths. If the position of the needle is normal at both stations, the azimuth and back azimuth will differ by 180° . If there is local attraction on the course, it will usually be stronger or cause a greater deflection at one station than at the other, and the azimuth and back azimuth will not differ by 180° .

Another way is, when taking the bearing to a station, to select a well-defined point beyond and on the same course. On arriving at the new station, take a bearing from there to the selected point ahead. If it is the same as the first bearing to that point, there probably is no local disturbance. If the two bearings to the same point differ, there probably is local disturbance.

A course in which local attraction is detected or suspected should be noted, and if, on closing, an azimuth correction is necessary, it should be applied to the suspected courses.

10. Gradients. There can be but one horizontal plane through a given point, and it may be determined by the spirit level or plumb line without serious error. Gradients are measured by taking the angle of the line of direction with a horizontal line through the point.

11. Gradients are commonly called grades or slopes and are expressed in degrees, as 1° , 2° , $3\frac{1}{2}^\circ$, $6\frac{1}{4}^\circ$ slope, etc.

Each angle corresponds to two slopes, one up and one down from the initial point. Rising grades may be recorded with a + before, or an R after the number of degrees; falling grades with — before, or F after. On a map, general slopes are indicated by an arrow pointing in the direction of the drainage, with the gradient written beside it, thus $\xrightarrow{4^\circ}$. Road grades are indicated by an arrowhead at top and bottom of the grade, the one at top pointing toward the road and the one at bottom away from it, thus $\downarrow \xrightarrow{4^\circ} \downarrow$.

Gradients are also expressed by the relation between the change of elevation—rise or fall—and the corresponding horizontal distance. This relation is stated in various ways.

By the rise in ft. per 100 ft. hor. or the ft. rise as a percentage, as "the slope is 4 in 100, or 4 per cent."

By the ft. rise for 1 mile of hor. distance; as "the grade is 50 ft.," or "a 50 ft. grade." This method and the preceding are commonly used for R. R. track grades.

By the number of ft. hor. corresponding to 1 ft. rise; as 3 to 1, 10 to 1. This method is commonly used for slopes of embankments and excavations when less than 45° .

By the ft. rise corresponding to 1 ft. hor.; as, 1 on 1, 6 on 1. This method is commonly used for slopes of embankments and excavations, etc., from 45° to 75° .

By the number of inches hor. corresponding to 1 ft. rise; as, 3 ins. to the ft., 1 inch in the ft. This method is commonly used for gradients of 70° and over, and is called batter.

Paragraph 12 eliminated, as it has no application to Infantry.

13. The **clinometer** is the instrument adopted for measuring gradients, with the horizontal plane indicated by a spirit level. It consists, Fig. 4, of a sight-

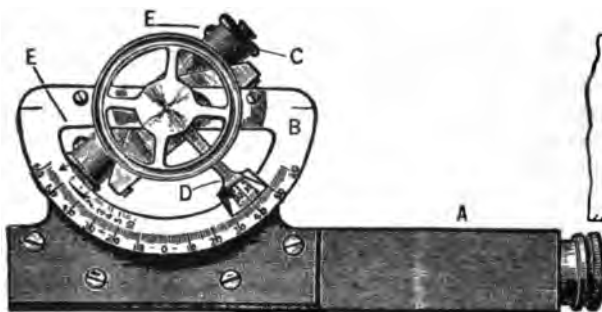


FIG. 4.

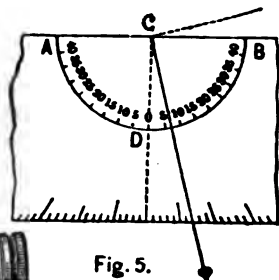


Fig. 5.

tube, A, with a graduated vertical arc, B, fastened to it, and a level-tube, C, with attached index arm, D, revolving about a horizontal axis through the center of the vertical arm. The base of the sight-tube is a plane parallel to the line of sight. Under the center of the level-tube is an opening in the sight-tube, inside of which is a mirror occupying one-half the width of the sight-tube and facing the eye end at an angle of 45° with the line of sight. A horizontal wire extends across the middle of the sight-tube in front of the mirror. When the bubble is brought to the center, its reflected image seen from the eye end appears to be bisected by the wire.

The central position of the bubble indicates that the level-tube is horizontal, and the reading of the index arm upon the arc is the angle between the axis of the level-tube and the line of sight. This reading should be 0° when these lines are parallel. The vertical arc is graduated each way from 0° at its middle point. The index arm has a double vernier whose smallest reading is $10'$ of arc. Gradients of more than 45° are difficult to measure on account of the foreshortening of the level-tube as reflected in the mirror.

When the vernier is set at 0° , the instrument may be used as a hand level to locate points at the same elevation as the eye. The graduation on the inner edge of the vertical limb corresponds to the ordinary fractional method of

indicating slopes, as 1 on 2, 1 on 10, etc. This scale should be read on the forward edge of the index arm, or in some forms on a special index mark on a shorter part of the arm.

The level-tube is made parallel to the sight-tube by the adjusting screws E, Fig. 4. To test and correct the adjustment, place the instrument on a smooth surface, the more nearly horizontal the better, and mark carefully the position of one side and one end of the sight-tube. Center the bubble by moving the index arm, and read the vernier. Reverse the instrument, bringing the other side and end of the sight-tube to the marks. Center the bubble by moving the index arm, and read again. Note and record for each reading its direction from 0° , whether toward or away from the eye end of the sight-tube. Note and record also the location of the eye end in each position with respect to some fixed object, so that the instrument can be replaced in the first position or second position at will.

If the first and second readings are the same, the adjustment is correct. If they differ, take the mean of the two and set the vernier at that reading on the side corresponding to the first reading. Place the instrument in the first position and bring the bubble to the center by means of the adjusting screws E. For a check, set the same reading on the side corresponding to the second reading and place the instrument in the second position. The bubble should come to the middle.

14. The determination of gradients by the plumb line is quicker and simpler, but less precise, than with the clinometer, though exact enough for ordinary purposes. If a line of sight be taken along the edge of a board and a line be drawn on the board perpendicular to the sighting edge, this line, when the board is held in a vertical plane, will make the same angle with the plumb line that the sighting edge makes with the horizontal, or, in other words, will indicate the gradient, Fig. 5.

Such a construction is called a slope board and is readily improvised. The scale may be constructed by sweeping an arc of a circle AB, Fig. 5, from the point C, at the intersection of the perpendicular and the sighting edge. From the perpendicular at D lay off each way on the arc chords equal in length to the radius CD divided by 57.3. It is convenient to take a radius of 5.73 ins., or $5\frac{3}{4}$ ins. scant, when the chords will be $\frac{1}{10}$ in., or a radius of $7\frac{7}{16}$ ins., when the chords will be $\frac{1}{8}$ in., accordingly as the scale used is graduated to 10ths or 8ths.

Short radial lines drawn at the ends of the chords form a graduation in degrees. The scale may be drawn on the lower edge of the board by prolonging the radial lines as indicated in the figure. The plumb line is suspended from the point C.

In use, the board is held so that the plumb line swings free but very close to the board. The sighting edge is directed to the object and when the line is steady the board is quickly tilted so that the line draws across the edge. The board is then turned to a horizontal position or nearly so, and the reading taken; or, when the line is steady, it may be pressed against the board with the finger and held in place until the reading is taken. With a straight scale and for steep grades, the latter method is better.

15. Elevations. From the slope and distance the elevation of a point above an assumed plane of reference may be derived. The difference of height of any two points is known by comparing their elevations above a common plane, called the plane of reference, or datum.

The plane of reference is taken low enough so that no point of the area covered by the reconnaissance will be below it. This makes all elevations relative. Knowing the height of a point above this plane of reference, the height of any other point may be obtained by taking the gradient and distance to that point, deriving from them the difference of height between the two points, adding this difference to the elevation of the first point if the gradient is rising or subtracting it if the gradient is falling.

The elevation for a given gradient and distance depends upon whether the distance is measured along the gradient or along the horizontal. Distances paced are along the gradient. Those measured with a chain will also be on the slope, though sometimes care is taken to hold the chain horizontal in which case the table for horizontal distances is to be used. Those determined by intersections or scaled from a map are along the horizontal.

Paragraphs 16 to 20 eliminated as they have no application to Infantry.

21. Use of Compasses. A good needle requires time to settle even if the case is firmly supported, and the user should cultivate the knack of catching it at the middle of its swing, which is the desired reading. If the compass cannot be supported, it is always better to do so. Then the sight can be taken and the position of the eye changed to read the needle. Wait until the swing gets down to 4° or 5° , which it will usually do in a few seconds, catch the highest and the lowest readings on the same swing and take the mean for the true reading. If the first swings are very large, catch the mean with the stop near the middle of the swing and release it quickly. It will suddenly check the swings and shorten the time in which the reading can be taken.

In using the box compass without a support, hold it sufficiently high so that the eye so that the swing of the needle can be seen. Point the edge of the compass in the required direction, catch the needle with the stop in the middle of the swing and hold it stopped until the reading is taken. Stop readings are less accurate than sight readings, as the needle may be displaced slightly when it strikes the pivot. When the stop is used, press it quickly and firmly. Always use a fixed-card compass from the south end of the card and read the number on the needle.

With the prismatic compass the stop is not used except to check the readings. Utilize a support if practicable. The prism having been adjusted for focus, as already explained, par. 8, adjust the case so as to bring the scale into focus, and when the swings become small, read the extreme readings and take the mean.

Compasses for night marching are on the market, but are not very reliable. They have the dial rendered luminous by a paint. After exposure to bright or strong daylight, they give off light, at first rather strong, but gradually diminishing in intensity. After a few hours they are not bright enough for much use.

The surest preparation for night marching is a provision for illuminating the compass by ordinary means without allowing the light to be seen.

Paragraphs 22 to 24 eliminated as they have no application to Infantry.

25. Distances passed over are ordinarily measured by the stride of a man, the pace of a horse, or by the revolutions of a wheel. Distances not passed over are determined by intersection, or are estimated.

Pacing on Foot. The length of a man's pace at a natural walk is about 30 inches, varying somewhat above and below. Each sketcher must determine

length of pace by walking several times over a known distance. An unnatural stride should never be taken. Knowing the length of a pace or step, the measurement of a distance is only a matter of counting steps. The counting may be done mentally, and with practice becomes a subconscious operation, leaving the attention free to take note of surrounding objects and conditions. The greatest danger is of dropping one hundred paces. It is better to keep a tally of the hundreds.

A pace tally is issued for use when desired. It is the size and shape of an ordinary watch.

On level ground, careful pacing will give distance correct to 3 per cent or less. The normal length of pace decreases on slopes. The decrease varies with the slope and with the direction, whether ascending or descending.

Paragraphs 26 and 27 eliminated as they have no application to Infantry.

28. Pacing Mounted. The average walk of a horse is a mile in 16 mins., or $3\frac{3}{4}$ miles per hour, making 120 steps, covering 110 yds. per min., the step being 0.916 of a yd., or 33 ins.

The average trot is a mile in 8 mins., or $7\frac{1}{2}$ miles an hour, making 180 steps, covering 220 yds. per min., the length of step being 1.22 yds. or 44 ins.

It will generally be found more convenient in pacing, both on foot and mounted, to count the steps of one foot only, and multiply the number counted by the stride of one foot, which is twice the length of step given above. In this case, the number counted is doubled for use with the tables and scales given herein.

Timing. Counting the steps of a horse diverts the attention more than is desirable, and it is better to determine distances in mounted reconnaissance from the times occupied by the horse in passing over them. The rating is done by ascertaining the time required to pass over a known distance. Time and step ratings should be taken together by counting and timing at once. Ratings should be taken before the reconnaissance, if possible, but for short stretches of hasty work, the average given above may be used without serious error.

Horses travel better in pairs, and two men should be sent out together, one to do the sketching and the other to give his entire attention to taking the time and keeping his horse at a regular gait. It is better to rate the pairs together. If it has not been done, take the rate of the timer's horse.

When a sketcher is traveling with a party and must keep their gait, an occasional count of his horse's steps for a minute or two will give a special scale for use in plotting.

29. The speed of a horse over road grades, even in moderately hilly countries, is not affected by the slope sufficiently to make an allowance necessary. Distances up and down grades measured by timing in mounted reconnaissance will require no correction.

30. The Walk is the Normal Gait for Reconnaissance. If greater speed is necessary, the timer may go on while the sketcher is taking angles and plotting; the latter taking the trot or the gallop and overtaking the timer just before he reaches the next station. This method should be used only when the required distance can not be covered at a walk.

If circumstances require short distances to be covered at a trot or gallop, the times may be reduced to walking time by multiplying by 2 for the trot and 3 for the gallop.

Paragraphs 31 and 32 eliminated, as they have no application to Infantry.

33. Estimation of distances is a knack which may be cultivated by practice to

a degree of accuracy far beyond that which is at first attainable, and sufficient for the location of many objects off the traverse line. Short distances are more closely estimated than longer ones; those on a level, than those down hill. When the intermediate ground can be seen, the estimation is closer than when it can not.

34. The location of a point by intersection is done by taking azimuths from two known points. As each of these azimuths when plotted must pass through the unknown point, it must be at their intersection.

An observer at an unknown point may locate himself from two visible points by taking an azimuth to each. From the known points plot the corresponding back azimuths and they will intersect at the point of observation. This process is called resection. It is subject to errors of local attraction. (Par. 9.)

The accuracy of a location by intersection is affected by the relation of the azimuths and of the distances. The greatest accuracy results when the azimuths differ by 90° or 270° and the distances are equal; in which case the two lines and the base form a right-angled triangle. A difference of azimuths of 30° or more than 330° should be avoided.

Errors in length of the base, or distance between the known points, affect the distances in the same proportion. If the base is 5 or 10 per cent. in error, the distances will be in error in the same direction by the same percentage.

Distances are most easily determined from intersections by plotting the lines and scaling. The distances are horizontal. If gradients are taken at the points as the azimuths or at one of them, the elevation of the unknown point may be determined after the distance has been scaled.

Paragraphs 35 to 39 eliminated, as they have no application to Infantry.

40. The protractor is an angular scale of equal parts used for plotting azimuths. That adopted for reconnaissance is the rectangular form, Figs. 12 and 13. It is graduated on one face, which will be called the A face, Fig. 12, from 0° to 180° , and on the other, or B face, Fig. 13, from 180° to 360° . The graduations are clockwise on both faces. It has a scale of inches and tenths along one edge. The protractor may be used as ruler, scale, triangle, and compass.

To plot a given azimuth from a given point, draw a meridian through the point. If the azimuth is less than 180° , lay the protractor down A face with the center at the point and the edge on the meridian, 0° to the north. Draw a pencil dot on the paper at the proper graduation on the edge of the protractor. Move the protractor so that one of its edges passes through the two points. Draw a line, which will be the desired azimuth.

If the azimuth is more than 180° , lay the protractor down B face with the center at the point, and proceed as before. The moving of the protractor after the first dot is off the angle and before drawing the line may be avoided by adding a counter-clockwise graduation to the protractor. The sum of the two graduations from any point will be 180° . Place the center of the protractor and the given point on a meridian, read on the counter-clockwise graduation, on a meridian, and slide the protractor up or down, keeping the two points on the meridian until one of its edges passes through the given point, when the azimuth may be drawn along that edge.

A semicircular protractor is shown in Fig. 14. It is usually double graduated in opposite directions from 0° to 180° . With this form an azimuth may be plotted off and the line drawn along the diameter without moving the protractor.

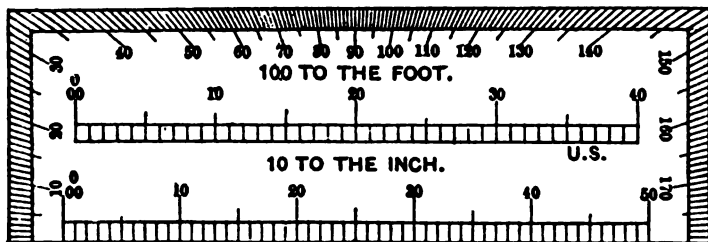


Fig. 12. A. Face.

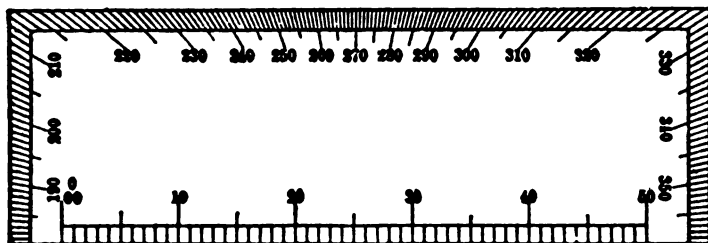


Fig. 13. B. Face.

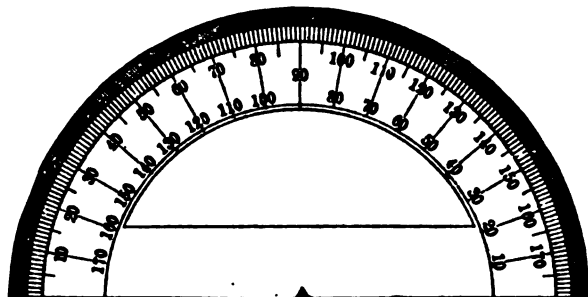


Fig. 14

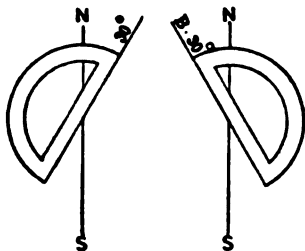


Fig. 15.

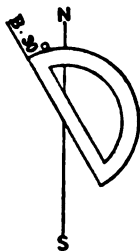


Fig. 16.

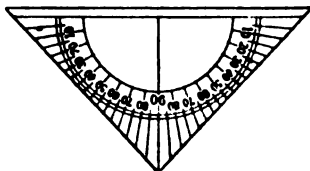


Fig. 17.

the protractor down with the center on a meridian. If the azimuth is less than 180° place its number of degrees on the counter-clockwise scale on the meridian, north of the center, Fig. 15. If it is greater than 180° , subtract its number of degrees from 360 and place the difference on the clockwise scale over the N. end of the meridian, Fig. 16. In either case slide the protractor up or down, keeping the center and the graduation on the meridian until the diam. passes through the point, when the az. may be drawn along the diameter of the protractor. Fig. 17 shows a triangle graduated for use as a protractor.

41. Improvised Protractors. If a rule is at hand, a protractor may be made as described for slope board in par. 14 by extending the 1° graduations around a half or whole circle. If without compasses, measure off the radius on a piece of paper, stick a pin through one extremity for a center and a fine pencil point through the other extremity and sweep the circle.

If without a rule, fold a piece of paper carefully through the middle. The folded edge should be straight. Place the ends of the folded edge together and fold again. The two edges now make an angle of 90° . Fold again through the middle and the angle will be 45° . Now fold in three parts and the angle is 15° . Spread the paper out flat, and the creases will represent radii of 15° intervals. These may be divided into three equal parts by the eye, and the protractor will then read to 5° .

The hour graduations of a watch are 30° apart, and the minutes 6° .

42. The scale of a map is the ratio between dimensions on the map and the corresponding dimensions on the ground. If the lengths on map and ground were expressed in the same unit, the scale ratio would always be expressed by the number of ground units corresponding to the map unit. If 1 in. (map) corresponds to 120,000 ins. (ground), the ratio, or scale, is plainly $1 \div 120,000$, or as usually described, 1 to 120,000. This fraction is called the representative fraction, and designated R. F. But ground distances are so much greater than map distances that they are ordinarily expressed in a larger unit, which makes the scale ratio less apparent. If 1 in. (map) equals 10,000 ft. (ground), the scale is still 1 to 120,000 because 10,000 ft. equal 120,000 ins. The map unit is almost always inches. Hence, a good rule for obtaining the scale ratio is to reduce the given number of ground units to inches, which will indicate the ratio.

Another method of stating scales, much employed in military map making, is to take ratios which will give $\frac{1}{2}$, 1, 2, 3, 6, 12, or 15 ins. on the map to 1 mile on the ground, and call the scales $\frac{1}{2}$, 1, 2, 3, 6, 12, or 15 ins. to the mile. Such scales can be put into terms which express the ratio by dividing 63,360, the number of ins. in 1 mile, by the number of ins. given in the scale. Thus, 1 in. to 1 mile equals $1 \div 63,360$; 2 ins. to 1 mile equals $1 \div 31,680$; 3 ins. to 1 mile equals $1 \div 21,120$, etc.

The scale ratio is true for all units. If a scale ratio is $1 \div 9,600$, 1 in. (map) = 9,600 ins. (ground); 1 ft. (map) = 9,600 ft. (ground); 1 meter (map) = 9,600 meters (ground), etc.

When the scale of a map is changed, as by reduction or enlargement, the R. F. changes too, and hence the ratio should not be given on maps which are to be reproduced. A linear scale should be drawn on every map. This will be enlarged or reduced with the map and will always be true. Such a scale is also very convenient for taking distances from the map. It consists of a straight line divided into equal parts which are numbered with reference to the relation between distances on the ground and distances on the map. The

numbers relate to distances on the ground and the graduations, or lengths set off on the line, relate to distances on the map. A distance on the map equal to that from the zero of the scale to any graduation corresponds to the distance on the ground represented by the number of that graduation. Scales are designated by the unit of their parts, as scales of miles, scales of feet, scales of meters, etc.

A scale might be constructed by drawing a scale of inches on the map and placing opposite the divisions the numbers expressing the equivalent ground distances. It is customary, however, because more convenient, to take the numbers at intervals of 10, 100, or 1,000, or multiples of them, and make the divisions of the line correspond. A scale should be divided into a convenient number of equal parts called primary divisions. The zero should be between the first and second primary divisions, counting from the left. The primary divisions are numbered from the zero to the right. The primary division on the left of the zero is subdivided into smaller parts, called secondary divisions, and these are numbered from the zero to the left. The secondary are usually $\frac{1}{10}$, or $\frac{1}{100}$ of the primary divisions.

To take off any distance from such a scale, put one leg of the dividers on the primary division next below the distance sought, and the other leg on the secondary division corresponding to the remaining figures.

Figs. 18 and 19 give scales for the usual range of topographic maps, which may be taken off on the edge of a strip of paper and transferred to a map. Fig. 20 gives scales for plotting distances measured by pacing on foot, and Fig. 21 for those by pacing mounted.

Scales may be constructed on strips of paper, wood, celluloid, or metal instead of on the map, and are then called plotting scales. The scales given in Figs. 18-21 are plotting scales. A distance may be taken between dividers from any map and read by applying the dividers to the proper one of these scales.

These scales are not engraved and can not be relied upon within 1 per cent. They are sufficiently exact for reconnaissance and, in fact, for most topographical drawing and scaling.

43. A series of points connected by azimuths and distances is called a traverse, and the operation of determining the azimuths and distances is called traversing. The latter term is usually extended to include all azimuths, distances and elevations taken while running such a line.

A traverse line with elevations along it may also be called a profile, and when the traverse is run for the express purpose of taking the elevations, the operation is called profiling; and the line on the ground and the plot of it on paper, are called profiles.

Distances in topography are so much greater than elevations that both can not conveniently be represented on the same scale. It is usual to take a scale for elevations called the vertical scale, much larger than the scale of distances, or horizontal scale. The ratio of the two scales is called the distortion or exaggeration. Ten or 20 ft. to the in. is a common scale for elevations. If the horizontal scale is 3 ins. to the mile, the resulting distortions are 176 and 88 times. Both scales should always be written below every profile.

Angles on a distorted profile are also distorted, and gradients can not be plotted or read with an ordinary protractor.

Angles can be plotted or read on a profile by any of the other methods of expressing gradients, par. 11. The horizontal distance is plotted to the horizontal scale and the corresponding vertical distance to the vertical

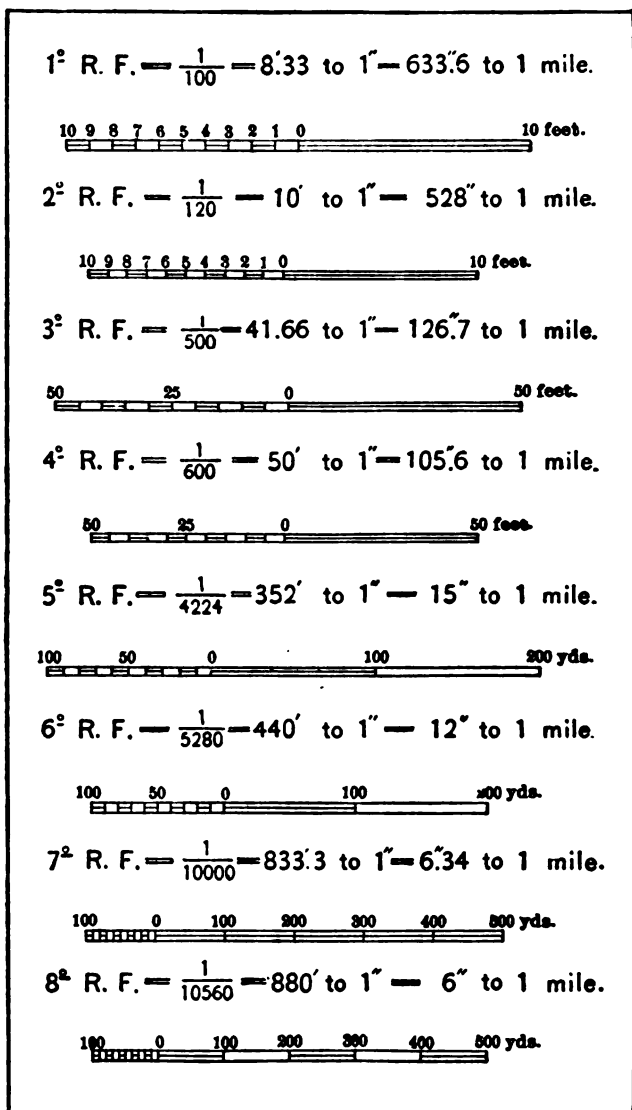


FIG. 18.

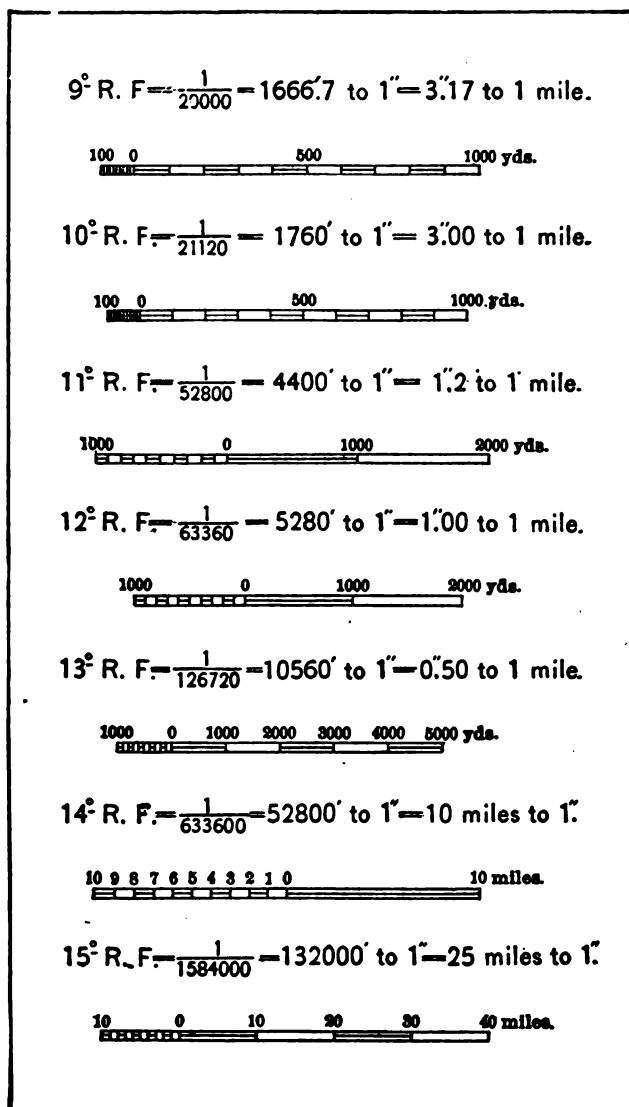


FIG. 19.

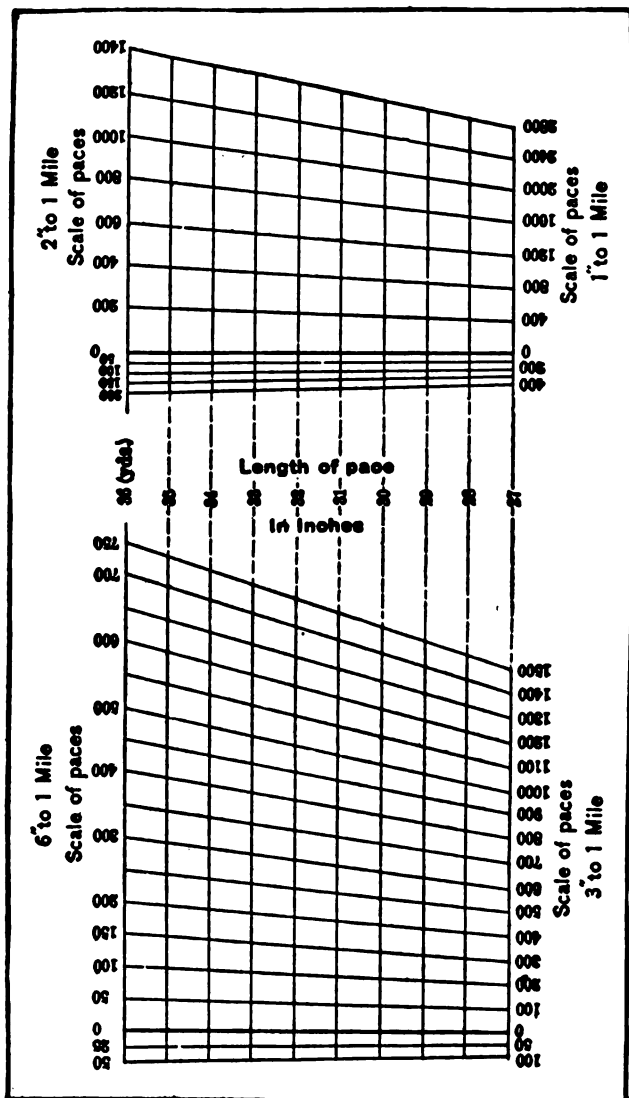


FIG. 20.

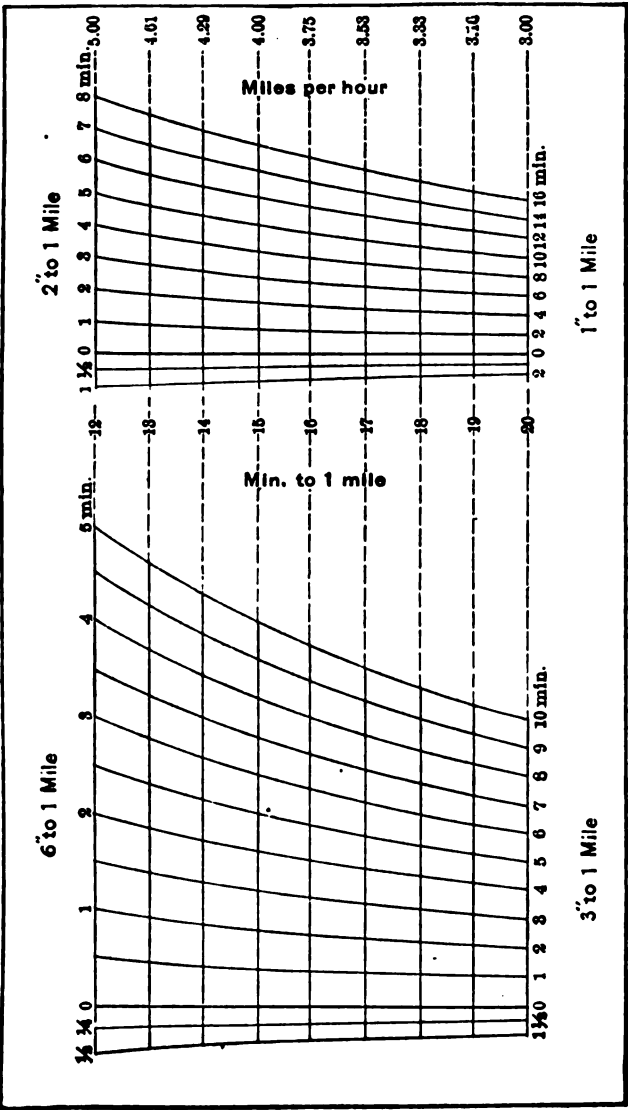


FIG. 21.

scale. A special protractor may be made for any given distortion and used to plot and read angles directly on a profile having that distortion. To make such a protractor, lay off a distance of 100 to the horizontal scale. At one end of it erect a perpendicular, and lay off on this, from the intersection, distances corresponding to 1° , 2° , 3° , etc. These distances must be laid off to the vertical scale. Draw lines through the points on the perpendicular and the other end of the horizontal line. These lines represent the angles on the profile corresponding to the slopes on the ground.

44. Fieldwork. Measurements and additional notes may be recorded and afterwards plotted on a map, or may be plotted on a map as taken, or the two operations may be combined, as circumstances demand. A written report also will often be required.

45. A road sketch consists of a map of the road with a narrow belt of country on either side. If roads, parallel and intersecting, are not too far apart, the road sketches may be combined into a fairly good map of the entire area.

The road itself will, if practicable, be traversed with the degree of precision already indicated as required for topographical reconnaissance. If the country is open, so that long sights are possible, a trained observer will get better work by the use of the prismatic compass and clinometer. For shorter courses, when the object is of sufficient importance to use a chain for distances, the prismatic compass and clinometer should also be used and the readings taken with the greatest care.

Usually, however, the box compass will be used for azimuths and the slope board for gradients, or else the sketching case, to be described later, par. 54.

Side features will, if important, be located by intersection; otherwise by estimation. A convenient method is to estimate the distance of an object when it bears at right angles to the course, and plot it from that point. In such case the azimuth will be denoted by R or L. Thus, house 300 R would mean a house at a distance of 300 units to the right, on a line at right angles to the course through the point where the observation was taken.

46. Traversing with Compass and Notebook. Rule a column $\frac{3}{4}$ of an inch wide down the center of each left-hand page of the notebook. Select for the starting point some object or point which can be identified by description. Standing at this point, sight with the compass toward some object—tree, stump, telegraph pole, or stone—that will serve as the second station of the traverse line. Note the reading of the compass and record it in the center column of the notebook, at the bottom of the first left-hand page, making also the symbol for $\odot 1$. Observe and record also the azimuths of any other objects which are to be located from $\odot 1$. All the observations taken at this station are written in order in the central column from the bottom upward and are bracketed together with the station symbol. The name of each object is written on the same horizontal line with its azimuth, on the right side of the page if on the right of the traverse, and on the left side of the page if on the left of the traverse. If elevations are to be obtained, observe the gradients from $\odot 1$ to the several objects and place each in the notebook next to the corresponding azimuth.

Proceed toward $\odot 2$, counting paces. Halt when necessary to sketch and measure offsets to objects on either side of the course, to take bearings of intersecting roads, paths, streams, etc. When a halt is made, a mark is scored on the ground, the distance in paces from the last \odot recorded in the central column and the desired notes made. Distances along the main line, azimuths,

ient angles only are recorded in the central column. All descriptive relative to side objects is placed outside of that column on the side depending to that where the objects lie. Return to the scored mark and the pacing, beginning with the number recorded at the halt, so that the sum of paces at any point shall be the number taken since leaving the

center column of the page is taken to represent the line actually paced without width, so that offsets in the side sketches are shown measured from the sides of the column and not from its center.

Reaching the second \odot , record its distance from \odot 1; draw a horizontal line across the page; write \odot 2 in the center column above the line, and continue the line to \odot 3.

At \odot 2 to take a back azimuth on \odot 1. This should differ from the azimuth of \odot 2 from \odot 1 by exactly 180° . A marked discrepancy indicates a mistake in observation or the effect of local attraction on the needle, and should be investigated before proceeding. If a back azimuth is taken, it should be observed and recorded.

Whenever opportunity offers, take bearings on distant bends of the road, spires, hilltops, tall trees, etc., and enter the angles in the center column with the name of each object written beside its bearing. Endeavor to get bearings on the same distant object from several stations or from two stations at some distance apart. These, when plotted, should intersect at a common point if the bearings are correct and the compass has not suffered local disturbance. It is not to be expected in work of this grade that an exact intersection of more than two bearings can be obtained except by accident.

When a sketcher at any point of the traverse finds himself in prolongation of a line that defines or bounds a feature of the country, such as a fence, the edge of a wood, a reach of shore line of river or lake, a gully, canyon, or ridge, or the corner of a building, or a stretch of road or railroad, its bearing should be taken. The same rule should be observed when important features come into range of observation from a point on the traverse. A valuable check on the relative positions of such features is thus obtained.

If the traverse line is interrupted by any obstacle that interferes with the measurement of distance, its width should be estimated and the pacing resumed on the other side; or, for greater exactness, make an offset, perpendicular to the traverse line if possible, long enough to clear the obstacle, continue the line parallel to the original course and return to the latter after passing the obstacle by a second offset parallel and equal to the first and in the opposite direction; or, locate points on the farther side by intersections.

The Unit of Measure Should be Clearly Stated in the Notes. Ordinarily measurements along the course are in paces, while estimated offsets may be in paces, rods, or fractions of a mile, according to their distances, and also according to the unit in which the sketcher finds he can make the closest estimate.

On the usual reconnaissance scales, the dimensions of buildings, widths of bridges, etc., can not be plotted to scale. They are shown exaggerated, but their true dimensions, if important, must be given in figures.

The best method of plotting is to plot the traverse lines and the check lines first. Then any error discovered by means of the latter, or by closure on the initial or other known point, can be more readily corrected. When the traverse line has been adjusted, the details on either side are plotted in and do not need to be changed.

The outfit desirable for the method of traversing with compass and book is the following: Notebook or sheets of paper ruled as described, pocket compass, pencil of medium hardness, rubber eraser, pocket tape, a piece of twine 100 ft. long. The absolute necessities are the compass, pocket knife or pencil sharpener, and rubber-tipped pen. Tape measure is to be used for making small measurements of distance or sections. The cord is useful for measuring depths of water, heights of stations, etc. It should be graduated to yards by knots.

49. The topographic field notebook is designed to facilitate the method of traversing. In addition to the central column, it has columns on either side in which to record the offset distances, each of which is plotted on the proper side of the central column, avoiding the necessity of using letters R and L, and eliminating the liability of mistakes in confusion of direction.

The opposite right-hand page is ruled in 1 in. squares, and has a protractor graduated to degrees printed on it. This page facilitates a method of the traverse with respect to which many details can be sketched more clearly and certainly than they could be recorded in writing. At the bottom of the page are scales of tenths and eighths of inches. The alternate pairs of pages are plain ruled for notes and memoranda. Figs. 22 and 23 show the method and illustrate the use of the book described.

50. Traversing with Compass and Drawing Board. The observations are taken as in traversing with a notebook and compass, but the traverse is plotted as such offsets as come within the limits of the sketch are plotted at once on the map as the observer proceeds over the ground. A great advantage of this method is that any large error in measurements is likely to be detected by the eye, as the map is compared with the ground, and errors can be corrected on the spot. The plotting scale of equal parts should be prepared before starting to suit the scale of the map. If this scale can be pasted or drawn on the back of the protractor opposite the angular graduation, it is a convenience.

The sides of the sheet of paper should be lettered N, E, S, and W to correspond with the points of the compass. If the paper is ruled or water-lined, the lines are taken parallel to the magnetic meridian.

Having observed the azimuth at $\odot 1$, draw through the point designated by the station a line having the observed azimuth. Azimuth lines are erased as a rule, and hence should be lightly drawn and with a fairly hard pencil. Prolong this line in the direction of $\odot 2$ far enough to surely reach the point. Other azimuths are taken at $\odot 1$, plot them also, and note on each the object to which it bears. If the distance to the object is estimated, it is laid off on the azimuth and the position of the object plotted at once.

Proceeding toward $\odot 2$ to take any desired side shot, halt abreast of the object, plot the distance from $\odot 1$ on the course, estimate the distance to the object, and plot it in at that distance opposite the point plotted on the course and on the proper side.

Arrived at $\odot 2$, lay off the entire distance from $\odot 1$, and plot and mark the point. Erase the azimuth line beyond $\odot 2$; take and plot any other desired azimuths. If any of them are to points previously sighted to, make the intersections and mark the points. In plotting azimuths to side objects, it is better to lay off only a short part of the line near the object to avoid confusion of lines in the sketch and especially near the station.

51. The following outfit is desirable for traversing by this method:

board 12 × 15 ins. to which the paper is attached by thumbtacks or rubbers, prismatic or pocket compass, clinometer or slope board, a reprotractor, a plotting scale, lead pencil, No. 3 or 4, rubber eraser, 25 ft. of twine, watch, pocket knife, canvas cover for board and paper, etc. A field glass is also very useful. Good work can be done with a complete outfit, or with improvised arrangements for some of those mentioned. The drawing board may be utilized as a slope board.

A road sketch will be long and narrow, and two or more stretches should be on a board if possible. In this way a board of the size indicated will hold a day's work. When a section runs off the paper mark it with a letter, and make a note, Continued at B. Mark the beginning of the next section and write Continued from A.

Whenever else a road runs off the map, make a marginal note "To ———, ——— miles," giving the name and distance of nearest settlement or conspicuous geographical feature. If the road crosses one parallel to the main route, so "To crossing, ——— miles."

Traversing with Oriented Drawing Board. A drawing is said to be oriented when so placed that its true meridian is parallel to the true meridian of the ground. When using magnetic azimuths, making the magnetic meridian of the map and ground—parallel, may be accepted as a proper orientation. The map is oriented, with any given point vertically over the corresponding point on the ground, a ruler held on the point or station on the map, and pointed in the direction of any object gives the azimuth of that object on the map. No measurements need be made. A compass is not necessary, but it is very convenient, as it affords the quickest means of orienting the map.

In a traverse by this method, assume on the map the initial point and the true meridian, selecting them so that the general direction of the traverse coincides with the longest dimension of the paper. Place the board over the first station; lay the compass on it with the north-and-south line parallel to the assumed meridian, and turn the board until the needle reads north. The map is then oriented, and must be in this position whenever a sight is taken. The board should also be level, as nearly as can be determined by the eye.

Place a ruler on the station point of the map and sight it in the direction of the object which it is desired to plot. Draw a line along the edge of the ruler and lay off to the adopted scale the distance of the object if known or estimated. When all the desired azimuths have been taken from the station, sight from the station to the second station and draw its azimuth, and then proceed to that station, pacing the distance. Arrived at the forward station, plot the paced distance, orient the board over the station, and proceed as before. If any of the sights taken at the first station can be seen from the second, new azimuths are taken to them which will locate them by intersection, Fig. 24. If no sight is at hand, orient the board arbitrarily at the first station, and at the second station orient it by placing the ruler on the line between the two, and sight back to the station just left. Fig. 25 shows the relative positions of the map and ground at four successive stations.

Traversing with Sketching Case. The sketching case is a compact device for traversing by the oriented-map method. The simplest form issued to the troops is usually called the cavalry sketching case, is shown in Fig. 26. The compass is set into the board, and a movable index is provided which can be revolved until it is parallel to the assumed meridian on the map. When the needle is parallel to the wire the board is oriented. The needle may be parallel

| <i>Remarks Left.</i> | <i>Offsets Left.</i> | <i>Courses & Distances</i> | <i>Offsets Right.</i> | <i>Remarks Right</i> |
|-----------------------------------|----------------------|--------------------------------|-----------------------|--|
| Crossed wagon road running E & W. | | 1230 | 230 | Road running N & S through Alpine village. |
| Crossed dry Cr. | | 4° R 880 | | |
| | | | | |
| | Cn 12 | 100 | 230 | Farm H. |
| Cult. | | 1800' | | |
| | | ° 5 | | |
| | | 3256 | | |
| | | 7° 41' | | |
| | | | | |
| R.R.Br. | 100 | 4000 | | |
| | Cr 25 | 3080 | | Crossed dry Cr. |
| | | 2765 | | Crossed wagon road |
| | Cr 2 | 2465 | | Crossed dry Cr. |
| R. R. Br. | 100 | 2300 | | |
| | | | | |
| R. R. Br. | 250 | 1760 | | |
| | | 1660 | 200 | Farm H. |
| | | 1650 | | Crossed Wagon road running E. & W. |
| Creek 30 wide | 440 | 620 | | |
| Woods along Cr. | | | | |
| | | | | |
| | | 34° 00' | | |
| Rolling Prairie | | ° 4 | | Pasture |
| Pasture | | 1230 | | |
| | | 7° 4' | | |
| Farm H. | 110 | 800 | | |
| Farm H. | 150 | 600 | | |
| | | 450 | | Crossed wagon road |
| | | 230 | 160 | Farm H. |
| " | | 15° R | | |
| | | 30300' | | |
| Corn & Wheat | | ° 3 | | Corn & Wheat |
| | | 1530 | | |
| | | 6° 50' | | |
| | | 1230 | | Crossed Cr. 15 wide |
| Creek, dry run | 130 | 880 | 175 | Farm H. |
| | | 3° F | | |
| | | 34300' | | |
| | | ° 2 | 50 | Farm H. |
| Left wagon road | | 230 | | Cult. |
| Cult. | | 6° 33' | | |
| Farm H. | 25 | 200 | | Level Country |
| | | 100 | 10 | Farm H. |
| Left Mahana 6° 30' AM | | 0° 00' | | Following wagon road |
| Sept. 4th. 1900. | | 6° 30' | | |
| | | ° 1 | | All distances in Yds. |
| | | Beginning | | |

FIG. 22.

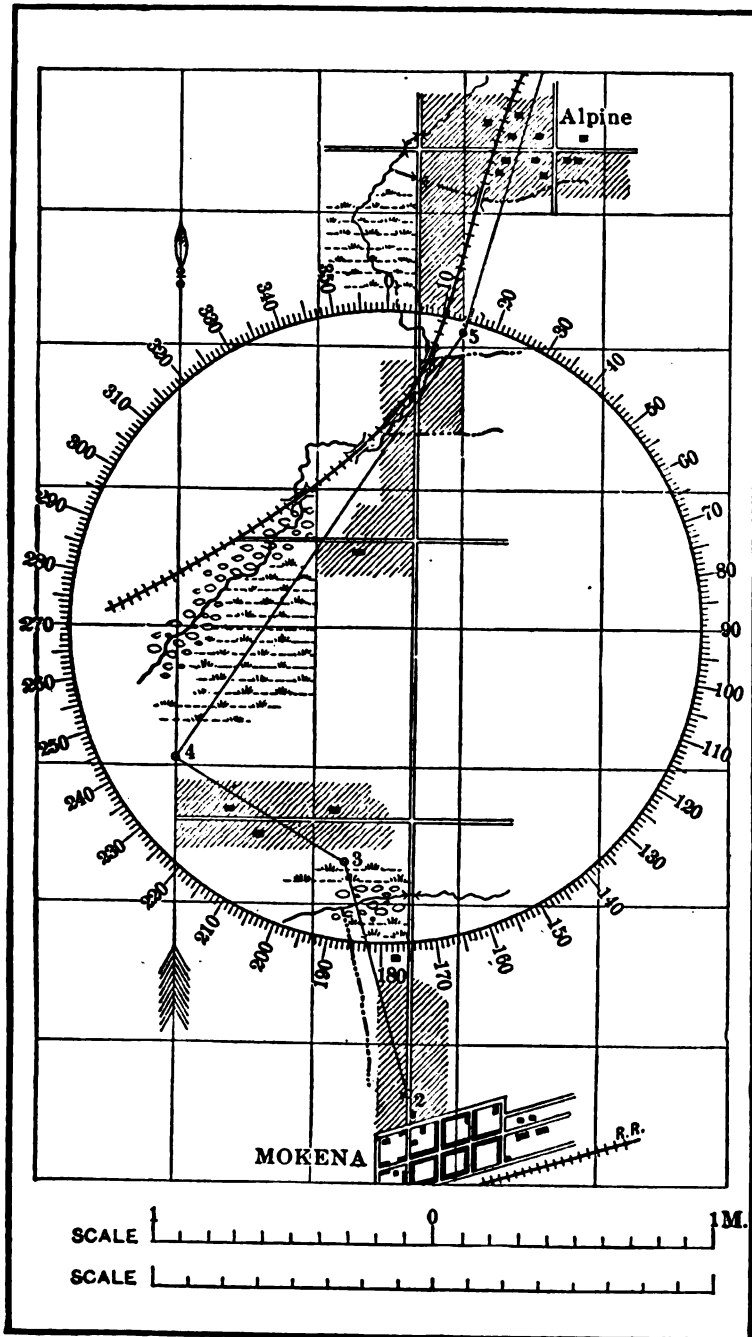


FIG. 23.

to the index wires, but end for end, or 180° out of its true position, in case the sketcher is turned completely around. Such a mistake is and so obvious that it needs no preventive, but a sketcher may note at whether the N or S end of the needle is toward the stud which moves and keep it in this position.

The ruler A is pivoted to a slide, moving in a slot in the radial arm B in turn to the board near the compass. The screw C clamps the slide with respect to the arm, and the screw D clamps the arm on the board. The combination permits the ruler to be set on any point of the board in any direction through that point and clamped there.

To facilitate road sketching rollers KK are provided, on which 30 in. of paper may be placed. The paper should roll on and off the undersides of the rollers. If the traverse runs off either edge of the paper draw a line through the last station, roll back the paper until that station is off the edge, plot the same station in a new assumed position with a new meridian line, and continue the sketch. When the paper is cut and one position is placed over the other with the two meridians coinciding, the true positions of the sketch are in their true relative positions.

By clamping the ruler with the stud F engaged in the notch G, loosening screw D and holding the board in a vertical plane, the case may be used as a slope board. The tops of the roller screws HH form a sighting line. The angle is read from the left edge of the arm, on the scale across the board of the board.

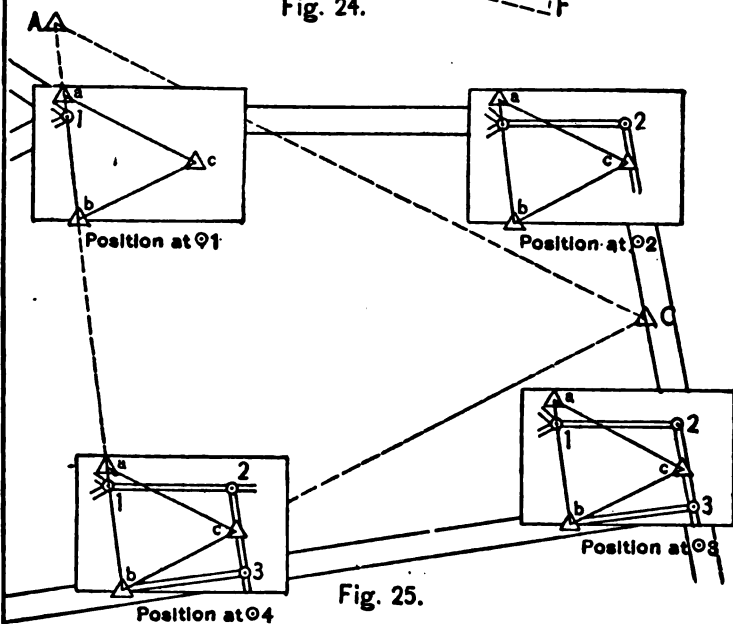
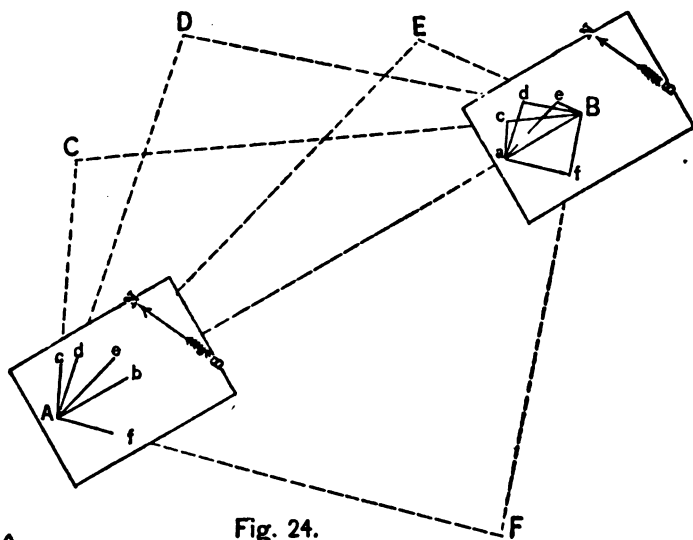
55. Another form of sketching case is shown in Fig. 27. The radial arm and cavalry case is replaced by two sliding motions at right angles to each other which permit the compass to be placed over the pivot end of the ruler and it directly under the eye when aligning the ruler. Several minor details have been worked out to promote convenience and accuracy of use. These advantages are secured at some sacrifice of simplicity and compactness, and this form of case will not stand as much rough usage as the cavalry case.

56. Improvised Instruments. By the oriented-map method a very good sketch may be made with improvised instruments. Any smooth surface on which the map will show will answer for the board and paper. The edge of a book, a slope, or a piece of paper carefully folded makes the ruler. A narrow strip of paper folded double several times makes a scale of equal parts.

57. A road reconnaissance should procure data on the following subjects:
The Road. Gradients, especially the steepest; width of roadway; width, kind, and condition of paving; width and depth of side ditches; whether wet or dry; if not paved, character of soil, sand, clay, or gravel; location of fences and width between them. The sketch should also show whether the road is in embankment or cutting; where wagons can not double or pass; where foot troops can not march along the side between the wagon tracks and the fences.

Bridges. Material of piers and abutments; type and material of superstructure, as girder, truss, arch, suspension, wood, steel, stone, etc.; width of roadway, and clear headroom; safe load (see Bridges). Of bridges over streams, clear width and height; over streams, the nearest bridges above and below; whatever information can be obtained about them.

The Country. Character of cultivation or natural vegetation; areas of forest, density of timber, underbrush, vines, especially poisonous ones; marshes and swamps; kinds of fences, nature of soil; general configuration of surface, especially



Traversing by plane table and Resection

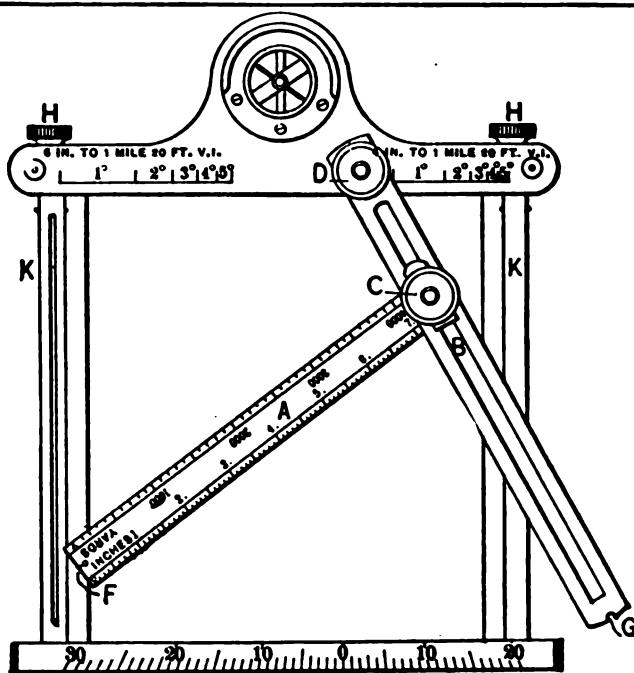


Fig. 26. Cavalry Sketching Case

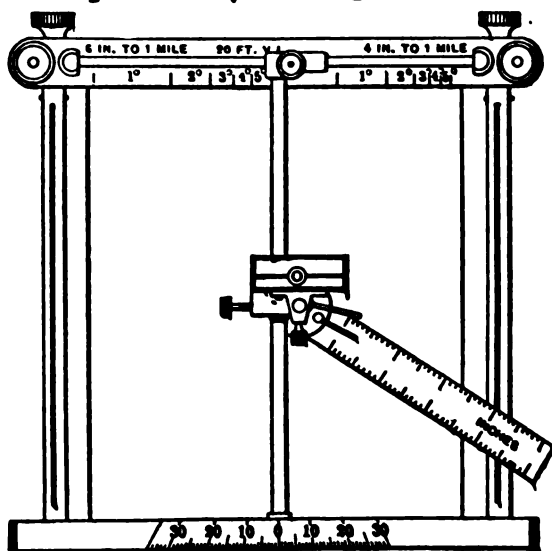


Fig. 27. Bower Sketching Case

ridges or valleys, bluffs or slopes too steep to scale, and practicable their crests.

Crossed. Name, width, depth, and surface velocity in swiftest current noted as sluggish, moderate, quick, or swift; elevation of high-ways in relation to the road; which bank is the higher at crossing and below, and how much; accessibility of water for stock; fords at crossing; length, depth, and steepness of approaches; levees or embankment, and thickness on top; if navigable, to what distance above and below for what class of vessels—steamers, flatboats, rowboats.

and Villages Passed Through. Name, location on map, and population of streets to be traversed. Material, as stone, brick, frame, log; number of stories, and distribution, close or scattered, of the houses in those places; gradients of intersecting streets; location of railway depots, post, telegraph, telephone offices; of drinking fountains and watering troughs; of warehouses, or other accumulations of food or forage; of blacksmith, and machine shops.

Ordered to make a complete examination of a town or village, note the foregoing, location and size of principal buildings, halls, court and houses, churches, banks, jails, and their ownership; sources, maximum and distribution of water supply; sanitary conditions and disposal of sewage; location of railroads, depots, freight houses, sidings, etc.; for all roads from the surrounding country the same information as scheduled above; location and extent of open spaces, and of large substantial buildings; location and extent of high ground with range, especially where which streets can be enfiladed.

Is Crossed. Name, gauge, single or double track, sidings and loading platform at point of crossing; crossing at grade, over or under; distance and direction of nearest station each way; direction and distance of nearest roundhouse,

or Reconnaissance. Designate the banks as right or left, the right bank being that on the right hand when looking down the stream. If, when standing on the bank facing across the stream, the current flows from left to right, the observer is on the right bank; if from right to left, he is on the left bank.

When a stream is navigated, pilots and residents will know distances by channel soundings with sufficient accuracy for the purposes of a field reconnaissance. In making a traverse along the banks of the river, it may be desirable to go from one side to the other to save distance or avoid obstacles. When a traverse is to be made, at two or three stations from the point of crossing on the other side and take an azimuth to it. From the last station take an azimuth to the selected point, locating it by intersection. If the intersection prevent an intersection, take an azimuth from the last station to the point on the opposite bank and estimate the distance.

Valley. General configuration, heights of limiting ranges, and positions of roads crossing them; commanding ground from which a stretch of line of considerable length can be enfiladed by artillery; forest growth on the banks; soil and cultivation of the valley; roads parallel to river, and means of access to them from the river.

Stream. Its width, depth, and velocity; navigability, as for steamboats, rowboats, rafts, and head of navigation for each; nature of obstructions

to navigation and possibility of removing or avoiding them; season of low water; average rise and fall; rapidity of rise and fall and causes of drift; character of banks and relative command. Quality of water and kind of sediment borne; usual period and thickness of ice.

Tributaries and Canals. Width, depth, navigability, and means of Nature and purpose of canals; dimensions and lifts of locks; time for means of destroying locks and effect of destruction; floating plant four

Bridges and Fords. As in road report. Also for bridges note position of channel and navigable width between piers; height of arches and low above the water at different stages; dimensions and operation of draw. Note the exact position of fords and the marks on both banks by which they may be found; length, width, and nature of bottom; velocity of current; position of deep holes; aids to crossing. Fords should not be more than 4 ins. for cavalry, $3\frac{1}{2}$ ft. for infantry, and 2 ft. 4 ins. for guns and ammunition. Note nature of approaches to bridges and fords; width of roadways; soil, effect of weather and traffic. Note especially the defensibility of bridges and fords.

Ferries, Boats, and Other Means of Crossing. Position of ferries; approach and practicability for horses and loaded wagons; sizes, number, and names of boats; method of propulsion; sites for military bridges or ferries; location of site for construction, use, and defense; proximity of islands and streams; approaches and slope of banks; width of river and maximum velocity of current; materials for the construction or repair of boats and ferries.

Inundations. Places suitable for inundations by damming or obstructing narrow bridge span, or by cutting a levee or dike. Note raised roads or bridges liable to natural or artificial inundations and the safest route to find known landmarks when the road is overflowed. An extensive inundation 2 ft. deep on level ground is a serious obstacle unless the roads are well sound and marked by trees, posts, etc. Even when so marked a deep roadbed of 3 or 4 ft. may render the road impassable. A railroad track soon washed out even by a slight overflow.

59. Reconnaissance of a Railroad. The Line. Local name; terminations and distances between stations and other points; gauge; single or double track; condition of roadbed, ties, and rails; drainage and liability to floods or washouts; facilities for repair; condition of right of way for troops along the line.

Tunnels and Bridges. Number and location; dimensions; strength of structure; means of destroying and repairing; of blocking traffic.

Rolling Stock. Number and nature of engines and cars available; facilities for transporting troops between given points; facilities for constructing and repairing loaded trains, as spare rails, old boilers, etc., location and capacity of storage yards.

Stations. Name and location; facilities for entraining and detraining troops with wagons and horses; platforms on through line and sidings; range of tracks, number and capacity; turntables; water tanks; fuel supply facilities; derricks or cranes; cross-overs for teams and pedestrians. Note what is at hand for hospitals, camps, depots; for feeding men, heating coffee, and for horses during temporary halts.

Other Communications. Telegraph lines; number and location of lines; number of wires; connections; parallel highways, roads, rivers, or canals; means of access from same to railroad; junctions and crossings of other lines; elevation; facilities for laying temporary switches and sidings at stations between crossing lines.

bility. Heights commanding line of road; defense of stations; defense and telegraph lines against raiding parties; structures exposed to defense and attack of same; defiles and river crossings.

Connaissance of a Wood or Forest. Note all roads and paths, and all creeks, and streams within the wood or skirting the edges; kinds of trees, and growth; underbrush, prevalence of poisonous shrubs and vines; large open spaces; practicability of forming new roads by cutting; removal of obstacles by felling trees; if there are no roads traverse the shortest path between the point of entrance and point of exit, and mark the path by blaze trees, set stakes, or otherwise indicate this path, and also give bearings of the route to be followed. Note the exterior forms of the wood, whether parts of the edge flank other parts; connection with neighboring woods of wood by scattered trees or clearings; undulations of the ground and give cover to attacking force or to defenders.

Connaissance of Mountains. Note the number and positions of passes and saddles, the mountains, of roads and trails leading to these passes, their condition, practicability and means of repair; steepness of slopes on the sides of mountains; means of constructing additional roads; water courses, their direction, and time of floods; means of crossing. Note ravines and open glades on the sides, lookout points, and good signal stations; note time and duration of drifts on roads or passes; depth of drifts and possibility of removing them; possibility of traveling on the surface of the snow. Note extent and nature of the snow.

Connaissance for a Camp or Winter Quarters. Site. Location, elevation, area; sanitary features, such as drainage, dryness, and general character of soil; proximity of swampy ground or stagnant ponds.

Communications. Sufficiency of existing roads and paths, maximum grades, condition under heavy traffic and in bad weather, location and kind of roads available for improvement or repair, railroad or water communication and other facilities of same.

Food and Fuel. Location, kind, and quantity of fuel at hand; quality and quantity of water; facilities for filling water carts, for watering animals and for cooking and bathing; nature of supply, as wells, springs, running streams, and other sources.

Shelter and Conveniences. Proximity of trees, brush, wood, hay, and straw for bedding; of markets; of towns and villages.

Defensibility. Location of outposts and guards; location and character of positions in or near the camp; force required to hold positions which command the camp.

Connaissance of a Position. This problem usually includes the selection of a position, and is therefore tactical as well as topographical. Certain required conditions must be observed in the selection, and the extent and nature of the position which they are found must be clearly shown on the map or in the sketch.

Length of the position, or its development along the firing line, should be commensurate with the force available for its occupation. Exact rules can not be given, but 5,000 infantry per mile or 3 men per yard is the usual estimate.

Flanks Must be Secure. Impassable natural features—a river, mountain, or cliff—form the best flank. Lacking these, a wood, a deep ravine, a cliff, or a steep bank will serve. Even with these features absent a flank may be strengthened by the construction of a strong earthwork, but the general rule obtains that the weakness of the flanks must be made up by a greater number of troops, or by the substitution of cavalry for infantry in case the ground favors them. Positions of mounted troops.

If the flanks are naturally strong the line should be withdrawn to entire position reëntrant; if the flanks are naturally weak the connection should be held straight or advanced so as to make the position salient.

The depth of the position, or its extent in rear of the firing line, should be determined by the nature of the ground, and the amount of natural cover for supports, reserves, and trains, which may require a distance of 800 to 2,400 yds.; but a short position may be relatively shallow and a long one. Three or four parallel ridges, 300 to 600 yds. apart, with the intervening ground practicable, form an excellent position. If the first ridge is higher than the rest, so much the better. Whatever cover there may be in the component parts of the force, whether natural or artificial, fences, trees, etc., should be shown or described. If digging is necessary, its extent and the character of the soil should be stated.

Strong points in front of the line, which may be occupied as outposts, should be shown.

Communication should be free in every direction, concealed so far as possible from the enemy's view.

Artillery positions are required when that arm is represented in the force, as will usually be the case. They should permit the guns to command the ground in front of the positions over which the enemy can advance, to a distance of effective range. Every point in front of the position and within range of the commands any part of it, is an element of weakness.

Ranges at which the enemy can be seen and reached by artillery, and points beyond rifle range covered by such fire and its relative command, of reverse artillery positions should be shown or described.

If possible, similar information should be obtained of the ground likely to be occupied by the enemy in forming for attack, or in taking up a counter-attack.

64. A position occupied by an enemy must be reconnoitered from a distance, and few details can actually be seen. Valuable inferences may be drawn from the position, remembering that the enemy has probably chosen his position in accordance with the principles above given.

Especial attention should be given to the flanks and the feasibility of attacking one of them.

65. A position sketch will usually be on a scale of 6 ins. or 12 ins. to a mile. It will be found most convenient and expeditious to make it by the compass and drawing-board method, par. 50, or the method with oriented board, par. 53. The traverse will include the fewest points from which the position can be seen, often only two, and all other features will be located by bearings from these points. Elevations may be taken by slope board or by aneroid, the height of the first point occupied being arbitrarily assumed if none is available.

If two points can be found which overlook the area in front of the position, which are also visible from each other, the compass may be dispensed with, except for a meridian. Measure the distance between the two points, and mark the position of one of the points and of the line joining them, so as to show the desired area on the paper. From the first point lay off on the line the distance between the two points to the adopted scale and plot the second point. The line joining the two is called the base, and will be near one edge of the board, if all the area to be mapped is on one side of the line, or to the middle if it is on both sides.

Place the board over the first point; lay the ruler along the base and draw the board until the ruler points to the second point. Keep the board in this position and point the ruler successively to the objects to be located, drawing them as explained in par. 53. Gradients are written along the corresponding lines. One gradient should be taken to each point determined.

to the second point. Lay the ruler along the base and point it to the
c. Point the ruler to the objects to be located, marking where it
e line to the same object drawn from the first point.

touring is a method of exhibiting relief of ground by means of lines
on a map as to indicate points of equal elevation. The lines so drawn
and the corresponding lines on the ground are called contours. The
touring is applied to the field work directed especially to obtaining data
ng contours.

erence of elevation of points in adjacent contours is called the contour
nd is usually constant for all the contours on the same map. The
distance between contours, measured in a radial direction with refer-
e curvature of the contours, will be referred to as contour distance.

ory of contouring is that no inadmissible error will be made by sup-
slope of the ground from a point in one contour to the corresponding
ne next, or along the contour distance, to be a straight line. The less
interval, the less error will be made. If in Fig. 28 the curved line
ents the actual surface of the ground, and points 1, 3, 5, the elevation
ive contours, the broken line 1, 3, 5, will represent the assumed ground
nd its departure from the line AB is the error introduced. If now
2, 4, and 6 are also determined, or the contour intervals be reduced
the assumed slope is 1, 2, 3, 4, 5, 6, which differs less from the line
the line 1, 3, 5, and hence introduces less error. With points deter-
very short intervals the error is practically eliminated.

ur distances decrease with elevation, or the contours become closer
o higher, the slope is concave, and points between contours are lower
straight line joining corresponding contour points. If the contours
loser as the ground falls, the ground is convex, or lies above the
ne joining corresponding contour points. A point of inflection, or
om convex to concave, is at the point where the contour distance is
reater than those on either side of it. Equal contour distances corre-
uniform slope.

contour does not necessarily join all the points of the same elevation
ap but only those which have a continuous series of points of the
ation joining them. It may require several contours to take in all the
a given elevation on the map. Parts of the same contour will appear
e when the ground over which they could be connected is not on the
e selection of the points to connect in one contour is the difficult part
ccess and can not be done correctly without thorough knowledge of
ples of the method and a good idea of the general shape of the ground
oured. In military reconnaissance only enough elevations can usually
in the field to guide one who has seen and studied the ground in draw-
contours. No one who has not seen and studied the ground should be
or permitted to draw contours from such data. Erroneous information
orse than none at all.

equal contour intervals the map contours are closer together as the
eeper. It follows that for steep slopes the map contours will approach
r very closely, and for a vertical wall or cliff they will coincide.

contours can not cross, but map contours may cross in the very un-
e of a cave or a bluff overhanging by an amount which can be shown
horizontal scale. This is so rare that it is usual to say that map contours
cross.

contour must close upon itself in a loop or else must extend unbroken
point on the margin on the map to some other point on the margin.
tion is made in the case of large streams, the contour on each bank

being carried upstream until it cuts the water surface, when it is dropped. The two ends must be directly opposite, Fig. 29. In a small stream or dry stream bed, the contour crosses at the point where the elevation of the bed is that of the contour, Fig. 30.

Maximum ridge and minimum valley contours go in pairs. A single contour can not lie between two higher ones, or a single higher between two lower. When two adjacent contours have the same elevation, the ground between them will be still lower if they are valley, or still higher if ridge contour.

69. Contours are designated by their heights above a datum plane. The height is expressed in feet, except when the metric scale is used, when contour intervals are in meters.

The elevation of each contour should be shown in figures at points close enough together to allow the eye to run from one to the other with ease. It is best to break the contours and write the numbers between the ends. If the numbers are alongside, the numbers should always be on the higher side of the contour. Figs. 31 and 32.

70. Straight contours are very rare. They may be determined by two points, or by locating one point and observing the azimuth of the line.

Simple curved contours are more frequent than straight ones, but they are often found of any considerable length. They may be determined by two points; or by 2 points with the radius estimated; or by 1 point with the radius assumed.

The typical contour is a wavy line, alternately salient and reëntrant. The contour may be determined with the precision needful for hasty reconnaissance by finding the extreme points of the convex and concave portions.

71. Looking at contours from the higher side, the salient parts, or the reëntrant parts, correspond to the ridges, and the reëntrant parts, or the convex to the observer, correspond to the valleys. The valleys are also lines of drainage. Hence, half of the points necessary to determine a wavy contour will be on drainage lines, as indicated by rivers, creeks, brooks, and rivulets, ravines, or other depressions dry at most seasons.

The slope of a drainage line grows less in the direction of flow. Tributaries or branches, are usually steeper than the main stream at their junction. They also increase in slope toward their sources. Generally, in a limited area, the sources will be at nearly the same elevation. To apply this principle in drawing the amount of topographical relief that may legitimately be drawn from a given number of known elevations, let Fig. 33 represent the drainage of an area taken from a civil map. Suppose the ground to have been studied at elevations to have been determined at 2 points, A and B. How much topography can be drawn?

The 110 ft. contour will be above the 105 ft. and by a distance somewhat greater than the length AB, because the slope becomes steeper and the contour interval less in going upstream. The succeeding contours at 10 ft. intervals will cross the tributary at gradually decreasing distances, as indicated, and for the same reason. The source is found to be about 130 ft. Take the other source to be also 130 ft., and draw the contour at that level, remembering that the ground is concave where it crosses the streams, and that the part between the sources is convex and advanced. Lay off the contour points on the other stream, keeping in mind the law of slopes, and draw the other contours, following the same rule as for the first.

72. If enough elevations were taken on stream lines the concave parts of the contours would be fairly well determined, but the convex points would be in part uncertain. It is known that they are convex and salient, and how much. This information is supplied by elevations taken along the crests, or divides which lie between adjacent drainage lines. The typical

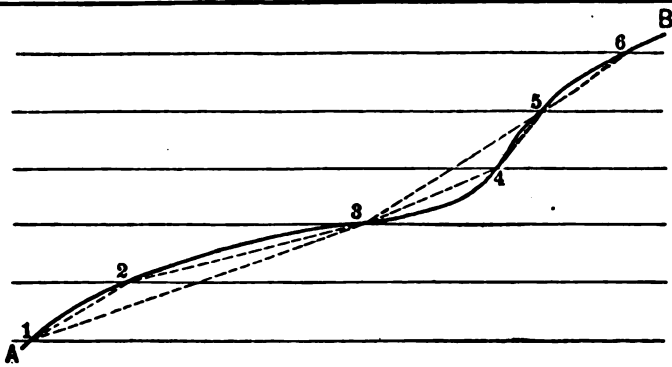


Fig. 28.

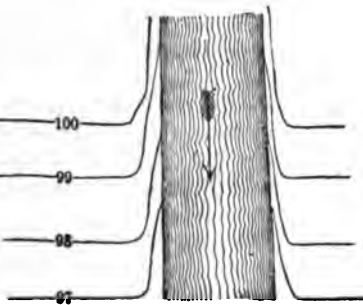


Fig. 29.

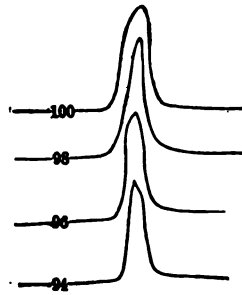


Fig. 30.

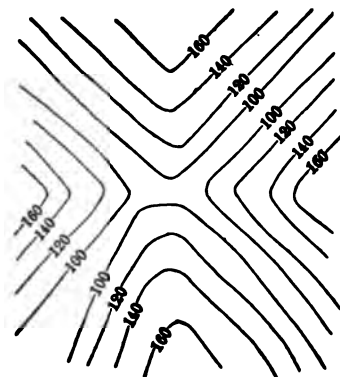


Fig. 31.

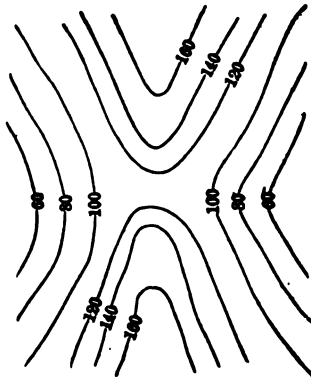


Fig. 32.

of a crest is a reversed curve, flat and convex between the sources of flat and concave near the junctions of streams, and steepest in the middle of the inflection at the steepest point. The form of crests is not so regular as that of valleys, and less use can be made of it. It should be kept in mind that for comparison, so that actual forms can be more readily remembered.

73. The field work of contouring an area which has a sufficient relief to show drainage lines clearly may begin by traversing these lines, with gradient measured by clinometer or slope board. It is most convenient to begin where the drainage leaves the area to be mapped, and follow each valley to its source.

If the valley is open and the flanks of the ridges on each side can be seen, time may be saved by taking level sights from some of the contour points on the drainage line to points on the ridges as far advanced as possible where the line of sight is tangent to the hill. This gives two points, 32 and 33, near the apex of the salient from which the contour may be drawn as well as by a point at the apex. If this can be generally done, it may be necessary to run out the ridges. Notes should be made of the appearance of the contours near the drainage line, whether sharp or blunt, or whether the valley is narrow or wide. The general shape of the sky line of the area and its projection against higher ground should be noted whenever a latitude of it can be had.

If hill points can not be taken from the valley traverse, the ridge line must be run out. They must be connected in plan (distance and azimuth) and elevation with the drainage lines. When drainage and ridge lines are plotted on the map, the contour points, if not actually observed, may be interpolated between the contours drawn.

The symmetry of adjacent contours is obvious from the inspection of a contoured map, and this relation may be utilized, where one contour is well determined, to draw the one on either side of it from a very few points, often but one. If the contours are wavy, they will generally be a little farther apart at the concave and convex points than at the reversion points between them. If the contours are not wavy, they are generally parallel.

74. If the relief of the ground is so slight that the drainage and ridge lines are uncertain, the field work of contouring is best done by taking level sights at points arbitrarily selected. Such points will usually be in straight lines running in the general direction of the steepest slope. The points are plotted on the map, the corresponding elevations written near them, and the contours interpolated as indicated in Fig. 34, assuming that the surface of the ground between observed points is a straight line. The closer the points are, the less error is involved in this assumption.

If the country is comparatively flat and unbroken, profiles may be taken along roads and paths, and contours sketched in on each side so far as they can be seen. Then by going over the intervening ground and observing its slope, the portions drawn can be joined with the eye with sufficient accuracy.

In towns and villages profiles along intersecting streets and the space between the intervening space furnish data for approximate contours.

75. Slope Equivalents. Actual distances between contours on a map depend on the contour interval, the scale of the map, and the gradient. For a given map the contour interval and scale are constant, and the distances between contours depend on the slope alone. On any map with contours at a given interval each gradient has its corresponding contour distance, which is its equivalent. A line subdivided to show the equivalents of various slopes on any map is called a scale of slope equivalents for that map, or a scale of slopes, and by applying such a scale to the distance between successive contours the slope of the ground between them may be read off.

Different maps slope equivalents vary with the ratio between the contour and the scale. A scale of slope equivalents may be constructed for a ratio and will be true for all maps having that ratio, no matter how much the scales may vary. The ratio may be taken as the fraction of an inch on the map corresponding to the contour interval. If the scale of the map is 1 in. to the inch and the contour interval 1 ft., the ratio is $\frac{1}{12}$ or 0.002, which is the fraction of an inch corresponding to 1 ft. on a scale of 500 ft. to an inch. If the scale is 1,000, 5,000, 10,000, or 50,000 ft. to the inch, and the corresponding contour interval is 2, 10, 20, or 100 ft., the ratio in each case is 1 in. to the contour interval corresponds to 0.002 in. on the scale of the map. A scale of slope equivalents corresponding to the ratio applies.

Fig. 35 contains scales of slope equivalents for ratios of $\frac{1}{12}$ to $\frac{1}{50,000}$, which cover the usual range.

To get any desired scale of slope equivalents from the figure, divide the number of feet in the contour interval by the number of feet per inch of the scale, or divide the number of inches in the contour interval by the denominator of the ratio. R. F. The result is the ratio. Place the straight edge of a piece of paper horizontally on the diagram and passing through the corresponding point on the ratio scale on the left of the figure, and prick off the scale.

Slope equivalents afford a convenient and rapid method of determining contours on any line of a map the gradient of which is known.

The fraction of the equivalent for any slope corresponds to the same fraction of the contour interval. If an end of the line is on a contour, the slope equivalent may be stepped off along the line and each point so determined will be on a contour point. If the end of the line is between contours, measure off on the line the part of the slope equivalent corresponding to the rise or fall to the next contour point. From this step off the slope equivalent as before. If a small distance remains at the end of the line, find what part of the slope equivalent it is, and add to or subtract from the last contour elevation the corresponding part of the contour interval for the elevation of the end of the line. To illustrate: If in Fig. 36 elevation at a of the line ab is 103, gradient $\frac{1}{10}$, contour interval 10 ft. and the slope equivalent cd, then the rise to the next contour is $110 - 103 = 7$ ft. or $\frac{7}{10}$ of the contour interval. Seven-tenths of 10 is 7, and hence e is the position of the 110 ft. contour point. Lay off ed = 7 ft. and gh = cd and locate the 120 ft., 130 ft. and 140 ft. contour points. The distance hb = $\frac{3}{4}$ of cd, hence the rise beyond h = $2\frac{1}{2}$ ft. and the elevation of b = 142.5.

In the absence of contours relief may be indicated by hachures, which are short parallel or slightly divergent lines running in the direction of the slope. Hachures should be used only to indicate areas which present a steep enough to offer cover or become obstacles. The use of hachures is illustrated in Fig. 37.

For the reconnaissance with a moving column will require the simultaneous work of a number of sketchers and must be so organized that each sketcher gets his full share in the time allowed; that the sketches and reports shall be made in about the same hour, and that the assigned ground shall be thoroughly covered without unnecessary duplication.

A good sketcher on foot can take about 10 miles of road in a day, or can keep up with a slowly advancing column. A good sketcher mounted can cover 20 miles a day steadily, or in an emergency 20 or 25 miles, and can keep up with infantry on a forced march or with cavalry marching at ordinary rate.

Reconnaissance for a column should include besides the road traveled the parallel road on each side and all connecting roads between them. Each road traversed by the column on the main road will thus involve $2\frac{1}{2}$ to 5 miles of sketching.

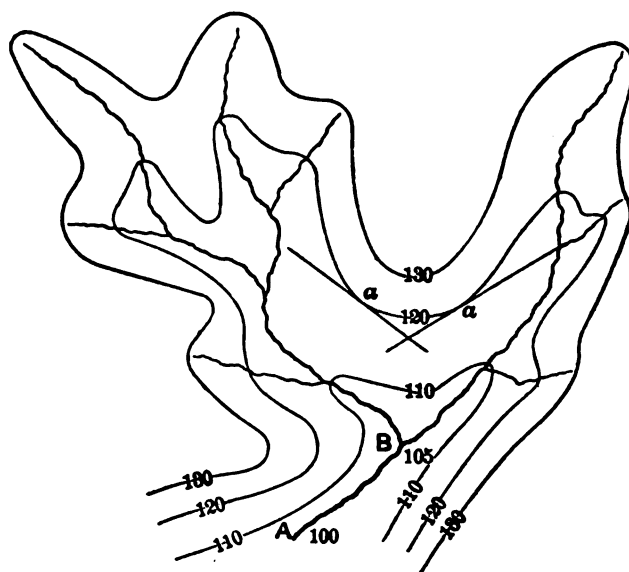


Fig. 33

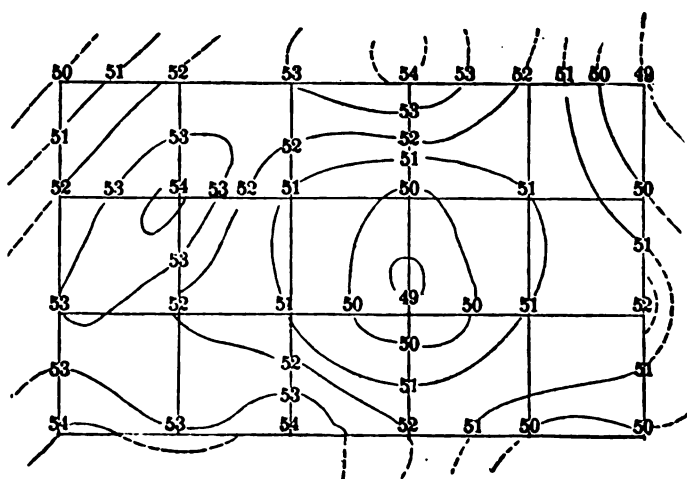


Fig. 34.

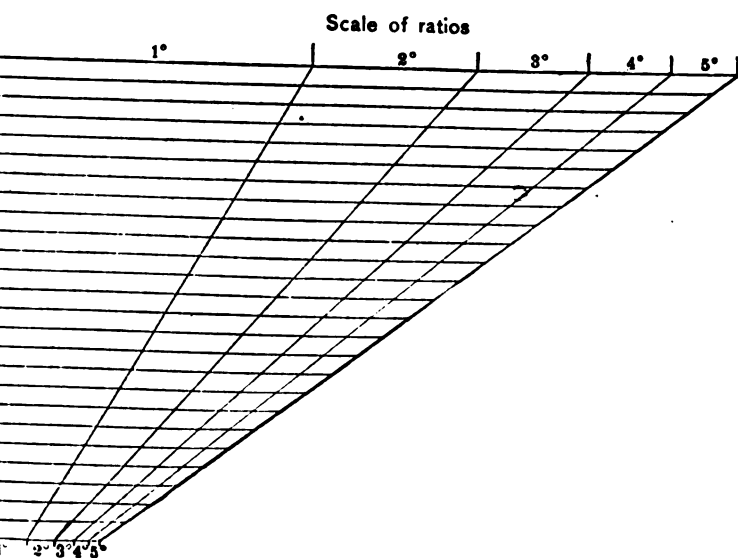


Fig. 35.

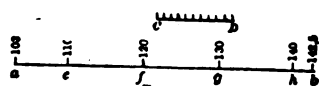


Fig. 36.



Fig. 37.

If a reconnaissance is to be made when a force is not in motion, the area to be covered will usually be so large and the time allowed so short as to make it necessary to combine the work of a number of sketchers.

78. If any map is available, the area to be reconnoitered should be divided on it and subdivided into as many parts as there are sketchers, the parts made equal, not in size necessarily, but in amount of work and time, the important point being that all the parts shall be finished at the same time.

Each of these parts is assigned to a sketcher, with full instructions as to the amount and class of work to be done, the scale to be used—which should be the same for all—and the place and hour at which the sketch must be turned in. For each practicable, each sketcher should be given a tracing or copy of enough of the map to show the boundaries of his own task and the adjacent features of interest next to his.

If there is no map, the area may be indicated by land marks, but it is usually necessary, and always desirable, to go over the ground and assign his task to each sketcher. When boundaries are definite, there need be little overlapping. The amount of reduplication must increase as the boundaries become more vague.

79. The area to be mapped may be divided up in any convenient way, but it is best to use roads, fences, streams, or other well-defined lines as far as possible. Lacking these, compass courses passing through well-defined points will answer.

In a road sketch one man should be assigned to the main road on which the column is marching. Others will be assigned to such parts as intersecting roads as it may be necessary to map. So far as practicable, the parties should leave the main road by an intersecting road, traverse a short stretch of parallel road, and return to the main road by another crossing.

80. **Compilation.** The sketches when turned in are consolidated, usually by pasting them in their proper relative positions on a large sheet of paper, and by pasting them together at their edges so that corresponding features will be in line. If one of them does not exactly fit, as will often happen, the adjustment is best made by cutting the sketch into two or more pieces and moving them into their proper respect to each other so as to absorb the discrepancy. Thus, if a piece is half an inch too short, cut it at three or four places on lines perpendicular to the road and separate the pieces by a sixth or eighth of an inch, so they will long, overlap the pieces instead of separating them. If a road or other feature is out of azimuth, make a cut through one of its ends and swing it into position. These operations may be combined. The adjustment is rapid and sure, and is exact. If a sketch is too much out to be adjusted by this process, it will be of little value and time will be saved by leaving it out of the compilation and filling in the gap freehand, using the sketch as a guide.

Fig. 38 illustrates this method of adjustment.

Paragraphs 81 to 84 eliminated, as not essential.

85. **Landscape Sketching.** Free-hand sketching can not take the place of topography, but it is a valuable adjunct and should be practiced by every soldier who has any aptitude for pictorial drawing.

A sketch differs from a photograph only in that it shows in sharp relief a limited number of the larger and characteristic features easily seen and understood, while the photograph shows all details, many of them so minute that they are lost in a mass of confused forms, with the form lines, of the sky line, relatively inconspicuous. All the lines of a perfect sketch are in a photograph, but close scrutiny is often necessary to find them. When the sketch is out and traced, however, a perfect sketch results. Tracing from photograph is excellent practice.

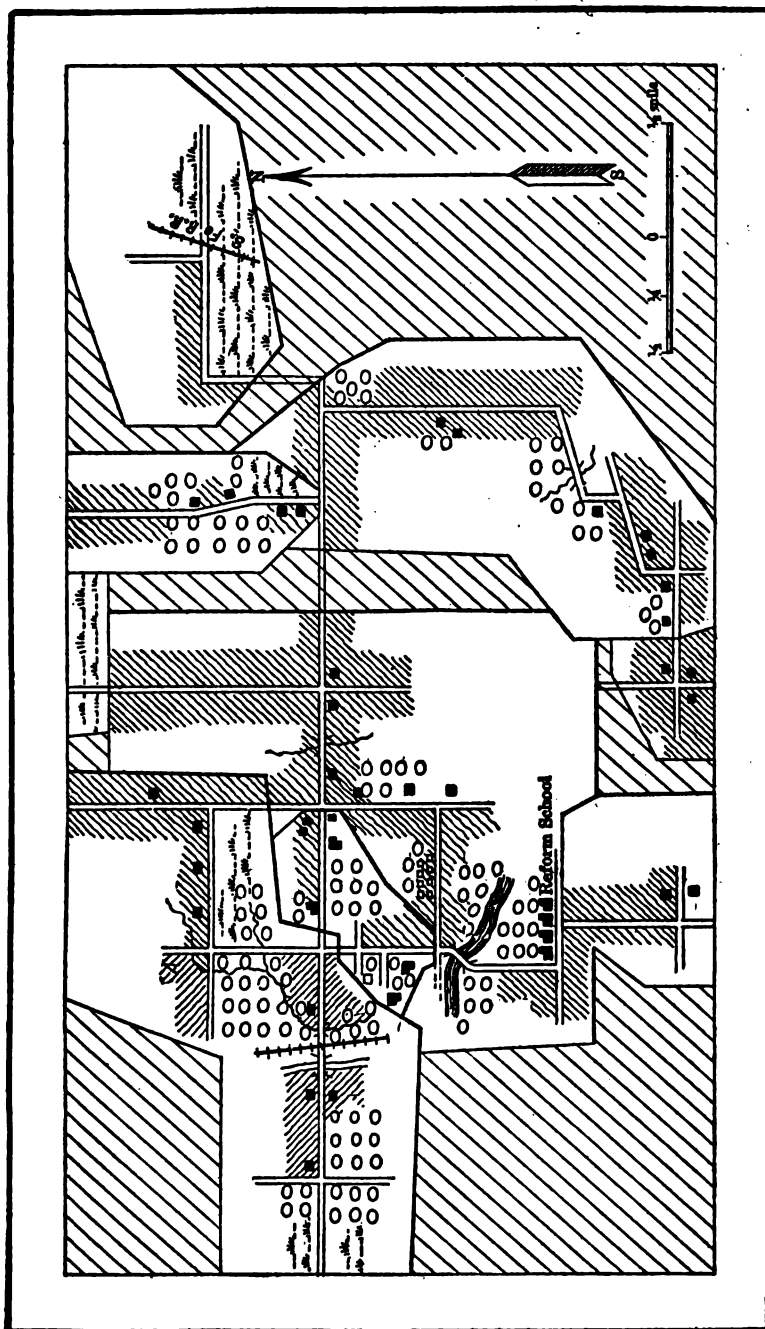


FIG. 38.

The outfit for field sketching should be as simple as possible. A sketchbook with a canvas cover, carried in a water-tight case, together with a pencil, pencils B, F, and H, and pieces of soft and hard rubber are the essentials for satisfactory work. For active field work the book should be no wider than 5 inches, and be carried in the pocket of a service blouse, and relatively long, say 5 inches.

The point of view should as a rule be high enough to give a comprehensive grasp of all that is important—a rock, a knoll, a hill, a peak—depending on the conditions. Face toward the middle of the field of view which is determined by the conditions. Hold the board or sketchbook vertically before the eye and move it backward or forward until the sheet just fills the field. Lower the board until the sky line of the hills can be seen above its top edge, and with a pencil mark on that edge the points corresponding to the principal salients and recesses of the hill forms. If desirable the board can be moved sideways far enough to enable the principal heights and depressions to be marked on the top edge. By intersecting references the locations can then be easily established on the sheet. From these points the forms can be sketched in with much greater accuracy.

Proceed next to draw the hills in outline, but faintly, with attention to the larger curves or humps at first. Go over them again with more care, and mark out the small irregularities. If any part of the horizon is visible, draw it lightly, and then complete the general mass of hills by drawing the top or base lines. Seek now for the surface character of the hills by tracing the ravine lines. The knobs and foothills are brought out by tracing the meanders that show form. All changes in form or breaks in the line will produce corresponding breaks in the foliage of the tree masses, which are drawn in the distance as irregular lines. If the more important of these are so drawn, the general character of the hill will result. Add now the foot of the crest, and the skeleton of the sketch is complete.

The road and railroad meanders should follow as a rule, and the fence lines of fields. Cultivated land is rendered by parallel irregularly broken lines. Fortifications, trenches, etc., will be drawn more or less in detail according to distance and importance. Enemy's lines or trenches even at a great distance should be strongly marked by simple black lines. The indication of trees and trees is the most difficult feature for students. The indications of the accompanying sketches will show the treatment in outline work.

Figs. 39 and 40 show a variety of forms sufficient for most localities.

86. Hydrography. Depth of water and character of bottom are determined by sounding with a pole or with a lead and line. The sounding pole may be of wood, or of permanent form. A convenient one is 10 ft. long, octagonal in section, tapering slightly from middle to ends, divided into feet by rings, painted alternately white, and black or red. There should be an iron hook at the bottom, heavy enough to make the rod stand erect when free in deep water. Such a rod is convenient to use in water 9 ft. or less in depth.

If a sounding lead is not furnished, any compact weight may be used. The sounding line should be of braided hemp or cotton, $\frac{3}{8}$ to $\frac{1}{2}$ in. in diameter, and tagged with cloth or leather. The tagging will depend on the depth to be measured, and degree of precision required. Cloth of different colors may be used for different units, and leather tags may be distinguished by notches or punching holes in them. The line should be thoroughly stretched, and allowed to dry. It should then be wet again and tagged. The zero of the graduation is at the bottom of the lead or weight. The lead and line are best connected by a rawhide thong passing through an eye in the lead and an eye made in the end of the line.

Soundings are usually referred to a plane parallel to the water surface.

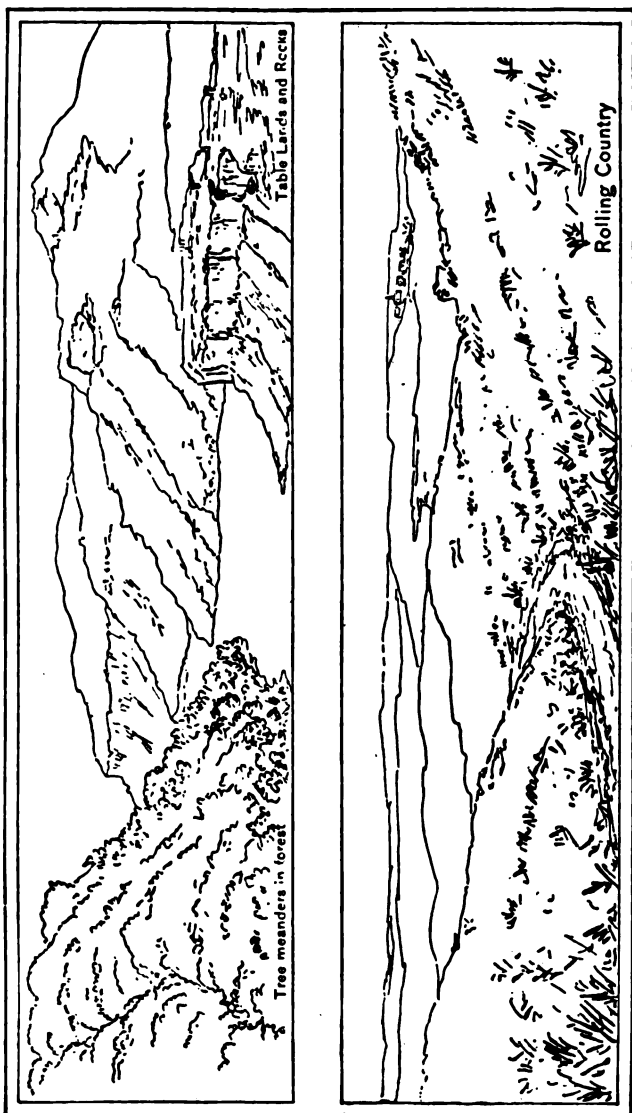


FIG. 39.

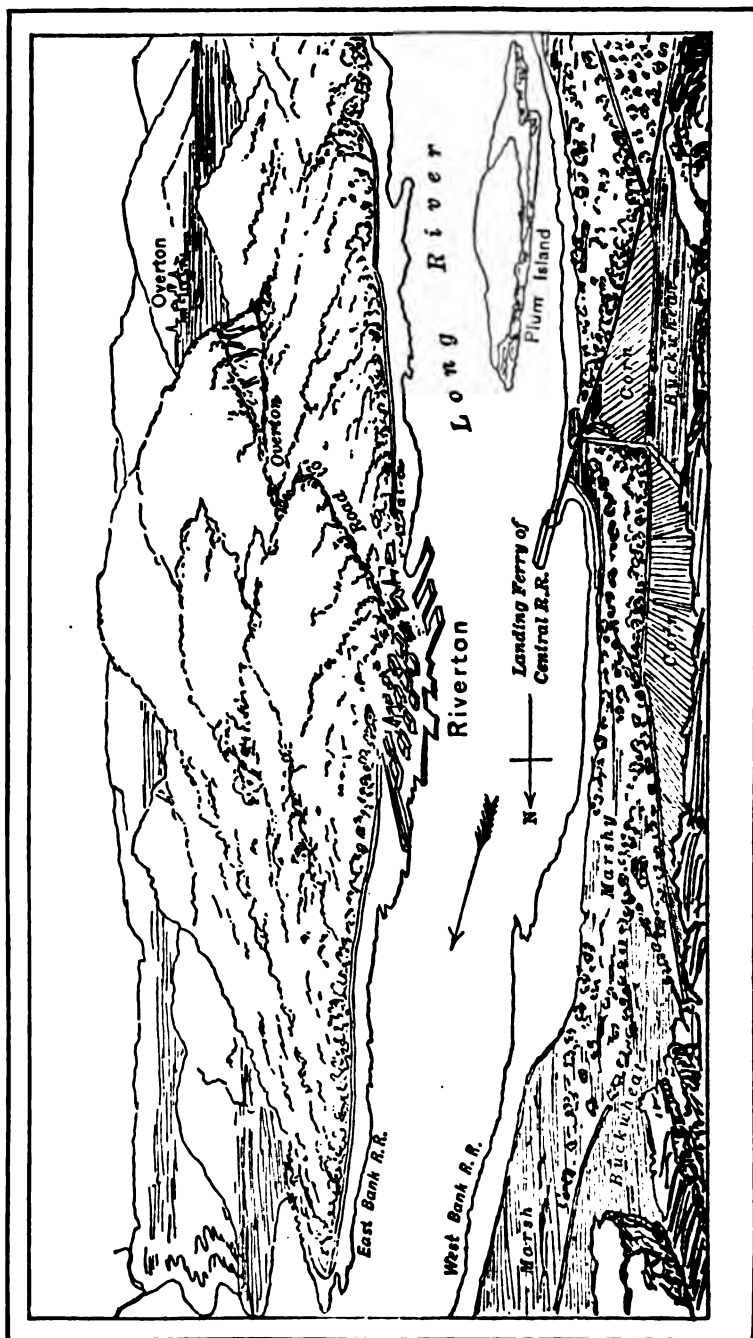


FIG. 40.

cept in flowing streams. The plane usually selected is the water surface if stationary, or one of its positions if variable, so that soundings will be approximately the actual depths of water. The elevation of the water in the position selected is called the datum level. If the surface elevations, a gauge rod must be set near the water's edge, and read often to plot a continuous curve of water level. The time of beginning and a particular group of soundings is noted. The mean elevation of the surface during that interval is taken from the curve, and the soundings corrected by the difference between the actual level and the datum level. If the correction to be applied is less than half a foot, it is usually neglected. The material of the bottom, as rock, gravel, sand, or mud, can usually be told by the feeling of the rod or lead when it strikes. A specimen of the bottom is brought up by smearing the end of the lead with tallow.

A direct sounding is obtained only when the line or rod is plumb and its length correct, or its error known and applied. Except for the error in reading the line, only one source of error operates to make the soundings too small, and that is a line which has stretched since it was tagged too long. All other sources of error make the soundings too large, and they are apt to be so, and actual depths slightly less than those recorded usually be found.

For a plumb sounding from a boat moving through the water, the lead is out on the pole inclined in the direction of motion far enough to allow the lead to touch bottom by the time the boat is directly over the spot where it is to be taken. Soundings taken with a line from a moving boat will always be too small.

The most accurate soundings with lead and line in running water are taken from a boat floating with the current, with line allowed to hang and move with the current. It is raised only a foot or so between soundings, just enough to keep the lead on the bottom.

Location of Soundings. The simplest method is by two simultaneous azimuths from known points on shore. If the soundings are taken on a line passing through one of the points, all azimuths from that point will be constant, and a single measurement will suffice. This line is plainly marked by range flags, and the boat's crew instructed to keep the flags in range. Only one instrument and one observer are required. This is the usual method for streams and is best for open water when the soundings can be taken in straight lines. Locations may also be determined from the boat by two observers taking simultaneous compass bearings on known points on shore—see resection—or by two simultaneous sextant observations. The latter is less convenient, as a special protractor is required for plotting.

The following notation or its equivalent should be made on a map or chart for each sounding: "Soundings are in feet (or meters) and are referred to the datum level of water at (location of gauge) at — o'clock, on the — day of —. The elevation of this datum level is — ft. (or meters)." If the reference plane is inclined, add: "and its inclination is — in a — direction." The first blank is left for the rate of fall expressed in any recognized way, and the second blank is left for the compass bearing.

Map reading is essentially the reverse of map making. In the latter process the ground is measured and studied with a view of forming a mental picture of the ground as it will look. In the former—map reading—a map is measured and studied with a view of forming a mental picture of how the ground will look. All rules and principles heretofore stated as to relations between map and ground are to be used in studying the relations of map to ground.

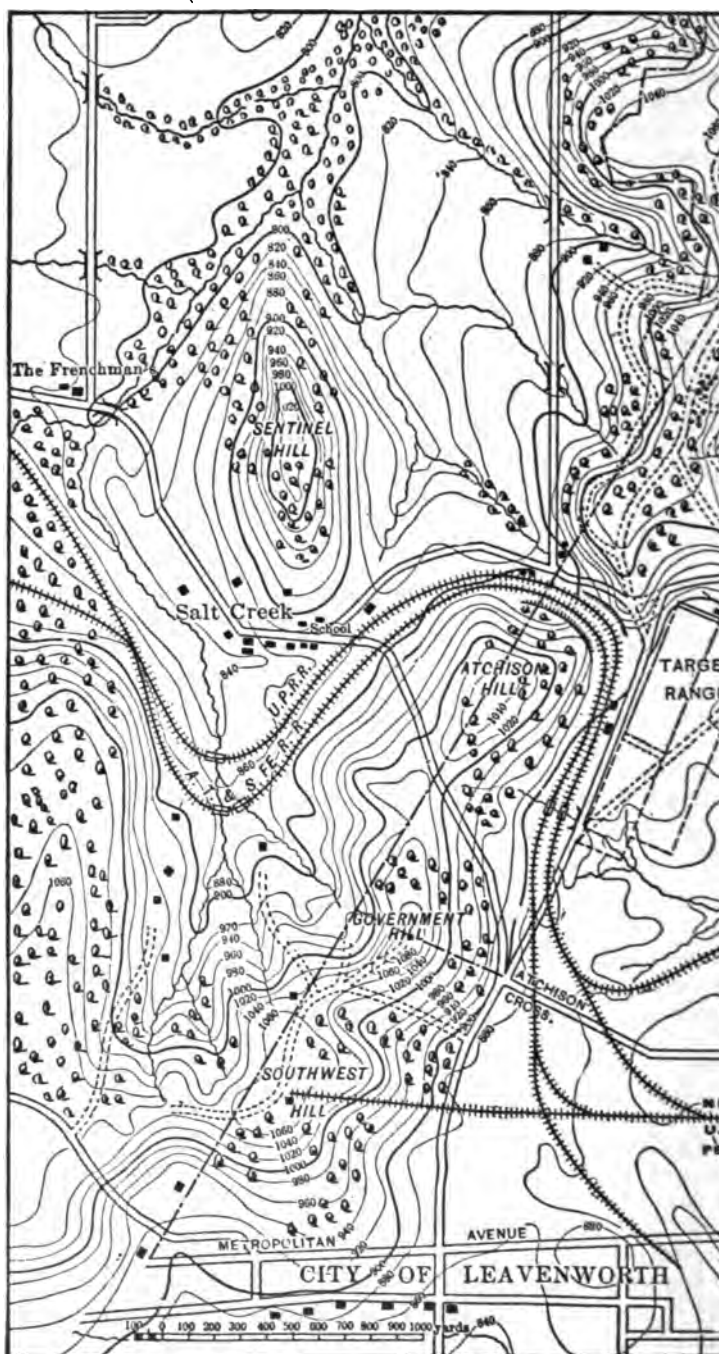


FIG. 41.

Following suggestions will aid the beginner:

the meridian on the map and associate it in the mind with the local n. This may be done by turning the map so that the meridian will be to the north, using the compass as a guide if necessary. If there is no n on the map, look for indications of direction in local names, or for road, stream, ridge, or other feature the general direction of which is

the scale of the map. Estimate certain distances, as the total width or length or distance between prominent points and test these estimates on the map. If there is no scale, look for some indications of distance. It may be found in local names, as Three Mile Creek, Two Mile House, etc.; in uniformly spaced, as the U. S. land surveys; city blocks, which are usually 100 yds. on the shorter side; railroad stations or sidings, the distance of which may be taken from time tables. If the map has parallels of latitude a scale may be drawn by assuming 69 miles to each degree, or 1.15 miles to a minute. If the ground is accessible, take two convenient points shown on the map and measure the distance between them.

If the map is contoured, note the contour intervals and the scale of slope between contours. If the contours are not numbered, decide which are the high ones and which are the low ones. Closed contours are much more likely to be elevations than depressions, especially if several are concentric. A single closed contour may be uncertain. Look for indications of marsh or water inside of it. If a contour interval is not given, it will be difficult to get any clue to it unless elevations appear on the map. If the ground is accessible the contour may be determined by actual measurement of a gradient.

Associate all topographical and cultural signs, and associate them in mind with their advantages or disadvantages for military operations.

A problem frequently arising in map reading is that of determining what points are visible from a given point. A point is visible when the gradient to it is rising, is greater, and, if falling, is smaller, than the gradient to any intermediate point.

These comparison gradients are conveniently represented by the quotient of the elevation in ft. divided by the difference of elevation in ft. The point will be visible when this quotient is smaller, if rising, and larger if falling, than the quotient for the intermediate point. Thus, to determine whether the bridge on Frenchman's Fig. 41, is visible from Atchison Hill or is concealed by intermediate ground, assume the highest point of Atchison Hill to be in the center of the 1,040 contour and to have an elevation of 1,050. The distance from the hill to the bridge is 5,610 ft., fall 250 ft., quotient 22.4. The line of sight from the hill to the bridge crosses the 960 ft. contour on the flank of Sentinel Hill. The distance is 3,060 ft. distance, fall 90 ft., quotient 34, hence bridge is not visible from Atchison Hill, since the gradient is falling, and the nearer point has the smaller quotient.

When rising from the bridge the quotient for the whole distance is 22.4 as before, since the gradient is rising. The distance from the bridge to the high point is 1,600 ft., rising; differences of elevation 160 ft., quotient 16, hence, as before, the bridge on Atchison Hill is not visible from the bridge, since the gradient is rising and the nearer point has the smaller quotient.

If the gradient is rising and the other falling, no computation is necessary. A rising gradient will hide a farther point of falling gradient, but will not be hidden by a nearer one.

Drawing. The essential requirements for a good topographical drawing are accuracy and clearness. By accuracy is meant a faithful exhibit of measurements and observations made in the field, or of data taken from other maps.

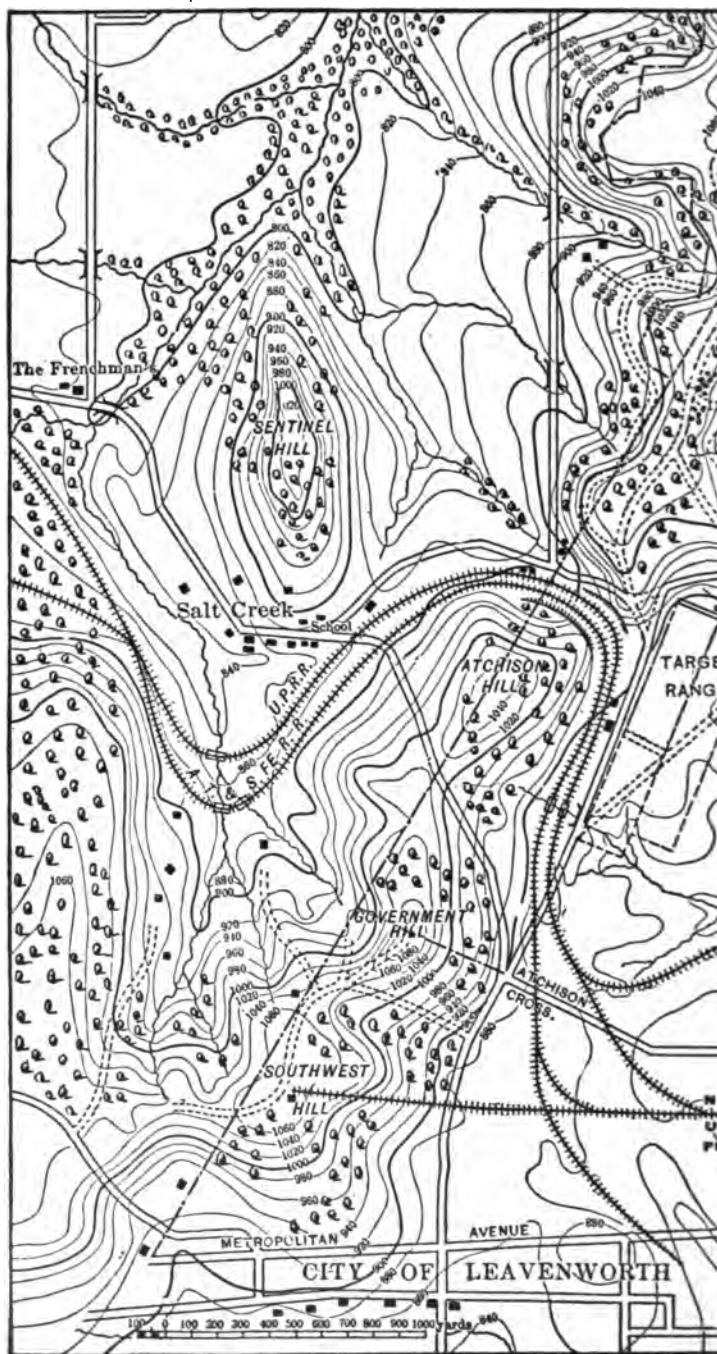


FIG. 41.

Following suggestions will aid the beginner:

Find the meridian on the map and associate it with the local meridian. This may be done by turning the map so that the meridian will be to the north, using the compass as a guide if necessary. If there is no meridian on the map, look for indications of direction by the names, or for a road, stream, ridge, or other feature the general direction of which is

known from the scale of the map. Estimate certain distances and the total width or length or distance between prominent points on the map. These estimates may be used as a check on the scale. If there is no scale, look for some indication of distance. It may be found in local names, as Three Mile Creek, or Mile House, etc.; or in uniformly spaced, as the U. S. land surveys with sections which are usually 3600 yds. on the shorter side; railroad stations or the distance of travel may be taken from time tables. If the map is a map of latitude and longitude a scale may be drawn by assuming 69 miles in one degree or 1.15 miles to one minute. If the ground is accessible, measure the distance between points shown on the map and measure the distance between them.

If the map is contoured, note the contour interval and the scale of slope or gradient. If the contours are not numbered, note which are the high ones and which are the low ones. Closed contours are more likely to be elevations than depressions, especially if several are concentric. A single closed contour may be uncertain. Look for indications of water inside of it. If the contour interval is not given, it will be difficult to get any clue to it unless elevations appear on the map. If the ground is accessible the contour interval may be determined by actual measurement on a gradient.

Remember all topographical and cultural signs and associate them in mind with their advantages or disadvantages for military operations. The problem frequently arising in map reading is that of determining what is visible from a given point. A point is visible when the gradient to it is rising, is greater, and, if falling, is steeper than the gradient to any intervening point.

These comparison gradients are conveniently represented by the quotient of the rise in ft. divided by the difference of elevation in ft. The point will be visible when this quotient is smaller, if rising, and larger if falling, than the quotient for the intermediate point. Thus, to determine whether the bridge on Frenchman's Fig. 41, is visible from Atchison Hill or is concealed by intervening ground, assume the highest point of Atchison Hill to be in the line of the 1,040 contour and to have an elevation of 1,050. The distance from the point to the bridge is 5,610 ft., fall 250 ft., quotient 22.4. The line of sight from this point to the bridge crosses the 960 ft. contour on the flank of Sentinel Hill, 3,060 ft. distance, fall 90 ft., quotient 34, hence bridge is not visible from Atchison Hill, since the gradient is falling, and the nearer point has the larger quotient.

Looking from the bridge the quotient for the whole distance is 22.4 as before, since the gradient is rising. The distance from the bridge to the high point of Atchison Hill is not visible from the bridge, since the gradient is rising, and the nearer point has the smaller quotient.

If the gradient is rising and the other falling, no computation is necessary. A point of rising gradient will hide a farther point of falling gradient.

Drawing. The essential requirements for a good topographical drawing are accuracy and clearness. By accuracy is meant a faithful exhibit of the facts and observations made in the field, and of data taken from other sources.

or

the

used

geol

riptive

ade, as

sion of

Clearness involves absence of confusion or crowding, and neatness in Beauty and pictorial effect are obtainable by skilled draftsmen only, always desirable, are rarely necessary. Persons who are not skillful men should not attempt pictorial effect, as it will detract from accuracy clearness without substituting anything of equal value.

Avoid unnecessary haste in plotting and drawing. If possible, take check carefully all azimuths and distances plotted and be sure they are correct. There should be no approximation on the drawing board. Although the server may have simply guessed a distance to be 550 yds. in the absence of other information, the plotter should be careful to lay it down at exactly 550 yards.

Start with clean paper and keep it as clean as possible. In the morning, wipe off the instruments before using, especially rulers, scales, and triangles. Clean the drawing carefully before beginning work. Dust again when stopped. Cover with a cloth or paper. If necessary, dust the drawing and wash the instruments occasionally while at work.

Make all ink lines firm and very black. A drawing to be made in ink is usually drawn first in pencil, and in such cases a very hard pencil (4B) is best. If the pencil drawing is to be traced, a softer and blacker pencil should be used, but must be kept well pointed.

India ink in stick form gives the best results, but the time required for grinding precludes its extensive use in military field work. The prepared inks in liquid form are ready for use and are satisfactory. They must be well corked when not actually filling a pen. If the ink gets thick in the pen, so that it will not run freely from a fresh-filled pen, add a little water.

The ruling, or right-line pen, is best for making lines of uniform thickness. The points must be kept clean, and when worn must be ground on a fine stone to the form shown and to exactly equal length. The points must be closed and the ends shaped together, which will make them identical. To open the points and grind each on the outside to a proper edge. Right-line pens are set to make lines of different thicknesses by the screw D, but the range for any one pen is limited, and different sizes of pens are made. A very fine line can not be made with a coarse pen, and it is difficult to make a very thick line with a fine one. The points should never touch. If a line made with a pen is slightly separated is too coarse, take a smaller pen. These pens are graded by the length over all. Five inches is a medium and useful size.

Right-line pens may be filled by dipping an ordinary pen in the ink bottle, or by inserting it between the points. A strip of paper closely folded may be used in the same way. In the bottles of prepared ink the cork carries a small tube for filling. Take only as much ink as can be used in two or three strokes. As soon as the flow becomes the least sluggish, the pen should be emptied and refilled. To empty or clean the pen, pass a piece of paper (the corner of a blotter is excellent) between the points.

The adjusting screw should not be disturbed while working on lines of uniform thickness. When changing from one thickness to another, open the pen and clean more thoroughly. To reset for a given thickness, draw a line of the desired length on a scrap of paper and lay it alongside of a line of the desired thickness previously drawn. The difference will be seen, the pen can be changed, and another trial made, and so on until the lines are matched.

For ruled lines the ruler or curve is laid in the proper position and the line is drawn along the edge, lightly pressing against it. The pen should be held so that the plane of its points perpendicular to the plane of the paper and in the direction of motion. The handle should be slightly inclined in the same

free-hand lines, as contours, hold the pen in the same way and move the pen as to cause the points to follow the line.

When writing with a writing pen, choose one of a size which will make a line of uniform thickness without pressing on the paper. Dip the point only in the ink. If the ruler has a beveled edge place it with the top projecting. A curve of the pen not beveled should be raised slightly from the paper. The pen should be held above the point which touches the ruler. It is held as described in the use of the ruling pen. Parallel lines close together may be drawn with one setting of the ruler by inclining the pen slightly.

Writing pens are best for stream lines. When it can be done, vary the size of the pen to suit the thickness of line. When using a writing pen free-hand do not vary the work as possible by drawing the pen toward the body in about the direction of the down stroke in writing.

For lettering, signs, and all free-hand work with the writing pen, keep the pen clean and freshly inked and the ink free from dust and of proper consistency. Do not write freely without dripping from the pen in blots.


When using a circular pen, set the legs of the compass so that they will span the desired distance and the pen point will be vertical. The lead of a pencil point should be sharpened to the shape of the ruling-pen points with the flat side toward the pivot leg of the compasses. When using compasses with pen or pencil incline them slightly in the direction of motion and rotate the head of the compass with the thumb and forefinger. Very slight pressure only should be used to keep the pen beyond the weight of the instrument.

Paragraphs 92-94 eliminated, as not essential.

Paraffin tracing linen is usually dull back, having one side glazed and the other side rough. Tracing can be done on the glazed side only. The glazed side is used for pen work and the dull side for pencil work. The glazed side requires preparation before use to remove excess of paraffin, which prevents ink from running well. To prepare the pen. Rubbing hard with fresh blotting paper is the simplest method.

Conventional Signs. The symbols or signs used to represent topographical features are designed to be rapidly made and readily understood, and to clearly indicate or suggest the actual features they represent. Multiplicity of signs is undesirable, and a verbal designation or description of the features is often necessary to make them intelligible and more quickly recorded. For instance, it is better to write the names of the growing crops of a district, as tobacco, corn, or cane, than to indicate the entire area with a symbol. Another method of expediting mapping is to draw around an area with a narrow border of the proper sign and leave the interior blank.

Conventional signs, United States Army maps, 1912, are changed as follows: It is desirable, where practicable, to indicate on military maps the character of the lands in regard to the difficulty which they offer to the passage of troops.

This will be accomplished by the use of the symbol  in woods or

or arboreal growth of any kind which offers such obstruction to the movement of troops as to require cutting, illustrated in following cut.

Conventional signs for other woodlands on which this symbol is not used are to describe open woods, where cutting is not necessary for the passage of troops. (C. C. S. U. S. A. M., No. 1, Feb. 8, 1916.)

Titles, Notes, Etc. Every finished drawing should have a descriptive title consisting of—

1. The designation of the organization under whose auspices it is made, as War Department; Bureau of Insular Affairs, War Department; Division of Insular Affairs, War Department; 1st Division, 2d Corps.

(2) Its kind, as map, sketch, plot, plan, profile, section, or elevation. than one kind of drawing appears on the sheet, each should be mentioned in the title, as Plan and sections of battery; Plan, section, and elevations of houses, etc.

(3) Its subject, if it relates to a particular object, feature or purpose.

(4) Its locality. This and the preceding may be interchanged in position.

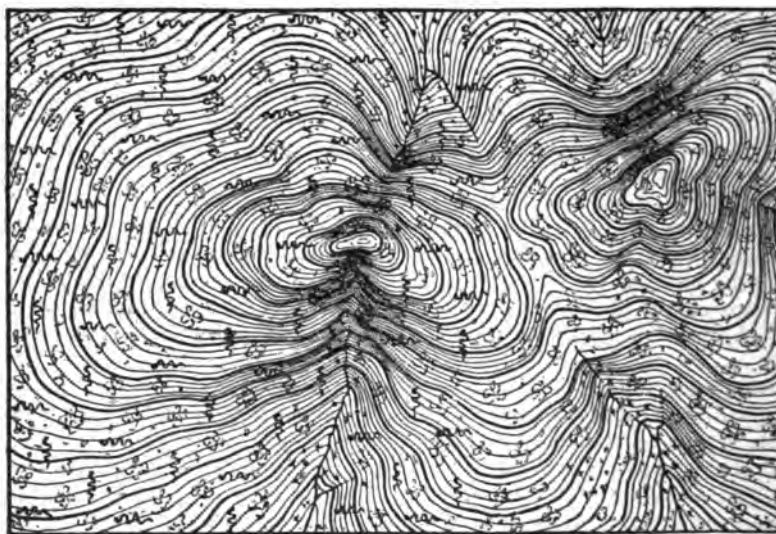
(5) Its sources, as Compiled from, etc.; Reduced from, etc.; From original, etc.

(6) Its authorship. If the work has been done by one person, acting under the instructions of another, both should be named, as under the direction of Colonel John Doe, General Staff, by Captain William Roe, 1st U. S. Infantry.

(7) Its date.

(8) Its linear scale; its contour interval; its scale of slope equivalent.

Titles should be adapted in size and boldness to the size and importance of the sheet. They should be divided into lines, following mainly the divisions of the sheet. The middle letter of each line should fall on a line drawn across the sheet.



Dense woods or woods of heavy undergrowth. Serious obstruction to movement of troops, especially in the case of a night march. Necessary to cut passage.

through the middle of the space allotted to the title. Lines should be of various lengths, not all equally long and short, and if the long lines are symmetrically disposed the effect is better.

To prepare a title, write down the matter under the various headings, proper connecting words, and divide it up into lines. Then block out the title, observing the division of lines decided upon, and make such alterations as may be desirable. Finally, letter the title on the map. The following is an example.

Division of the Philippines. | Sketch map | of a tract of land north of Zamboanga, | Island of Mindanao, | showing the proposed location of the encampment of U. S. troops. | From a reconnaissance by | Capt. A. . . . Chief Engr., Department of Mindanao, | Jan. 15, 1904. | Scale | 1 inch = 1 mile, contour interval, 20 ft.

Notes. Besides the title, such information as will help to a proper understanding of the meaning and value of the map should be given in the notes. These usually relate to methods used in the survey, datum point, etc.

Fig. 50 shows the title corresponding to the above example, with notes on the magnetic meridian. The magnetic meridian should be shown, and the true

the declination is known. The true meridian may be a line, of 3 ins. or in length, with a star at its north and the feather of an arrow at its end. The magnetic meridian may be an arrow crossing the former at the point and making with it an angle equivalent to the declination. The drawing should be inclosed in a rectangle, preferably with its sides N. and S. and E. and W. The border consists of two parallel lines, the inner one medium fine, the outer one medium heavy, with a space between them equal to the width of the outer. For geographical maps a double border is used, the space between sufficient to contain the numbers of meridians and parallels. The letters of the border should be placed on the outside. Names and figures relating to points on the map should be made to fit the space between the border lines and be placed on one side. Names and figures relating to extended features or large areas should be disposed along the feature or across the area in straight or curved lines.

Unnecessary lettering should be avoided. A plain unshaded letter is best. All varieties of effect and prominence may be obtained by the size, spacing, and inclination of such letters and the larger initials for important points. Fig. 51 shows the style of letter described, upright and inclined—called italic—with normal, condensed, and extended spacing. Fig. 51A shows the method for spacing letters and determining the length of a given line. This gives equal space to all letters, which is not strictly correct, but is simple and works well enough for present purposes. It is the method necessarily employed in typewriters and the eye is accustomed to it.

Ordinary or normal lettering the height of letters is the width of the letter in the second line below that adopted for the widths of the letters, as in Fig. 51A.

Condensed lettering take for the height the space in the third or fourth line below; and for extended letters make the height equal to the width or take the height of the first line below.

Every good effect may be obtained by the exclusive use of capitals. The letters require one-half the space of capitals in the same line. They are easy to make well as the capitals, but can be made more rapidly and look better on the face of the map. A very good general rule is to use inclined letters for all names and words on the face of the map which relate to water and straight letters for those which do not.

Enlargement and Reduction. The simplest method is by squares. Divide the original into squares of 2 ins. or less by lines drawn parallel to the borders,

Divide the paper on which the copy is to be made into squares with sides corresponding to the same distance on the scale of the copy that the side of the square on the original itself does to the scale of the original, Fig. 53. If a plot of the original be placed on the side of a square on the original and the corresponding scale of the copy on the side of a square of the copy, the readings will be the same. The square on the copy will be larger if the drawing is to be enlarged and smaller if it is to be reduced. The ratio between the sides of the squares on the original and the copy is the ratio of reduction or enlargement. This ratio must not be confused with the ratio of areas of the squares, which is different and not important.

Take a square of the original and reproduce its contents in the corresponding square of the copy; or take a feature of the original, as a road or stream, and draw it through several squares.

Usually the position of a point in a square or on one of the sides can be estimated with sufficient accuracy. Important points may be located by measurement of distances from the nearest sides of the squares, using the scale of the original and the scale of the copy respectively.

Instead of drawing the squares on the original, they may be drawn on tracing paper laid over it, or fine threads may be stretched to form the squares. The drawing board should have a scale of inches on each edge marked with fine cuts or with small tacks to facilitate the drawing of squares.

DIVISION OF THE PHILIPPINES.

SKETCH MAP
OF A TRACT OF LAND NORTHEAST OF
ZAMBOANGA,
ISLAND OF MINDANAO.

Showing the proposed location of a
CANTONMENT OF U.S. TROOPS.

FROM A RECONNAISSANCE BY
CAPTAIN A. B.
CHIEF ENGR. DEPT. OF MINDANAO.

JAN. 15, 1904.

SCALE:



Contour Interval 20'



*Note: Elevations are above mean low of
Q.M. wharf in Zamboanga.*

FIG. 50.

Upright 1 2 3 4 5 6 7 8 9
 A B C D E F G H I J K L M N
 O P Q R S T U V W X Y Z
 bcdefghijklmnopqrstuvwxyz
Inclined 1 2 3 4 5 6 7 8 9
 A B C D E F G H I J K L M N O P Q R S T
 bcdefghijklmnopqrstuvwxyz
Condensed PLAN AND
 Extended ELEVATION

Inclined shows errors less.

DIAGRAM DIAGRAM

*Prominence obtained
 by weight of letters.*

CHANNELS.

SHOALS.

SPINDLES.

COMPASS.

Fig. 51A.

99. To Measure an Irregular Area. Lay over the area a piece of cross-section tracing paper, Fig. 54. Count the full squares inside the area and to their number add the sum of the estimated fractional ones. In the figure the fractional squares to be added are shaded. Multiply the equivalent number of full squares in the area by the area of one square to the scale of the figure. If the scale is 500 ft. to the inch = 250,000 sq. ft. to the sq. in., and the squares $\frac{1}{16}$ of an inch on one side, then the area of one square is $\frac{1}{16}$ of a sq. in., and its value to the scale of 500 ft. to 1 in. = 2,500 sq. ins. = 17.36 sq. ft. The number of squares counted, multiplied by 17.36, is the number of square feet in the area.

If the scale is distorted, the area per sq. in. of the drawing is found by multiplying the scales together. Thus, in a profile plotted to a hor. scale of 500 ft. to 1 in. and a vert. scale of 10 ft. to 1 in., the area of a sq. in. of the drawing is $500 \times 10 = 5,000$ sq. ins. On such a profile a square of $\frac{1}{16}$ in. on a side, or $\frac{1}{16}$ in. area, corresponds to 50 sq. ins.

Paragraphs 100 to 128 eliminated as they have no application to Infantry.

ADDENDA, 1907.

129. Military Reconnaissance of Cuba. In October, 1906, Gen. J. Franklin Bell, commanding the Army of Cuban Pacification, ordered a military reconnaissance of the Island of Cuba. This work, though done under conditions somewhat different from those assumed in the foregoing pages, and covering territory much larger than is likely to be reconnoitered by a marching army, is such a valuable practical exemplification of the principles upon which all military reconnaissance must be based that a succinct description of it is given.

130. The reconnaissance was organized and conducted as prescribed in Field Service Regulations through the agency of the Chief of Staff and the Chief Engineer of the Army of Cuban Pacification. The subjoined description is condensed from the instructions issued and information supplied by the Chief Engineer.

131. A military map of Cuba prepared, largely by compilation, after the close of the Spanish war, was used as a base. Its scale was 1:250,000. This map was divided into 87 rectangles of 30' of latitude 30' of longitude. These rectangles were enlarged to 1:62,500 by pantograph, and blueprints made of the enlargements. The prints were reversed, showing blue lines on white ground. Each rectangle was then divided into 35 subrectangles or sections arranged and numbered according to the following scheme:

N.

| | | | | | | | | |
|----|---|----|----|----|----|----|----|----|
| | 1 | 6 | 11 | 16 | 21 | 26 | 31 | |
| | 2 | 7 | 12 | 17 | 22 | 27 | 32 | |
| W. | 3 | 8 | 13 | 18 | 23 | 28 | 33 | E. |
| | 4 | 9 | 14 | 19 | 24 | 29 | 34 | |
| | 5 | 10 | 15 | 20 | 25 | 30 | 35 | |

S.

Reconnaissance.

52-54.

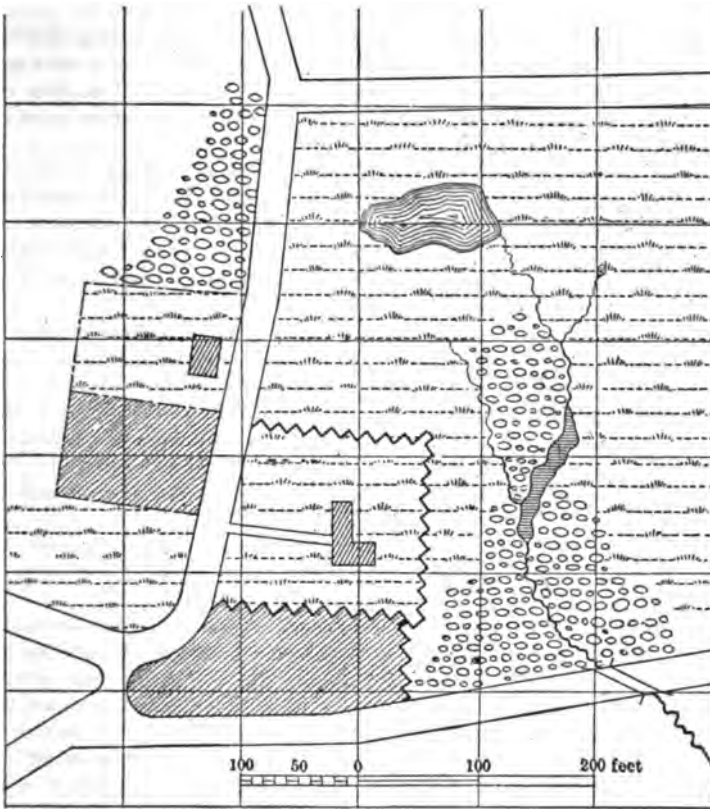


Fig. 52



Fig. 53

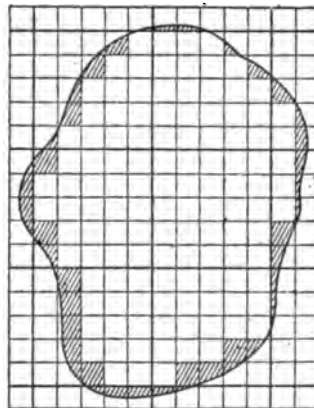


Fig. 54

These sections were about 5 by 7 ins., and two copies of each large section were cut up into sections and the smaller parts pasted on heavy cardboard. Each such card was numbered on the back to correspond with its place on the full sheet. When a full sheet extended beyond the land area the portion falling entirely on the water were omitted, but the number of a section corresponding to its place on the full sheet was never changed. Two sets of cards were sent to each officer charged with the area covered by them, in addition two or more uncut sheets or rectangles.

132. When several parties worked from the same station a competent reconnaissance officer was appointed to supervise the work of all, allotting to the various parties, preventing duplications, and seeing that the work was done and checked. For convenience, plotting was authorized to be done on a scale of 1 in. to 1 mile. The work was done by officers assisted by enlisted men.

The method of procedure was as follows:

Each party took into the field one or more of the cardboard sections. They actually traversed all roads, railways, public and private (plantation), important trails. Inaccuracies of the base map were corrected to show in detail all roads, buildings, bridges, large culverts, fords, telegraph and telephone lines, fortifications, and other features of military importance. Lines of communication not shown on the base map were followed and drawn in. Features shown on the map but not found on the ground were crossed off and marked "Out."

Contouring was not attempted on flat or ordinary rolling country, but on hills, forms, prominent ridges, and accessible mountains were shown by contour lines at 50-ft. intervals.

Swamps, woods, cultivated land, etc., were shown by conventional symbols. Villages and towns were shown in true plan when practicable, with the names correctly spelled. If a true plan could not be shown on the scale of the map, a sketch of the village on a larger scale was included in the notebook as descriptive matter, which was very complete. The rule, however, was to show on the map everything that could be shown there without confusion. Features which could not be so shown were entered in the notebooks which were carried in with the completed sheets.

The work of each day was transferred in ink to the large sheet in the evening. If parties were to be carried out more than one day and there was no more of the large sheet available to carry with them, each day's work was transferred with ink on the cards themselves in the evening. Care was taken in transferring continuing features, as roads and streams crossing the dividing lines of the cards, checked by comparison with adjacent cards before sending in. When this could not be done on account of the adjacent territory not yet having been covered by field parties, such features were continued far enough to the border of the card to be checked with well-defined points on the other side, a special description of the checking point being made and attached to the card when necessary.

Distances were measured by pacing, foot or mounted, and by odometer or bicycle. Directions were by compass, with sufficient attention to magnetic variation to permit the deduction of true bearings.

The large sheets were sent in to the office of the Chief Engineer as soon as completed. The card sections were sent in as opportunity offered as soon as practicable after work on them was completed and transferred.

The base map was found so defective in many parts that practically nothing on it was marked "out" and the cards were used as though nothing on them. In some cases the cards were entirely discarded to avoid accumulative errors, the following method was adopted: Reconnaissance, showing all road and stream crossings, were first made so as

loops of 20 to 60 miles in perimeter, the several loops covering the entire island. Each of these loops was made to close on itself and adjusted so as to properly connect with the adjacent loops. The crossroads, etc., were then made and adjusted to fit the crossings as already determined, the adjusted loops forming in some degree the place of a triangulation system. This method was found to give good results.

The total area covered by the survey was 40,000 square miles, and the work was completed between the middle of October and the middle of November. More than 90 per cent, however, was completed in five of these six months. A battalion of engineers completed 14,000 square miles in four and a half months. Three companies of another battalion of engineers completed 4,800 square miles in about two months. Five officers of marines with assistants from that corps completed 1,200 square miles. The remainder, 10,000 miles, was assigned to infantry and cavalry commanders at twenty different locations throughout the island.

By direction of the Chief of Staff, the conventional signs adopted in 1904 and published to the Army in pamphlet form as War Department Document No. 1, Office of Chief of Staff, are included in the revised edition of the Engineer Field Manual. These signs are shown in Figs. 79-91, inclusive. Except for the signs, which have been reengraved, the original plates, slightly modified, have been used, with some changes in spacing and disposition of matter to suit the form and size of the Manual page. The modifications alluded to, which have been approved by the Chief of Staff, are in the classification of wagon roads (Fig. 79), and of streams (Fig. 85), and in the sign for a canal (Fig. 80). Other signs are additional and explanatory.

The adaptation of conventional signs to the size and scale of the map is accomplished in part by varying the boldness of the pen or brush strokes and in part by wider spacing of them. The strokes must never be so small as to make the sign illegible and never larger than can be easily made with a medium pen. The object is to produce a result which, while distinct as to conventional signs, shall not be so heavy in general tone as to catch the eye, or, what is equally important in military maps, to obscure any additions which may be made. Topographical signs should be perfectly clear when looked for, but not intrusive.

As a rough guide, it may be stated that the signs shown in the plates are suitable for continuous areas of 3 sq. ins. or less in maps of scales of 2 or 3 inches to the mile. If the map areas are large or the scale smaller, the signs should be lightened some, but not much, by making the strokes smaller and by making them wider. Some examples of good maps show the meadow sign, for example, with 2 or 3 elements to the sq. in. For very large scale maps or field sketches the strokes may be made heavier and the spacing increased. These remarks apply only to cultural signs, and a few others of no significance of which is independent of size and shape. All natural or physical features in which size and form are in any way material should be shown with as much regard to the scale as practicable. This becomes more important as the scale is larger.

It may, therefore, happen that the same feature will be differently shown on maps of different scales. This is well illustrated in the case of streams. Fig. 85 shows three signs for streams. On a large-scale map, say 1:1,000, a rivulet a few feet wide would be shown by the third sign, or probably the second, while on a scale of 1:1,000,000 a stream 1 mile wide would be shown by the first sign. There should always be a certain correspondence between the refinement of the map drawing and the accuracy and elaborateness of the field measurements and observations on which the map is based. The general appearance

a map suggests the class of fieldwork from which it should be derived, and if this suggestion is not in accordance with fact the map is deceptive. A broad simple drawing corresponds to rough and rapid fieldwork. A finely drawn and highly finished map corresponds to a deliberate and exact survey. If rough fieldwork is represented by a highly finished work, it is given more value than it deserves, and more confidence in its details may lead to disaster. If, on the contrary, high-class fieldwork is crudely drawn, its apparent is less than its true value and time may be wasted in needless verification. The former contingency is much more serious than the latter.

96d. On civil maps explanatory matter is usually confined to notes. On military maps much use should be made of explanatory matter in the body of the map relating to single features. The design, material, and dimensions of bridges may be indicated; the height and width of channels and dimensions of locks and canals may be given; the width, depth, and character of streams may be indicated, and other data of tactical value may be set forth. This method of expression will be more freely used as the maps or sketches are of less permanency or more historical in character. For maps designed for permanent use, or for use at an indefinite future time, this method must be employed with caution, in view of the fact that most of such data is of changeable type and may become obsolete, when its presence on the map will do more harm than good.

The following abbreviations of words of frequent recurrence have been adopted by the War Department for use on all military maps and sketches. It is not required that an abbreviation shall be used when space and time permit the full word to be written, but it is required that when any of the following words is used it must be written in full or abbreviated as shown, and none of the abbreviations given may be used for any other word than the one for which it stands in the table. Words not given in the table should not be abbreviated if it can be avoided.

96e. Authorized abbreviations.

| | | | | | |
|-------|------------------|----------|----------------------|-------|--------------|
| A. | Arroyo. | gir. | Girder. | q. p. | Queen-post. |
| abut. | Abutment. | G. M. | Gristmill. | R. | River. |
| Ar. | Arch. | i. | Iron. | R. H. | Roundhouse. |
| b. | Brick. | I. | Island. | R. R. | Railroad. |
| B. S. | Blacksmith shop. | Jc. | Junction. | S. | South. |
| bot. | Bottom. | k. p. | King-post. | s. | Steel. |
| Br. | Branch. | L. | Lake. | S. H. | Schoolhouse. |
| br. | Bridge. | Lat. | Latitude. | S. M. | Sawmill. |
| C. | Cape. | Ldg. | Landing. | Sta. | Station. |
| cem. | Cemetery. | L. S. S. | Life-saving station. | st. | Stone. |
| con. | Concrete. | L. H. | Lighthouse. | str. | Stream. |
| cov. | Covered. | Long. | Longitude. | T. G. | Tollgate. |
| Cr. | Creek. | Mt. | Mountain. | tres. | Trestle. |
| cul. | Culvert. | Mts. | Mountains. | tr. | Truss. |
| D. S. | Drug store. | N. | North. | W. T. | Water tank. |
| E. | East. | n. f. | Not fordable. | W. W. | Waterworks. |
| Est. | Estuary. | p. | Pier. | W. | West. |
| f. | Fordable. | pk. | Plank. | w. | Wood. |
| Ft. | Fort. | P. O. | Post office. | | |
| G. S. | General store. | Pt. | Point. | | |

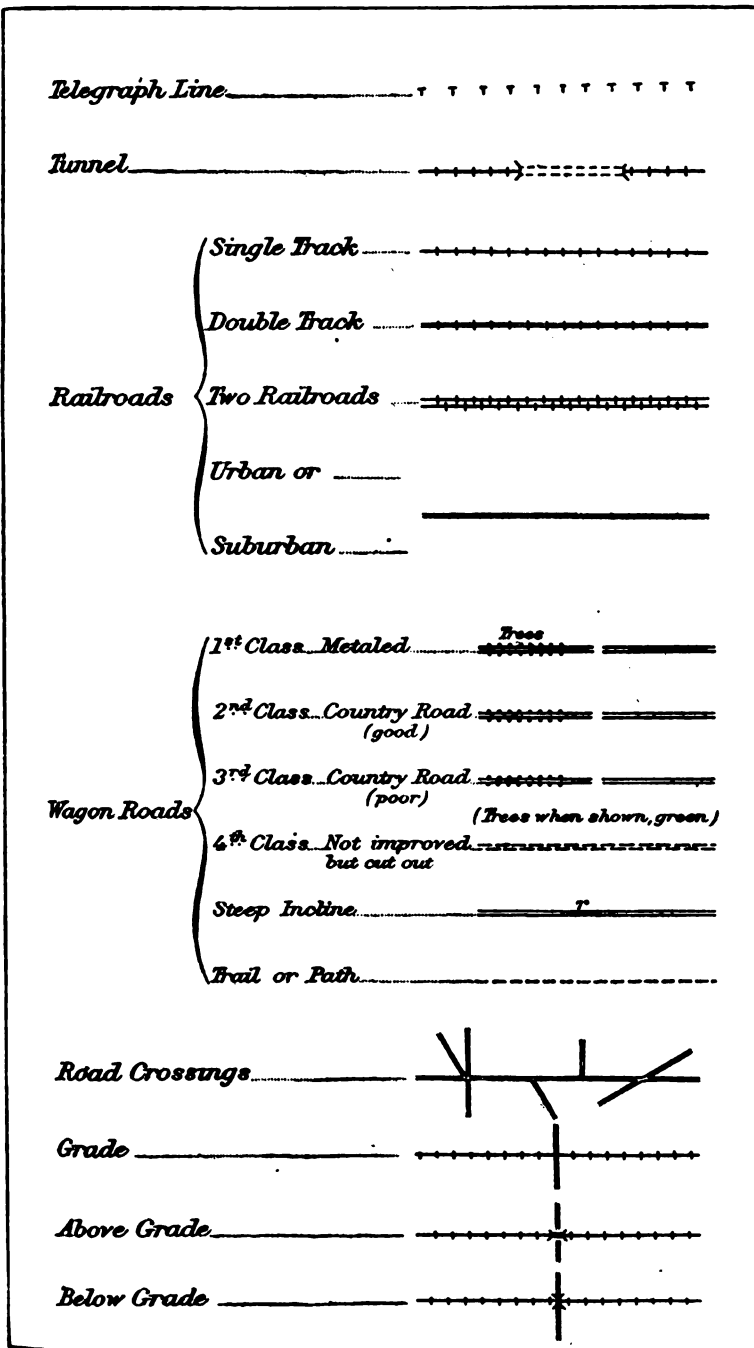


FIG. 79.

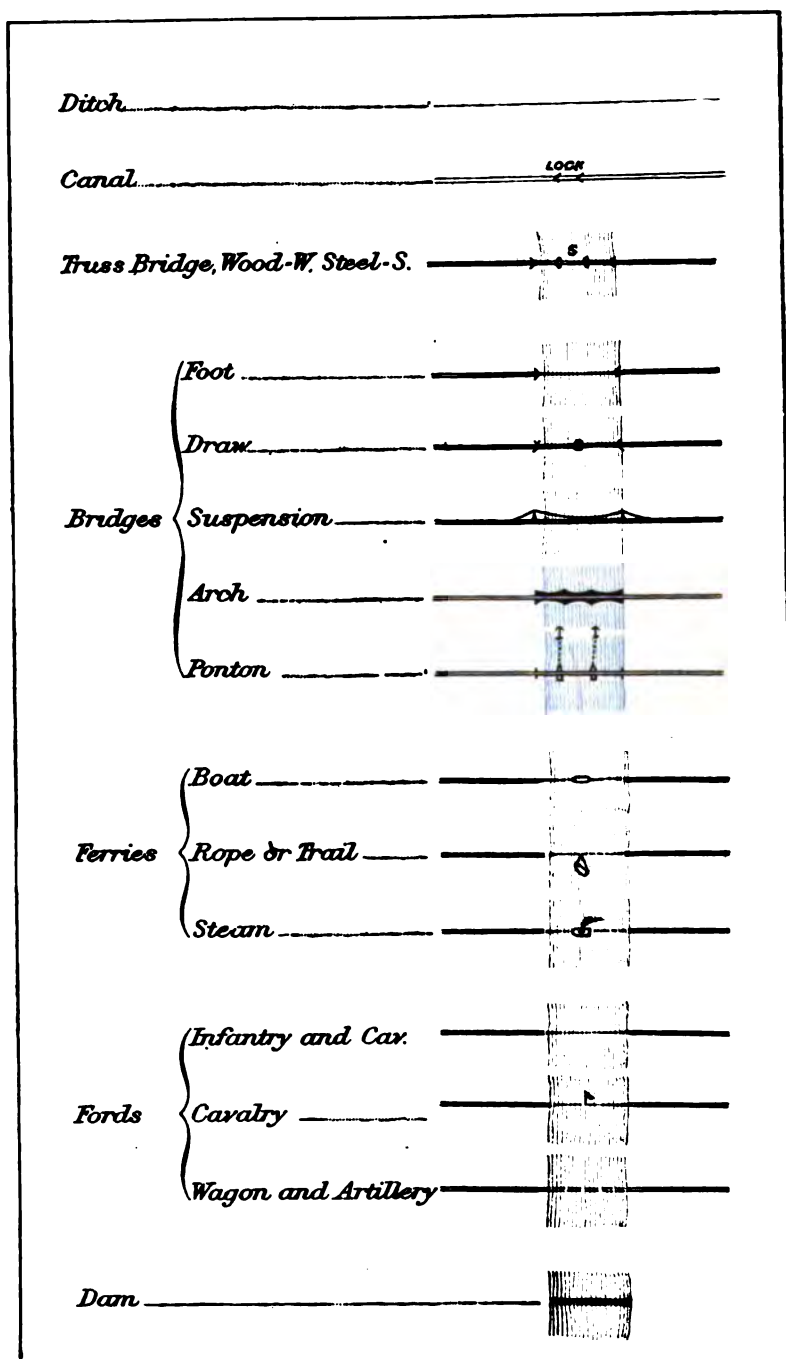


FIG. 80.

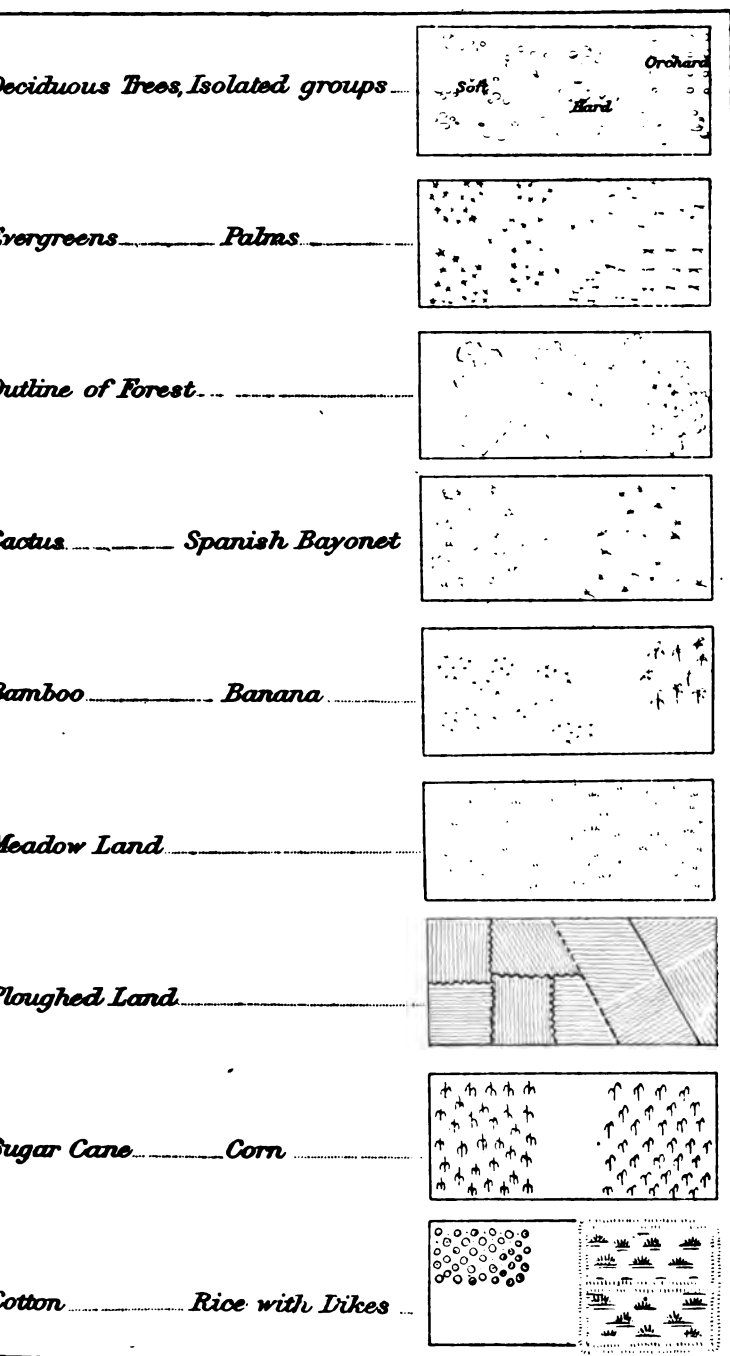


FIG. 81.

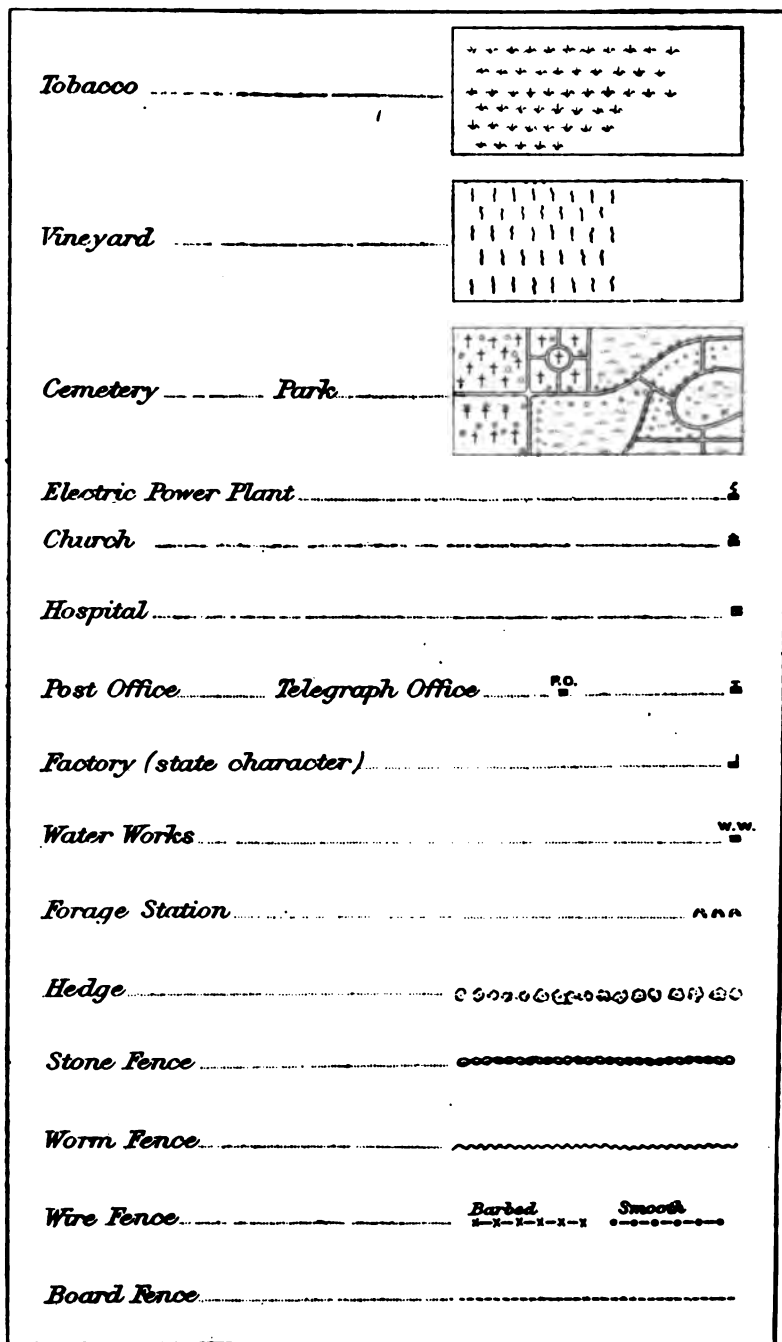


FIG. 82.

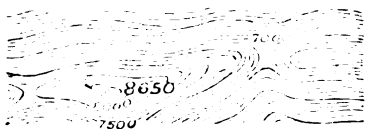
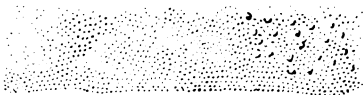
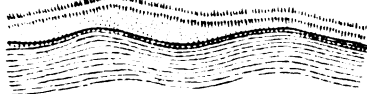
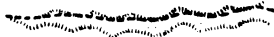
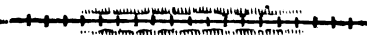
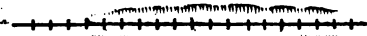
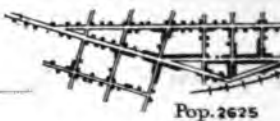


Contour System*Depression Contours**Sand, Gravel**Sand Dunes**Levees**Cliffs**Arroyo or Ditch**Railway Embankment**Railway Cutting*

FIG. 83.



City or Village _____

Capital —  *County Seat* —  *City or Village* _____

Buildings _____

Triangulation Station _____

Plane-table Station _____

Common Survey Station _____

Bench Mark _____

Mines and Quarries _____

BOUNDARY LINES

State Line _____

County or Province _____

Township or Barrio _____

Reservation _____

Lettering on Boundary Lines _____ **NEW YORK**
VERMONT

FIG. 84.

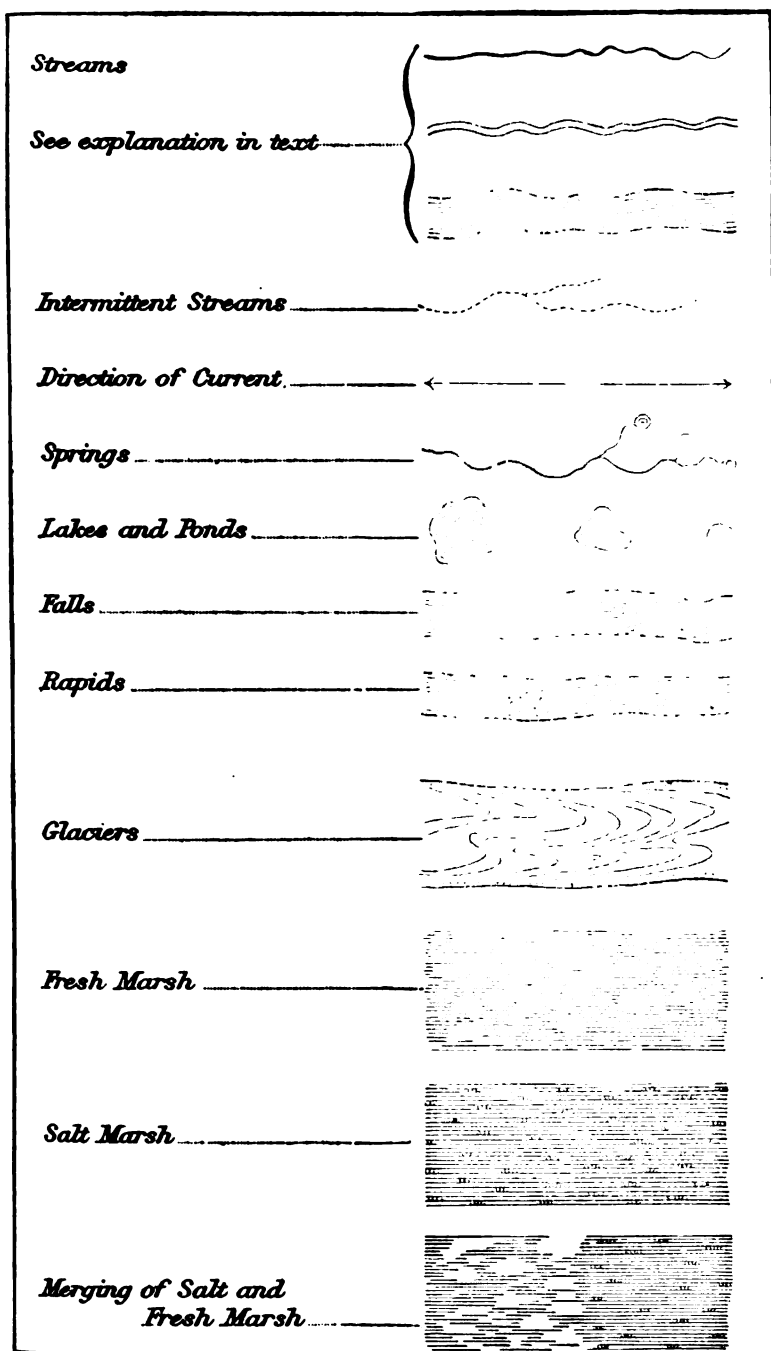


FIG. 85.

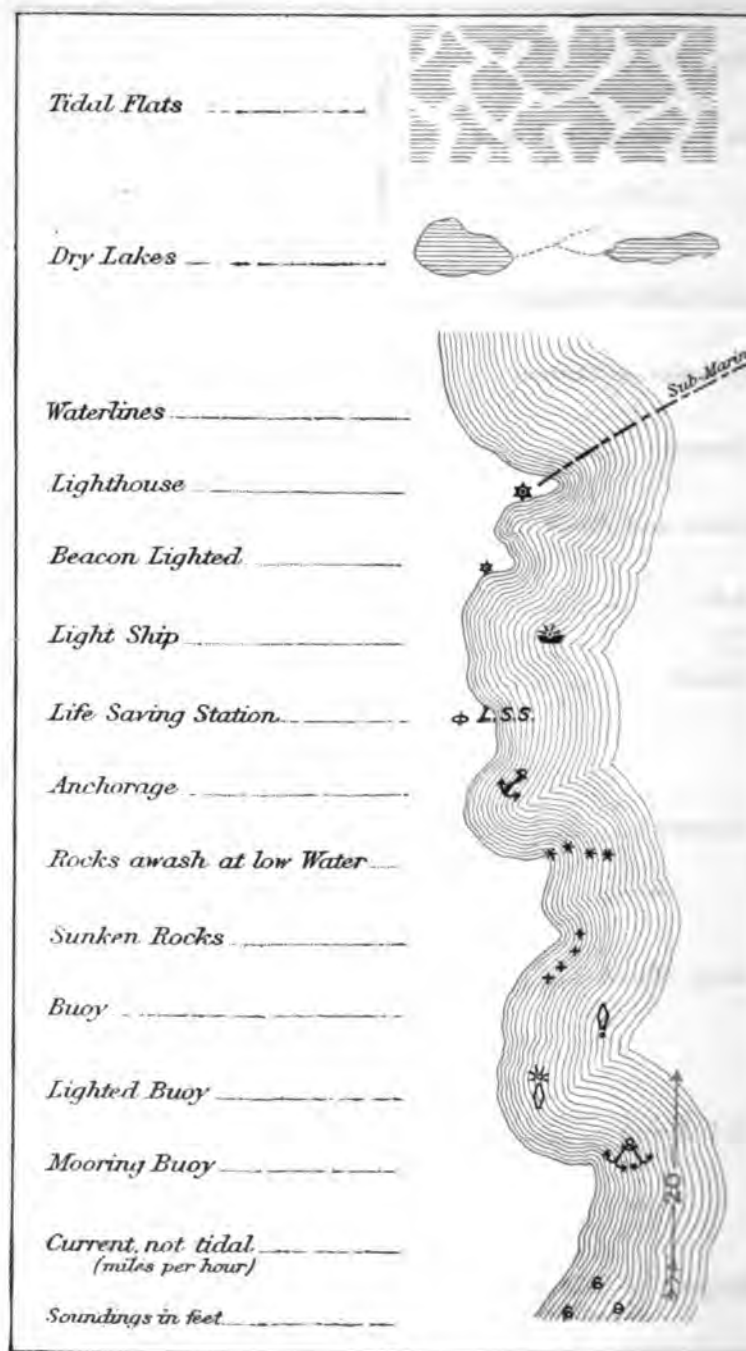


FIG. 86.








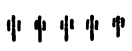




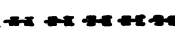



| | |
|---------------------------------------|--|
| <i>Regimental Headquarters</i> |  |
| <i>Brigade</i> " | ²⁸ 40★3C |
| <i>Division</i> " | 50★3C |
| <i>Corps</i> " | 8AC  |
| <i>Infantry in line</i> |  |
| <i>Infantry in column</i> |  |
| <i>Cavalry in line</i> |  |
| <i>Cavalry in column</i> |  |
| <i>Mounted Infantry</i> |  |
| <i>Artillery</i> |  |
| <i>Engineery</i> |  |
| <i>Bandette</i> |  |
| <i>Rocket, Cav. and Inftry.</i> |  |
| <i>Support</i> " " " |  |
| <i>Wagon train</i> |  |
| <i>Adjutant General</i> |  |
| <i>Quartermaster</i> |  |
| <i>Commissary</i> |  |

FIG. 87.

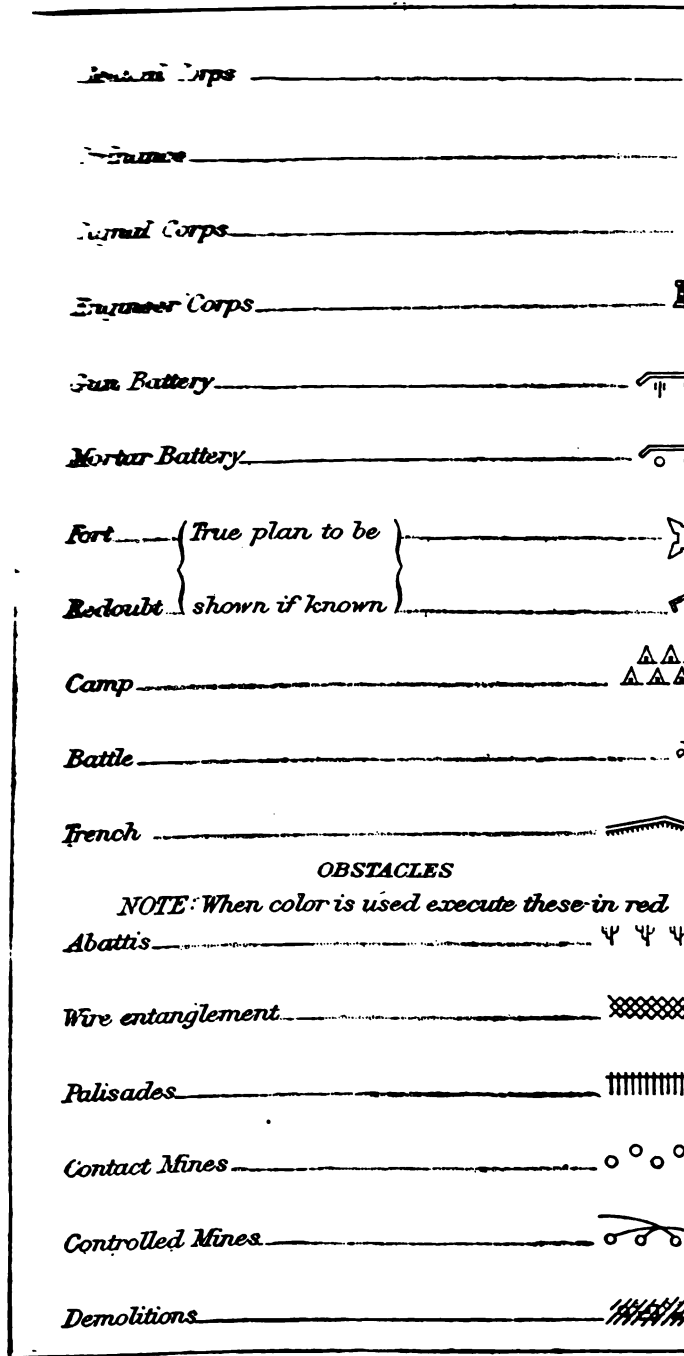


FIG. 88.

CIVIL DIVISIONS

*States, Counties, Townships, Capitals and
Principal Cities (all capital letters)*

ABCDEFGHIJ
KLMNOPQRST
UVWXYZ

Towns and Villages (with Cap. initials)

abcdefghijklmnopqrstuvwxyz

HYDROGRAPHY

Lakes, Rivers and Bays (all capital letters)

ABCDEFGHIJ
KLMNOPQRST
UVWXYZ

*Creeks, Brooks, Springs, small Lakes, Ponds,
Marshes and Glaciers (with Cap. initials)*

abcdefghijklmnopqrstuvwxyz

FIG. 89.

HYPSOGRAPHY

*Mountains, Plateaus, Lines of Cliffs
and Canyons (all capital letters)*

ABCDEFGHIJKLMN O P Q R
V W X Y Z

*Peaks, small Valleys, Islands and Points
(with Cap. initials)*

abcdefghijklmnopqrstu vwxyz

PUBLIC WORKS

*Railroads, Tunnels, Bridges, Ferries, Wagons,
Trails, Fords and Dams (capitals only)*

ABCDEFGHIJKLMN O P Q R S T U V W X Y Z

CONTOUR NUMBERS

Heavy contours 1234567890

Light contours 1234567890

MARGINAL LETTERING

ABCDEFGHIJKLMN O P Q R S
V W X Y Z

(with Cap. initials)

abcdefghijklmnopqrstu vwxyz
1234567890

FIG. 90.

Gage of Letters
(in Decimillimeters)

| | | |
|-------|----|-------|
| | 5 | _____ |
| _____ | 6 | _____ |
| _____ | 7 | _____ |
| _____ | 8 | _____ |
| _____ | 9 | _____ |
| _____ | 10 | _____ |
| _____ | 12 | _____ |
| _____ | 13 | _____ |
| _____ | 14 | _____ |
| _____ | 15 | _____ |
| _____ | 18 | _____ |
| _____ | 20 | _____ |
| _____ | 22 | _____ |
| _____ | 25 | _____ |
| _____ | 30 | _____ |
| _____ | 35 | _____ |
| _____ | 40 | _____ |
| _____ | 45 | _____ |
| _____ | 50 | _____ |
| _____ | 55 | _____ |
| _____ | 60 | _____ |

Thickness of letter $\frac{1}{4}$ of height.

Slope of letter 3 parts of base to 8 of height.



FIG. 91.





















| FIRE CONTROL; COAST ARTILLERY. | | |
|---|---------------|---|
| | Abbreviation. | Sign. |
| Battle Commander's Station _____ | C _____ |  |
| Primary Station of a Fire Command _____ | F' _____ |  |
| Secondary " " " " " _____ | F" _____ |  |
| Supplementary " " " " " _____ | F''' _____ |  |
| Primary Station of a Battery _____ | B' _____ |  |
| Secondary " " " " " _____ | B" _____ |  |
| Supplementary " " " " " _____ | B''' _____ |  |
| Primary Station of a Mine Command _____ | M' _____ |  |
| Secondary " " " " " _____ | M" _____ |  |
| Supplementary " " " " " _____ | M''' _____ |  |
| Double Primary " " " " " _____ | M' M' _____ |  |
| " Secondary " " " " " _____ | M" M" _____ |  |
| Separate Observing Room _____ | O _____ |  |
| " Plotting " _____ | P _____ |  |
| Battery Commander's Station _____ | B.C. _____ |  |
| Meteorological Station _____ | Met. _____ |  |
| Tide Station _____ | T _____ |  |
| Searchlight _____ | S _____ |  |
| Illuminating Light _____ | I _____ |  |
| Post Telephone Switchboard _____ | P.S.B. _____ |  |

FIG. 92.

PART II.

BRIDGES.

The kind of bridge to be built depends upon the load, the nature of the country, and the materials available. Time is of prime importance in the construction of bridges for troops in campaign, and the proper distribution of load and material to do the work quickly must be made.

Loads. Loads are classified as dead or stationary and live or moving. Usually speaking, the former is the weight of the bridge itself and the latter is the weight of the traffic over it. Loads are usually stated in lbs. per sq. ft. for highway and per lin. ft. for military and railway bridges. Some loads of military bridges are as follows, all in lbs. per lin. ft.: Infantry, single file, 140; infantry, column of twos, 280; infantry, column of fours, 560; cavalry in single file, 320; cavalry in column of twos, 392. Infantry in heavy marching order, 200 lbs. per man; when unarmed, 160 lbs. When crowded in a mass they weigh 133 lbs. per sq. ft. of standing room.

Weights of guns and military carriages, fully loaded for traveling:

TABLE I.

| | Weight on the wheels. | | Distance between axles, c. to c. | | Width of wheel track, c. to c. |
|-------------------|-----------------------|-------------|----------------------------------|-------------|--------------------------------|
| | Front. | Hind. | | | |
| | <i>Lbs.</i> | <i>Lbs.</i> | <i>Ft.</i> | <i>Ins.</i> | <i>Ft.</i> |
| 3. L. F. gun..... | 1,735 | 2,070 | 8 | 7 | 5 |
| 3. L. F. gun..... | 1,870 | 2,415 | 8 | 9 | 5 |
| 3. L. F. gun..... | 1,775 | 2,805 | 8 | 5½ | 5 |
| 3. L. F. gun..... | 1,930 | 3,070 | 8 | 6 | 5 |
| 3. L. F. gun..... | 1,130 | 2,130 | 8 | 6 | 5 |
| 3. L. F. gun..... | 2,530 | 6,425 | 8 | 1¼ | 5 |
| 3. L. F. gun..... | 2,510 | 6,920 | 8 | 1¼ | 5 |
| 3. L. F. gun..... | 1,950 | 1,230 | 7 | 0 | 5 |
| 3. L. F. gun..... | 754 | 1,075 | 7 | 0 | 5 |
| 3. L. F. gun..... | 2,500 | 2,500 | 5 | 9½ | 5 |
| 3. L. F. gun..... | 3,500 | 3,500 | 6 | 11½ | 5 |

Bridges for General Road Traffic. The dead load is the weight of the structure. Estimate quantities of the different materials and multiply by the unit stresses from the tables following.

The live load is assumed at 100 lbs. per sq. ft. of floor, or 5 tons concentrated on two axles 5 ft. long and 8 ft. c. to c.

Loads for a special purpose exclusively may be proportioned for the corresponding load.

Paragraph 5 eliminated, as it has no application to Infantry.

Site. Favorable conditions are narrowness of stream; stable banks of stream; hard but penetrable bottom; moderate depth and current; permanent water level, and absence of navigation.

Measurement of width will be done directly by use of tape, wire, or line, if practicable. Boats or floats may be used to support a long line. Otherwise, use of sections (see Topographical reconnaissance).

Strength of Wooden Beams. For crushing, tensile, and shearing strength, multiply the cross section in sq. ins. by the unit stresses in Table II. The result

will be the ultimate tensile strength in lbs. This divided by the adopted factor of safety gives the safe tensile load in lbs. From this the crushing and shearing strengths are derived by applying the percentages given in the table.

For transverse strength. Multiply breadth of cross section by sq. of depth; divide by $\frac{3}{4}$ of the length between supports, all in ins.; multiply by factor in column 2, Table II. The result will be the breaking load in lbs. applied uniformly, or twice the breaking load applied at center of span. The safe load is $\frac{1}{4}$ to $\frac{1}{6}$ of the above, depending upon the importance of the structure, its temporary or permanent character, and the amount of vibration probably caused by the live load. The ratio of breaking load to maximum actual load is the factor of safety. It should be 4 to 6 as above.

The breadth of a rectangular cross section is the face to which a load is applied. The depth is the face at right angles to the breadth.

A round beam has $\frac{1}{10}$ the transverse strength of a square beam with breadth and depth equal to its middle diameter.

9. Constants of strength and weight of a number of species of wood when dry; principal authority, Trautwine:

EXTRACTS FROM TABLE II.

| Species. | R. | Tensile strength. | Weight per cubic foot. |
|-----------------------------------|--------------------------------|--------------------------------|------------------------|
| | <i>Pounds per square inch.</i> | <i>Pounds per square inch.</i> | <i>Pounds.</i> |
| Ash, American white..... | 7,800 | 16,500 | 38 |
| Elm, American white..... | 7,800 | 6,000 | 36 |
| Oak, red..... | 10,200 | 10,000 | 32-45 |
| Oak, American white and live..... | 7,200 | 10,000 | 48 |
| Pine, American Georgia..... | 10,200 | 12,000 | 65 |

The crushing strength may be taken at 40 per cent of the tensile strength in the direction of the grain and 5 per cent across the grain, except oak, which is 10 per cent across the grain. The shearing strength may be taken at $\frac{2}{3}$ of the crushing strength across the grain. These ratios are approximate only, but sufficiently exact for field designing.

10. A rapidly moving load produces about double the stress of an equal quiescent load. A concentrated moving load must be considered as applied at the point where the greatest strains are produced, usually midway between the supports.

11. A beam safe against breaking may bend too much under the desired load. The maximum allowable deflection in permanent structures is $\frac{1}{300}$ of the span. In military bridges for temporary use, and especially in bridges with floating supports, a greater deflection is permissible. The factor of safety will generally give enough stiffness.

12. **Safe Loads.** The formula is,

$$S = \frac{1}{f.s.} \times \frac{bd^2}{3} \times \frac{4R}{l} \quad (A)$$

in which

S = safe load in lbs., uniformly distributed.

b = breadth

d = depth

l = length

} of beam, all in ins.

R = coefficient of resistance for the timber used, Table II, column 2.

f. s. = factor of safety.

Examples. Determine the safe uniform load on a horizontal beam of pine 3 ins. thick, 12 ins. deep, and 20 ft. clear span, factor of safety 5. Formula (A), uniformly distributed safe load S equals $3 \times 12 \times 12 \div 240$, multiplied by $\frac{1}{5}$ of 7,750 divided by 5, equals 3,720 lbs. Safe center load = 3,720 lbs.

Various sizes of materials are available, the inverse problem may be used to determine the size which will give requisite strength with least weight. The ratio of breadth to depth must be assumed.

Example: Determine the size of beam to carry a safe load of 3,750 lbs., uniformly distributed over a clear span of 20 ft.; factor of safety, 5; breadth, $\frac{1}{4}$ of depth, material, yellow pine, seasoned.

Formula (A),

$$3,750 = \frac{\frac{1}{4}d \times d^3}{240} \times 10,333 \div 5$$

$$d^3 = 1,728; \quad d = 12; \quad b = \frac{1}{4}d = 3.$$

Beam should be 3 by 12 ins.

Paragraphs 14 and 15 eliminated, as they have no application to Infantry.

Working load in lbs. of pillars of half-seasoned white or common yellow pine, fixed and equally loaded; based on formula of C. Shaler Smith, C. E., factor of safety 5:

TABLE IV.

Side of square pillar in inches.

| 3. | 4. | 5. | 6. | 7. | 8. | 10. | 12. |
|-------|-------|--------|--------|--------|--------|--------|---------|
| 3,461 | 8,419 | 15,865 | 25,711 | 37,867 | 52,237 | 87,420 | 130,896 |
| 2,903 | 6,970 | 13,670 | 22,846 | 34,437 | 48,333 | 82,860 | 125,885 |
| 2,176 | 5,789 | 11,740 | 20,182 | 31,095 | 44,403 | 78,000 | 120,413 |
| 1,766 | 4,838 | 10,100 | 17,784 | 27,969 | 40,614 | 73,040 | 114,653 |
| 1,456 | 4,083 | 8,725 | 15,682 | 25,108 | 37,018 | 68,180 | 108,749 |
| 1,217 | 3,478 | 7,565 | 13,846 | 22,520 | 33,677 | 63,460 | 102,845 |
| 880 | 2,589 | 5,845 | 10,894 | 18,336 | 27,878 | 54,680 | 91,382 |
| 664 | 1,987 | 4,530 | 8,705 | 15,387 | 23,155 | 46,960 | 80,720 |
| 518 | 1,565 | 3,625 | 7,063 | 12,221 | 19,366 | 40,400 | 71,136 |
| 425 | 1,264 | 2,945 | 5,825 | 10,182 | 16,333 | 34,900 | 62,726 |
| 372 | 1,034 | 2,445 | 4,867 | 8,560 | 13,914 | 30,260 | 55,382 |
| ..... | 867 | 2,060 | 4,118 | 7,311 | 11,982 | 26,400 | 49,046 |
| ..... | 736 | 1,750 | 3,521 | 6,361 | 10,355 | 23,380 | 43,574 |
| ..... | 630 | 1,510 | 3,046 | 5,390 | 8,960 | 20,440 | 38,880 |
| ..... | ..... | 1,310 | 2,647 | 4,596 | 7,949 | 18,120 | 34,819 |
| ..... | ..... | 1,150 | 2,340 | 4,224 | 7,040 | 16,180 | 31,306 |
| ..... | ..... | 1,015 | 2,074 | 3,753 | 6,259 | 14,500 | 28,253 |
| ..... | ..... | 905 | 1,850 | 3,391 | 5,619 | 13,060 | 25,603 |
| ..... | ..... | ..... | 1,656 | 3,009 | 5,094 | 11,620 | 23,270 |
| ..... | ..... | ..... | 1,490 | 2,725 | 4,582 | 10,740 | 21,254 |
| ..... | ..... | ..... | 1,354 | 2,470 | 4,160 | 9,780 | 19,469 |

When a wooden beam is to bear compression in the direction of the fibers, no matter whether vertical, horizontal, or inclined, its safe load is that given in this

The factor of safety of timber against crushing should be 6 to 8 for important structures, and 4 to 6 for temporary ones.

17. A horizontal beam should have a part of its length equal to its width firmly bearing on the support at each end, and more if possible. A pillar can not have a greater bearing surface than its end section. Crushing effect may be reduced by interposing a hard-wood plank or sheet of iron between the end of the beam and its support.

Paragraphs 18 to 44 eliminated, as they have no application to Infantry.

KNOTS.

45. The following knots are most useful in bridging:

Overhand knot, Fig. 38a, used at the end of a rope to prevent unreeving or to prevent the end of the rope from slipping through a block.

Figure-of-eight knot, Fig. 38b, used for purposes similar to above.

Square or reef knot, Fig. 38, commonly used for joining two ropes of the same size. The standing and running parts of each rope must pass through the loop of the other in the same direction, i.e., from above downward or vice versa; otherwise a granny, Fig. 39, is made, which is a useless knot that will not hold. The reef knot can be upset by taking one end of the rope and its standing part and pulling them in opposite directions. With dry rope a reef knot is as strong as the rope; with wet rope it slips before the rope breaks, while a double sheet bend is found to hold.

The thief knot, Fig. 40, commonly mistaken for a reef knot, should be avoided, as it will not hold. The figure shows that the end of each rope turns around the standing part instead of around the end of the other, as in a reef knot.

Single sheet bend, weaver's knot, Fig. 41, used for joining ropes together, especially when unequal in size. It is more secure than the reef knot but more difficult to untie.

Double sheet bend, Fig. 42, used also for fastening ropes of unequal sizes, especially wet ones, and is more secure than the single sheet bend.

Two half hitches, Fig. 43, especially useful for belaying or making fast the end of a rope round its own standing part. The end may be lashed down or seized to the standing part with a piece of spun yarn; this adds to its security and prevents slipping.

This knot should never be used for hoisting a spar.

Round turn and two half hitches, Fig. 44, like the preceding except that a turn is first taken round the spar or post.

Fisherman's bend or anchor knot, Fig. 45, used for fastening a rope to a ring or anchor. Take two turns round the iron, then a half hitch round the standing part and between the rings and the turns, lastly a half hitch round the standing part.

Clove hitch, Fig. 46, generally used for fastening a rope at right angles to a spar or at the commencement of a lashing. If the end of the spar is free, the hitch is made by first forming two loops, as in Fig. 47, placing the right-hand loop over the other one and slipping the double loop (Fig. 48) over the end of the spar. If this can not be done, pass the end of the rope round the spar, bring it up to the right of the standing part, cross over the latter, make another turn round the spar, and bring up the end between the spar, the last turn, and the standing part, Fig. 49. When used for securing guys to sheer legs, etc., the knot should be made with a long end, which is formed into two half hitches round the standing part and secured to it with spun yarn.

Timber hitch, Fig. 50, used for hauling and lifting spars. It can easily be

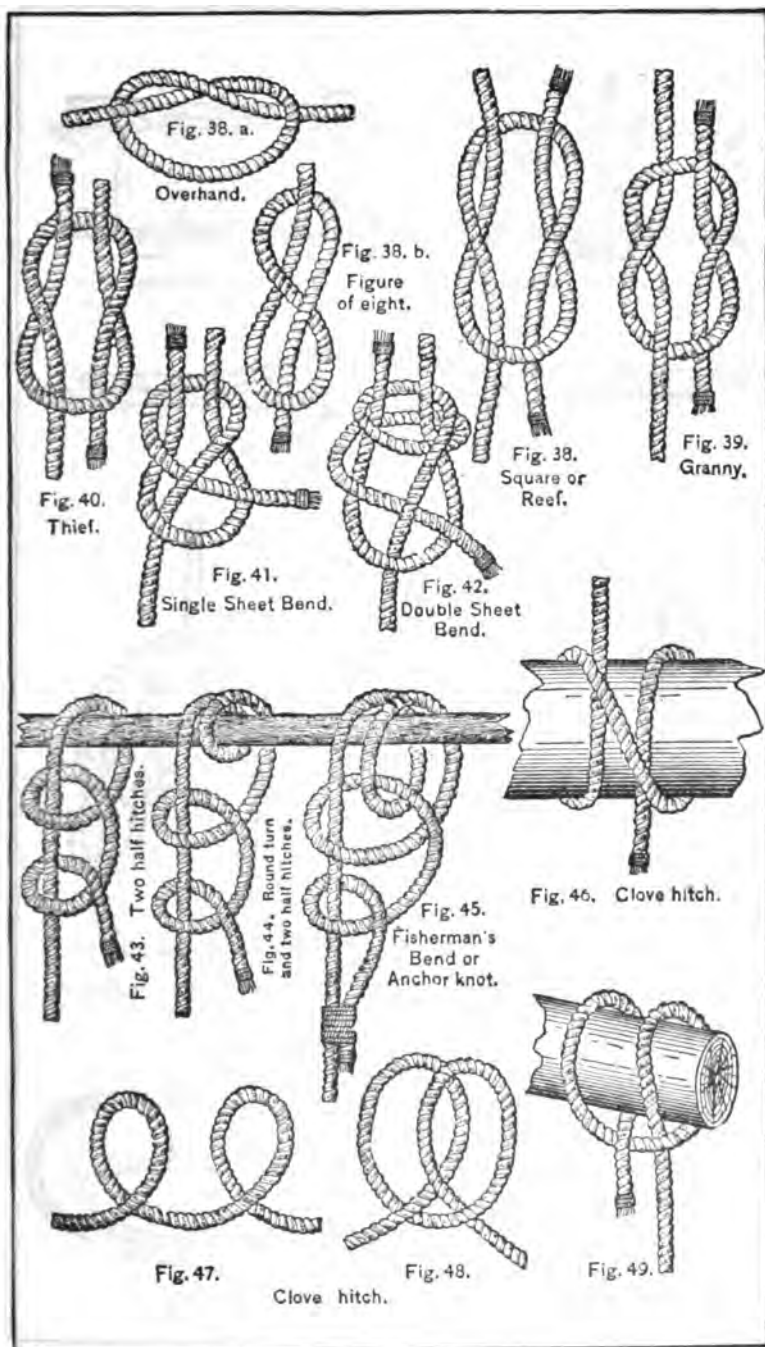




Fig. 50. Timber hitch.

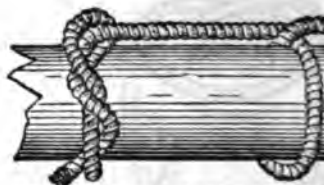


Fig. 51. Timber hitch and Half hitch.



Fig. 53. Hawser Bend.

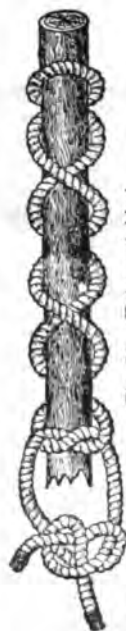


Fig. 52. Telegraph hitch.

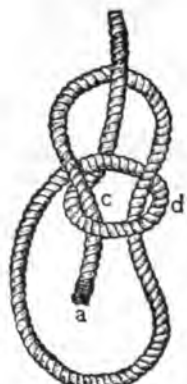


Fig. 54. Bowline.



Fig. 56. Running Bowline.

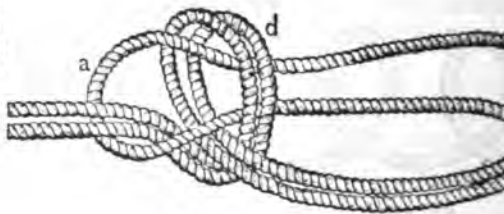


Fig. 55. Bowline on a Bight.

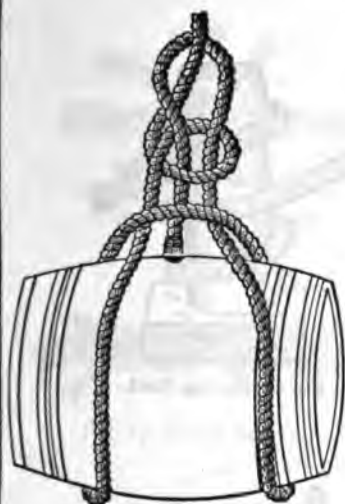


Fig. 57. Sling for barrel horizontal.

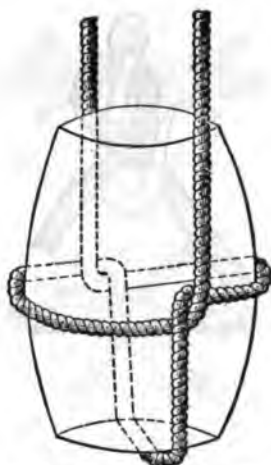


Fig. 58. Sling for barrel vertical.



Fig. 59. Cat's Paw. a.



Fig. 62. Rolling Hitch.



Fig. 61. Sheepshank.



Fig. 60. Cat's Paw. b.



Fig. 63. Blackwall Hitch.



Fig. 64. Mooring Knot.

Fig. 65.
Carrick Bend.

Fig. 66. Wall Knot.



Fig. 67. Wall Knot.



Fig. 68.



Fig. 69.

Crown on Wall.



Fig. 70. Short Splice.



Fig. 71. Short Splice.



Fig. 72. Short Splice.

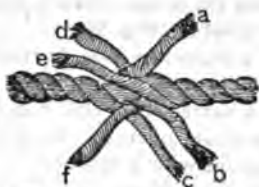


Fig. 73. Long Splice.

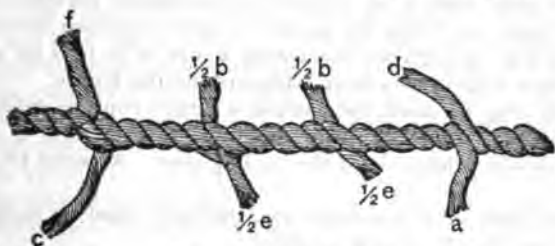


Fig. 74. Long Splice.



Fig. 75.



Fig. 75a.

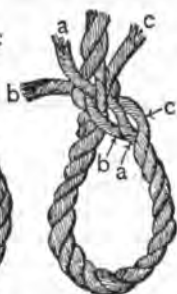


Fig. 76.



Fig. 76a.

loosed when the strain is taken off, but will not slip under a pull. for hauling spars, a half hitch is added near the end of the spar, Fig. 51.

Telegraph hitch, Fig. 52, used for hoisting or hauling a spar.

Hawser bend, Fig. 53, used for joining two large cables. Each end is made to its own standing part.

Bowline, Fig. 54, forms a loop that will not slip. Make loop with the end of the rope underneath, pass the end from below through the loop, then the part round the standing part of the rope, and then down through the loop. The length of bight depends upon the purpose for which the knot is used.

Bowline on a bight, Fig. 55. The first part is made like the above, but the end is doubled part of a rope; then the bight is pulled through sufficiently to be bent past it and come up in the position shown. It makes a comfortable sling for a man than a single bight.

Running bowline, Fig. 56.

To sling a barrel or box horizontally, Fig. 57, make a bowline with the end of the rope, bight and apply it as shown.

To sling a barrel vertically, Fig. 58, make an overhand knot on top of the rope; open out the knot and slip each half of it down the side of the cask; secure with a bowline.

Cat's-paw, Figs. 59 and 60. Form two equal bights, as in Fig. 59; take each hand and roll them along the standing part till surrounded by the standing part; then bring both loops (or bights) together and secure with the hook of a block, as in Fig. 60, where the hook is shown moused.

Sheep shank, Fig. 61, used for shortening a rope or to pass by a wall. A half hitch is taken with the standing parts around the bights.

Rolling hitch, Fig. 62, used for hauling a larger rope or cable. The ends are taken round the large rope in the direction in which it is to be hauled, one half hitch on the other side of the hauling part. A useful knot for making a rope.

For armored cable, or wet manila rope, the hitch must be made with the end of rope yarn, Fig. 86. Rope will not hold.

Blackwall hitch, Fig. 63, used for attaching a single rope to a hook for hoisting.

Mooring knot, Fig. 64. Take two turns round the mooring or snub, pass the free end of the rope under the standing part; take a third turn round the other and pass the free end between the two upper turns.

Carrick bend, Fig. 65, much used for hawsers and to fasten guys to a post. Wall knot, Figs. 66 and 67, and

Crown on wall, Figs. 68 and 69; both used for finishing off the end of a rope to prevent unstranding.

To make a short splice, Figs. 70, 71, and 72, unlay the strands of the rope for a convenient length. Bring the rope ends together so that the end of one rope lies between the two consecutive strands of the other rope. Lay the strands of the first rope along the second and grasp with one hand. Then work a free strand of the second rope over the nearest strand of the first rope and under the second strand, working in a direction opposite to the first rope. The same operation applied to all the strands will give the rope the appearance of Fig. 71. The splicing may be continued in the same manner to the end of the rope (Fig. 72) and the free ends of the strands may be cut off when done. The splice may be neatly tapered by cutting out a few fibers from each end of the strands the time it is passed through the rope. Rolling under a board or the foot of a plank will make the splice compact.

Long Splice (Figs. 73, 74). Unlay the strands of each rope for a convenient length and bring together as for a short splice. Unlay to any desired length.

d, of one rope, laying in its place the nearest strand, a, of the other. Repeat the operation in the opposite direction with two other strands,

Fig. 74 shows strands c and f secured by tying together. Strands b are shown secured by unlaying half of each for a suitable length and half of the other in place of the unlayed portions, the loose ends being run through the rope. This splice is used when the rope is to run through

The diameter of the rope is not enlarged at the splice. The ends of strands should not be trimmed off close until the splice has been thoroughly finished by work.

Splice (Figs. 75, 75a, 76, 76a). Unlay a convenient length of rope. Pass the first strand, a, under one strand of the rope, as shown in Fig. 75, forming a loop of the proper size. Pass a second loose strand, b, under the strand of the rope next to the strand which secures a, Fig. 75a. Pass the third strand, c, under the strand next to that which secures b, Fig. 76. Draw all taut and complete as for a short splice.

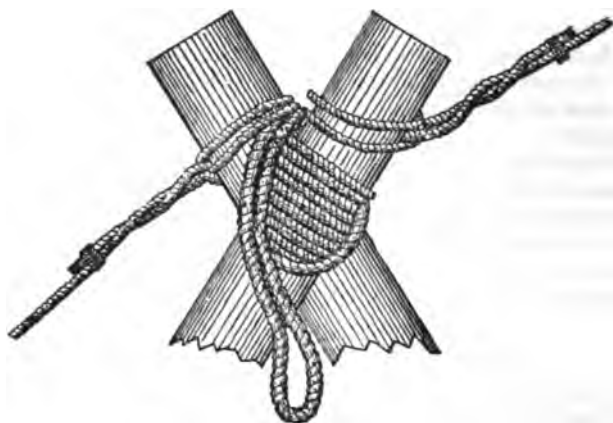
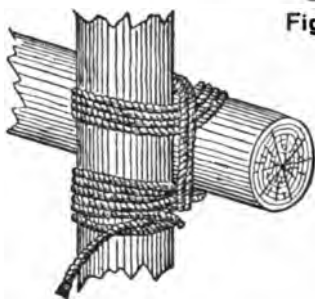
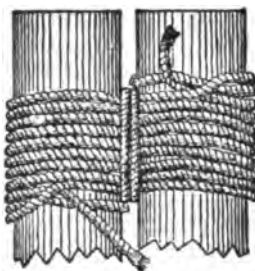
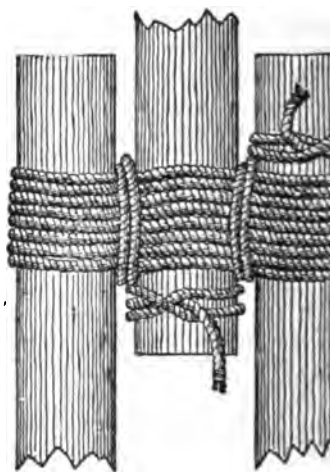
LASHINGS.

To Lash a Transom to an Upright Spar, Fig. 77, Transom in Front of Upright. A clove hitch is made round the upright a few inches below the transom. The lashing is brought under the transom, up in front of it, horizontally to the upright, down in front of the transom, and back behind the upright to the level of the bottom of the transom and above the clove hitch. The following turns are kept outside the previous ones on one spar and inside on the other, not riding over the turns already made. Four turns or more are required. The ends of frapping turns are then taken between the spars, around the lashing, and the lashing is finished off either round one of the spars or any part of the rope through which the rope can be passed. The final clove hitch should be made around the spar on the side toward which the stress is to come, so that it may jam and be difficult to remove. The lashing must be well beaten with a mallet or pick handle to tighten it up. This is called a square lashing.

Lashing for a Pair of Shears, Fig. 78. The two spars for the shears are lashed on the outside of each other with their butts on the ground, the points below the lashing is to be resting on a skid. A clove hitch is made round one of the spars and the lashing taken loosely eight or nine times about the two spars above the skid, not riding. A couple of frapping turns are then taken between the spars and the lashing is finished off with a clove hitch above the turns on one of the spars. The butts of the spars are then opened out and a sling passed over the top of the block which the block is hooked or lashed, and fore and back guys are made to the bottom and top spars, respectively, just above the lashing, Fig. 79.

To Lash Three Spars Together as for a Gin or Tripod. Mark on each spar the distance from the butt to the center of the lashing. Lay two of the spars parallel to each other with an interval a little greater than the diameter. Lay the third spar between them with its butt in the same direction so that the marks on the three spars will be in line. Make a clove hitch on one of the outer spars below the lashing and take eight or nine turns around the three, as shown in Fig. 80. Take a couple of frapping turns between each pair of spars in succession and finish with a clove hitch on the third spar above the lashing. Pass a sling over the lashing and the tripod is ready for raising.

Oldfasts. To prepare a fastening in the ground for the attachment of cables or purchases, stout pickets are driven into the ground one behind the other in the line of pull. The head of each picket except the last is secured by

**Fig. 79****Fig. 77****Fig. 78****Fig. 80**

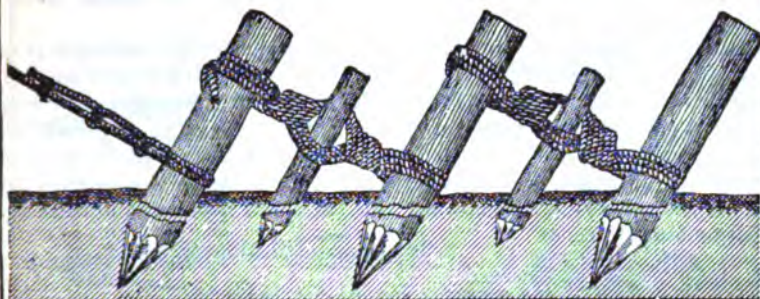


Fig. 81

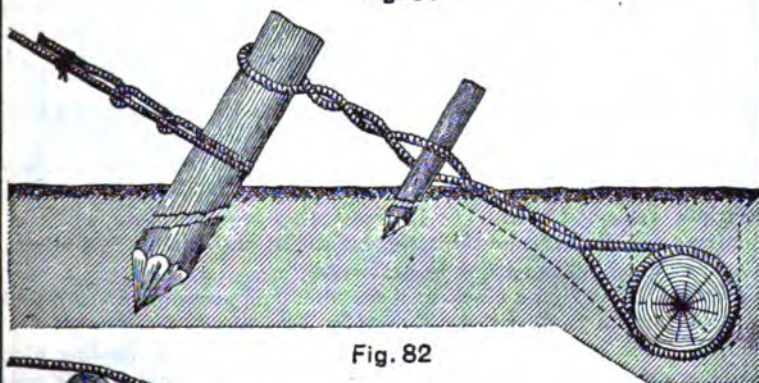


Fig. 82

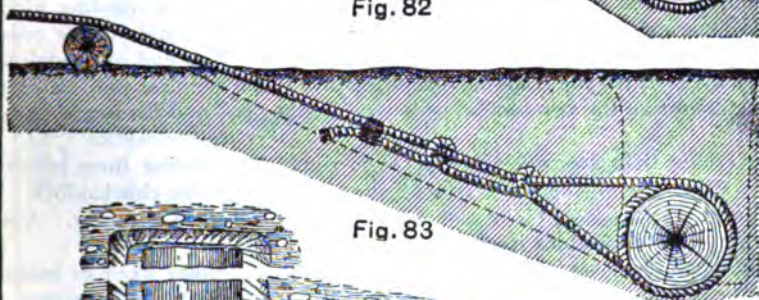


Fig. 83

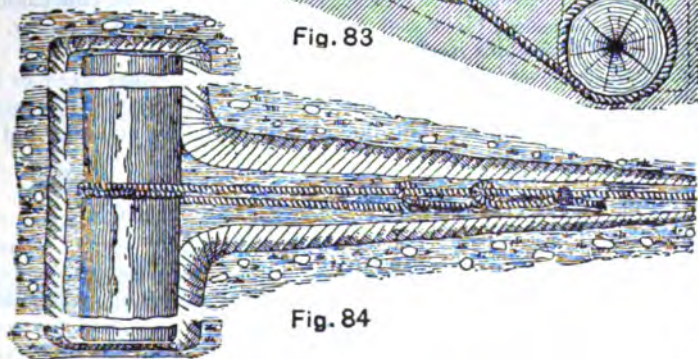


Fig. 84

a lashing to the foot of the picket next behind, Fig. 81. The lashing is made by rack sticks, the points of which are driven into the ground in position. The distance between the stakes should be seven feet, or the height of the stake above the ground.

Another form requiring more labor but having much greater strength is a "deadman," and consists of a log laid in a transverse trench, the trench intersecting it at its middle point. The cable is passed down the trench, takes several round turns on the log, and is fastened to it by marlin stopping, Figs. 82, 83, and 84. If the cable is to lead inclined downward, it should pass over a log at the outlet of the trench, Fig. 83. If the cable is to lead upward, this log is not necessary, but the log must be buried deeper.

BLOCKS AND TACKLES.

50. The parts of a block are the shell or frame, the sheave or wheel, which the rope runs, and the pin upon which the wheel turns in the shell. A strap of iron or rope passes around the shell and forms attachment at one end and an eye at the other; see Figs. 85, 86, 87, and 88.

Blocks are also made entirely of metal, in which the strap is replaced by a ring, Fig. 89.

Blocks are designated by the length of the shell in inches and by the number of their sheaves. Those with one, two, three, and four sheaves are called single, double, triple, and quadruple. The largest rope a wooden block will hold is a circumference equal to one-third the length of the shell. Metal blocks may be obtained and are to be preferred.

A snatch block is a single block with the shell and strap open so as to admit a rope without passing the end through, Fig. 90.

A running block is attached to the object to be moved; a snub block is fixed to some permanent support, Figs. 94, 95, and 96. A simple tackle consists of one or more blocks rove with a single rope or fall. The end of the rope in the tackle is called the standing end; the other is the running end. The fall is the part of the rope between the two blocks, or between either end and the snub block, or a return.

To overhaul is to separate the blocks; to round in, to bring them together. When the blocks are in contact the fall is said to be choked.

A whip is a single fixed block and fall; it gives no increase of power, but on a whip, Fig. 98, doubles its power.

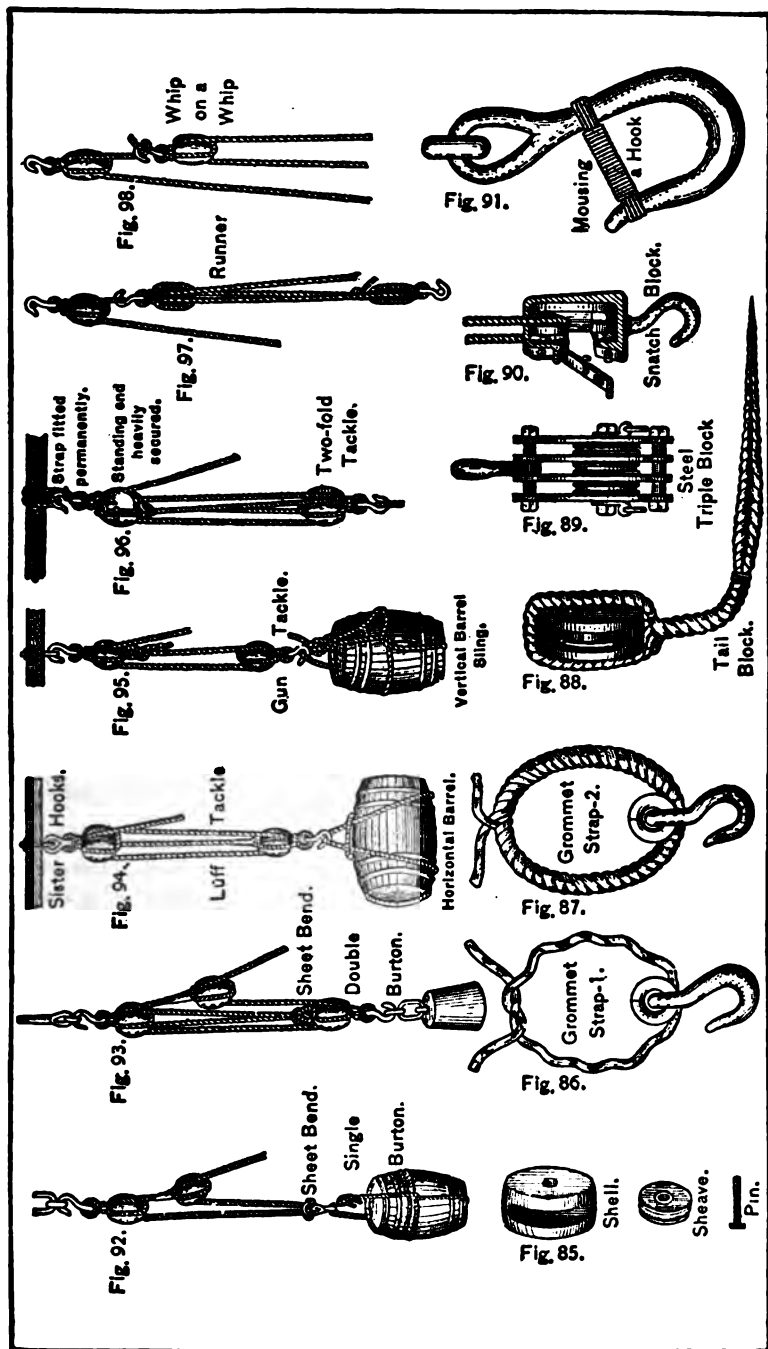
A luff tackle consists of a single and double block, either fixed or running, Fig. 94.

A gun tackle consists of a double and a single block, the standing end of the rope being attached to the fixed block, Fig. 95.

GENERAL NOTES ON BRIDGE DESIGN.

51. When frequent supports can be obtained, the floor system consists of longitudinal beams and cross planking, or their equivalents, called stringers and sleepers. This method of construction should be adopted whenever long spans are necessary, the floor system must be sustained by trusses, arches, or cables resting on the supports and forming a continuous arch, or suspension bridges.

52. A roadway 9 ft. wide in the clear should be provided to pass four abreast, cavalry two abreast, and military wagons in one direction; this will suffice for infantry in column of twos, cavalry in single file, or for the passage of a single file, passed over by hand.



The clear width of roadway of an ordinary highway bridge less than 12 ft. for single track, or 20 ft. for double track.

The clear head room in ordinary military bridges should not be less than 14 ft. for wagons and cavalry; for highway bridges not less than 14 ft.

Ramps at the ends of a bridge, if intended for artillery, should be not less than 1 on 7. For animals, slopes steeper than 1 on 10 are incon-

If the bridges are high, hand rails should be provided. A screen will suffice, or it may have brush placed upon it to form a screen.

A guard rail should be provided along each side of the roadway at the ends of the flooring planks. In hasty bridges it may be secured by lashings through the planking to the stringer underneath. Other fastenings may be fastened with spikes or bolts.

53. Examples of improvised short-span military bridges:

Trussed Ladder Bridge. A ladder may be used as a bridge by using its edge, thus forming a kind of trussed beam. A portable bridge was used in China in 1860 for crossing canals. Two beams 24 ft. long were formed out of four scaling ladders, each 12 ft. long, by lashing the ends to end, with planks 3 ft. long covering the junctions. The planks were laid across the canal, set on edge in grooves cut into the beams. The 12 ft. long were laid across from beam to beam to form the roadway.

This bridge, 24 ft. long, was laid and crossed in a quarter of an hour. Its total weight was 750 lbs., or 31 lbs. per ft. It was crossed by a company of infantry, two abreast, files well closed and in step.

The ladder beam may be greatly strengthened by trussing with ropes, as shown in Fig. 100.

In shallow streams intermediate supports may be quickly obtained by driving wagons into the water.

54. Spar Bridges. This name is applied to bridges built of spars lashed together. Intermediate points of support are provided by using the spars acting as struts to transmit weight from the middle of the bridge to the footings. The single-lock and double-lock bridges with two and three spans respectively, are the ones of most utility.

The first step in constructing a spar bridge is to measure the width of the gap to be bridged and select the position of the footings on either bank. The distance from each footing to the middle point of the roadway is marked on the spars, or the two corresponding points of a double-lock bridge. Next the spars are marked on each spar except the diagonals the places where other spars will be lashed. The marking may be done with chalk, or with an ax. If possible, a standard notation should be adopted. As, for example, in marking with an ax, the mark around the spar where the edge of the crossing spar will come, and the mark across the part which will be hidden by the crossing spar.

A simple way to determine the length of spars is the following: Lay out small lines somewhat longer than the width of the gap, double them and bring the bights together. Stretch them tightly across the gap so that they come at the middle, as at A, Fig. 109. Release one end of each line and bring it to the footing on the same side as indicated by the dotted line. The line from the footing C or C', and at the position chosen for the other footing B or B'. Cut the lashing and take each piece of rope to its own place. The distances AB and AB' are the lengths between the transoms, and will give the length of road bearers required. The distances AC and AC' are the lengths of struts from butt to top of transom, and with 3 ft. added will give the length of spars required.

For double-lock bridge, a piece of rope of a length equal to the width of the middle bay replaces the lashing. If the banks are not parallel, the lashing should be taken on each side of the middle bay.

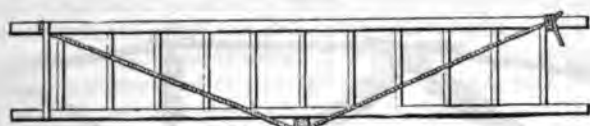


Fig. 100.



Fig. 99.

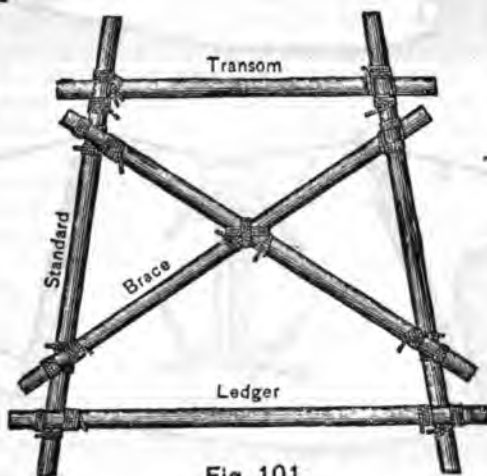


Fig. 101.



Fig. 103.

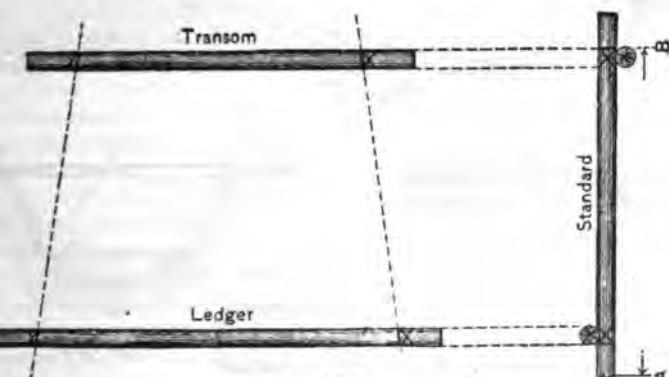


Fig. 102.

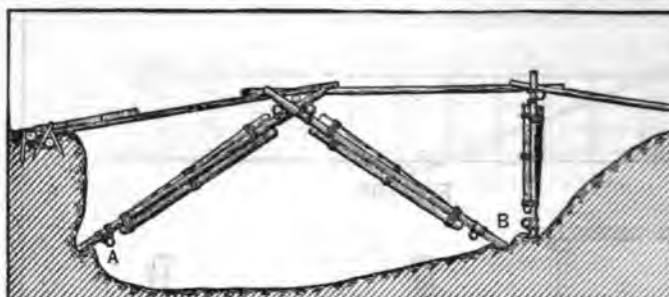


Fig. 104

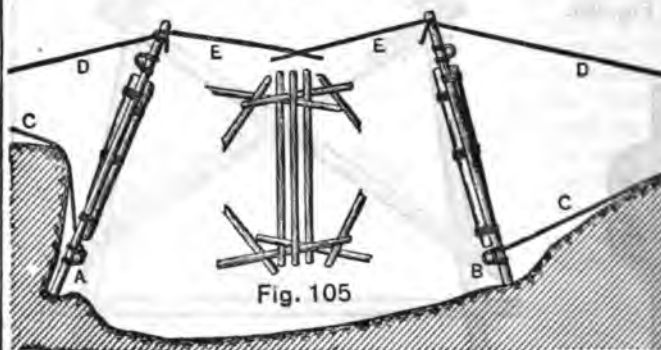


Fig. 105

Fig. 106

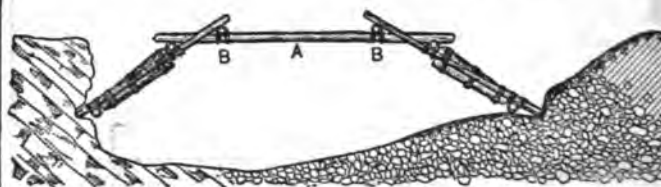


Fig. 107



Fig. 108



Fig. 110

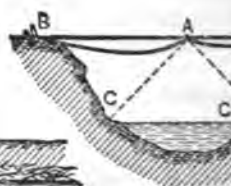


Fig. 109

red, a section of the gap may be laid down on the ground in full size lengths of spars determined by laying them in place. This method, given as standard by all authorities, requires more time and more hand-material than the other and gives no better results.

Construction of a frame is shown in Fig. 101, and the system of marking 102. The arrangement of frames to form a single-lock bridge is shown 104 and 105, and a double-lock bridge in Fig. 107.

Construction of Single-lock Bridges, Figs. 104, 105, and 106. Suitable for 30 ft. or less. The two frames lock together at the center of the span; they must not be more than 4 on 7. The bridge can be erected by two or uncommissioned officers and 20 men, one-half on each side of the gap. Spars require more men.

Footings at A and B must be firm, horizontal if possible, and at right angles to the axis of the bridge. In a masonry pier they may be cut out. In yielding soil a plank or sill must be laid under the footing. The frames are made of such length as to give a slight camber to the bridge, which may be increased to allow for probable settlement of the footings.

The inside dimension of one frame is made slightly greater than the outside dimension of the other, so that one frame may fall inside of the other when pulled into position. For a 9 ft. roadway the standards of the narrow frame should be 9 ft. 6 ins. apart at the transom and 10 ft. 6 ins. at the foot, the clear, and the other (outside) frame 1 ft. 6 ins. wider throughout. The frame is constructed on each bank. The standards are laid on the ground at the foot of the bridge, butts toward the bank. The ledgers are lashed on to the transoms beneath the standards at the positions marked. The cross-braces are lashed to the standards, two butts and one tip above the transom and two to each other. Before the braces are lashed, the frame must be pulled into position by checking the measurements of the diagonals.

When necessary, pickets for the foot and guy ropes are driven, the former about 10 paces from the bank and 4 paces on each side of the axis of the bridge; the latter about 20 paces from the bank and 10 paces on each side of the axis. The foot ropes, CC, Fig. 106, are secured by timber hitches to the butts of the standards, and the back and fore guys, DD and EE, to the tips; the fore guys are lashed across to the opposite bank. The guys of the narrow frame should be lashed to the guys and standards of the wide frame.

The frames are put into position one after the other, or simultaneously if there are enough men. A man is told off to each foot rope and one to each back guy rope. As required, two turns being taken with each of these ropes around the standards by effective pickets. The other men raise the frame and launch it forward, by pulling on the fore guys, until the frame is balanced on the edge of the footings.

The frame is then tilted until the butts rest on the footing, by slackening the foot ropes and hauling on the fore guys, Fig. 106. After the head of the frame has been hauled over beyond the perpendicular, it is lowered nearly to its final position by slacking off the back guys. When the two frames are in position opposite each other, the narrow frame is further lowered until its butts rest upon the transom of the other. The wider (outer) frame is lowered until the two lock into each other, the standards of each resting on the transom of the other.

The fork transom, Figs. 104 and 105, is then passed from shore and placed between the two frames. This forms the central support of the bridge and a floor system of two bays, built as already described.

The estimated time for construction of such a bridge is about one hour if material is available and in position on both sides of the stream. The construction of the roadway requires about twenty minutes; forming footings in the stream about one hour.

56. Construction of Double-lock Bridge, Fig. 107. Suitable for exceeding 45 ft., and consisting of two inclined frames which locking horizontal frame of two or more distance pieces, with cross bracing the gap to be bridged into three equal bays of about 15 ft. each. Required is two or three noncommissioned officers and 25 to 50 men for construction, except roadway, about two and one-half hours; 15 minutes allowed for difficult footings.

The width of gap is measured, the position of footings determined, and the length of standards from butt to transom determined and marked.

The inclined frames in this case are built of equal widths, lashed and held by guys just above their final position. Two stringers are run from each bank to the main transom. The distance pieces, Fig. 107, are placed inside the standards, using tackle if necessary, and the standards are placed and lashed to the distance pieces at the places marked. They are now lowered until they jam.

57. Round timber required for spar bridges:

TABLE XX.

| Kind of bridge. | Spars. | Length. | Diameter. | |
|----------------------------|--------|---------|-----------|----------------------|
| | | | At tip. | Through-out or mean. |
| | No. | Feet. | Inches. | Inches. |
| Single lock, 30 foot span. | 4 | 22 | 7 | 6 |
| | 2 | 15 | | 6 |
| | 4 | 15 | | 4 to 6 |
| | 4 | 20 | | 3 |
| | 1 | 15 | | 10 |
| | 10 | 20 | | 6 |
| | 4 | 20 | | 3 to 6 |
| | 4 | 20 | 7 | 6 |
| | 2 | 15 | | 6 |
| | 4 | 15 | | 4 to 6 |
| Double lock, 45 foot span. | 2 | 25 | | 8 |
| | 2 | 15 | | 10 |
| | 4 | 20 | | 3 |
| | 15 | 20 | | 6 |
| | 4 | 20 | | 4 to 6 |

58. Rope required for spar bridges:

TABLE XXI.

| Description and size of ropes. | Single lock. | | | |
|---|--------------|---------------|-----------------|--------|
| | Ropes. | Total length. | Maximum weight. | Ropes. |
| | No. | Feet. | Pounds. | No. |
| Foot ropes, 3 in. circ., 40 to 60 ft., | 4 | 240 | 71 | 4 |
| Guys, 3 in. circ., 120 to 150 ft. | 8 | 1,200 | 356 | 8 |
| 2 in. circ., 108 ft. | 2 | 216 | 29 | 2 |
| 1½ in. circ., 54 ft., for transom lashings | 4 | 216 | 29 | 8 |
| 1½ in. circ., 36 ft., for ledger and brace lashings | 10 | 360 | 27 | 14 |
| 1 in. circ., 21 ft., for road bearers | 10 | 210 | 7 | 10 |
| Spun yarn. | | | 7 | |
| Aggregate length and weight of rope required | | 2,442 | 526 | |

aneous materials: 2 pieces chalk; 8 pickets, 5 ft. long; 4 pickets, 3 ft. long; 12 pickets; plank for chess ($1\frac{1}{2}$ by 12 ins. by 10 ft.) (according to span); 2 pieces of bamboo sticks and lashings (at 4 ft. intervals) (according to span); 2 pieces of bamboo, 150 ft. each.

Highway of Spar Bridge. For infantry in fours crowded the transoms have a diam. of not less than 9 ins. for a span of 15 ft. Five stringers 2 ft. apart, 6 ins. diam. at the tip will suffice. If the sticks vary in size, the smaller ones should be notched down on the transom so as to bring the tops in the same plane. The stringers should be long enough to overlap the transoms, and should be lashed together at each tip. The floor is held down by side rails outside stringers and lashed to them. If lumber can not be obtained, the floor may be made of small spars, the interstices filled with brush, and the floor covered with loam or clay; Figs. 108 and 110.

Trestle Bridges. Applicable to shallow rivers with firm bottoms and not subject to sudden change in water level. Improvised structures are seldom necessary. On a rocky bottom they are difficult to fit; on a muddy bottom they sink, and on a sandy bottom they undermine. Portable trestles require but little labor and can easily be transported. The parts are fitted together and lashed to facilitate assembling. A trestle bridge is not limited as to length. The spans are of convenient length, usually 12 to 15 ft., depending upon the material and the available material.

Soundings across the stream along both sides of the bridge are required where the bottom is irregular, to determine the length of legs and the height of the cap of each trestle above the bottom.

Trestles of spars and lashings are applicable to rocky ravines, or when circumstances make it difficult to drive piles. They may be two, three, or four

legged. The two-legged form is similar to a frame for a single-lock bridge (par. 55), the difference being that the trestle standards have a greater slope. Four standards would make the trestle in forty-five minutes. If the timber be weak, both standards and transom may be doubled, as in Fig. 103. Light material may be used for diagonal braces, as little strain is brought upon them. Two-legged trestles are maintained in upright positions by lashing the stringers to the transoms by longitudinal bracing of adjacent trestles. The trestles next the bank must be rigidly braced by spars lashed to the standards and to stout piles driven in the bank. This end bracing is very important.

Three-legged trestles, Fig. 111, have the advantage of utilizing light material. They will stand without bracing and admit of more ready adjustment than the two-legged forms.

To make a tripod, the lashing of the tips may be done as described in par. 48. The tripod is shown in Fig. 112, the latter method permitting a transom to be placed in the center. In the latter method the tips of the two legs are lashed together with bamboo lashing, par. 47, and the third leg or tripod is then added. The tripod is raised, the feet placed on the angles of an equilateral triangle with sides equal to half the height of the tripod, and secured by lashing three light ledgers, as shown in the figure.

Three-legged trestles of bamboo fitted with three transoms lashed at different heights for varying depths of water were used near Manila for a portable bridge. The floor was made of bamboo frames covered with bamboo mats. The bridge for each bay was carried entire and was designed to be hung by ropes to the transoms. The entire bridge could be carried by 120 men, but was too heavy for them.

A four-legged trestle made of spars and lashings is shown in Fig. 113. It consists of two frames similar to two-legged trestles, locked together at the

transoms and connected by short ledgers at the feet. The breadth of on which the trestle stands should not be less than one-half the height. Fig. 114 shows a four-legged trestle for same use as that shown in Fig. 113. Fig. 115 presents slightly different arrangements of the parts and of the lashing. Two-legged trestles are not convenient for use on uneven bottom.

If trestles are placed in considerable depth of water it may be necessary to use ballast them temporarily until the weight of the roadway can be put on the bottom. If of rock or sacks of gravel may be used for ballast, or any articles of timber in compact form and of considerable weight may be lashed to the trestles when it is set, and removed to the next when no longer needed.

In setting trestles of all forms on dry foundations they may be made of uniform length as prescribed in the text, set up in place, and fitted to the ground by lashing suitable extension pieces to the feet.

62. Spars and lashings for trestles:

TABLE XXII.

| Kind of trestle. | Number of spars or lashings. | Length. | Diameter of spars or circumference of rope. | |
|-------------------|------------------------------|--------------|---|---|
| | | <i>Feet.</i> | <i>Inches.</i> | |
| Two-legged..... | 2 | ..... | 4½ to 6 | L |
| | 1 | 10 to 14 | 5¼ to 7 | T |
| | 2 | ..... | 3½ to 4½ | D |
| | 1 | ..... | 3 to 6 | L |
| | 6 | 30 | 1½ | L |
| | 3 | 15 | 1½ | L |
| Three-legged..... | 6 | ..... | 3 to 5 | L |
| | 1 | 14 | 7 to 8 | T |
| | 4 | 4 to 6 | 3 to 3½ | C |
| | 6 | 6 | 1¾ to 2½ | L |
| | 4 | 2 | 2 | S |
| | 12 | 30 | 1½ | L |
| Four-legged..... | 6 | 15 | 1½ | L |
| | 4 | ..... | 3¼ to 4¾ | L |
| | 2 | 10 to 14 | 5 to 6 | T |
| | 4 | ..... | 3 to 3½ | D |
| | 4 | ..... | 2½ to 3 | L |
| | 12 | 30 | 1½ | L |
| | 6 | 15 | 1½ | L |

63. Erecting Trestle Bridges. Trestles may be placed in position in dry situations, and also in shallow streams of moderate current if the weather will permit men to work in the water. This method facilitates construction, as several trestles can be placed simultaneously. Another method is slower of execution, since but one trestle can be placed at a time. If the bridge be built from one end, or two if work is prosecuted from both ends. One of these methods is shown in Fig. 115. Inclined timber is pushed out from the end of the bridge, their lower ends resting on the bottom at the point where the next trestle is to stand. Slide the trestle down these until it strikes the bottom. Lash stringers to the cap and push the bent into position. Lay the remaining stringers and complete the roadway over the bay, and place another trestle as before.

Another method is shown in Fig. 121, involving the use of beams, and rope. The beams used must be about twice the length of the bay.

Fig. 122 illustrates a method of placing trestles when a boat or raft is

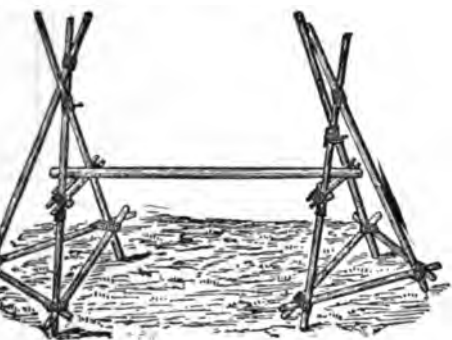


Fig. 111.

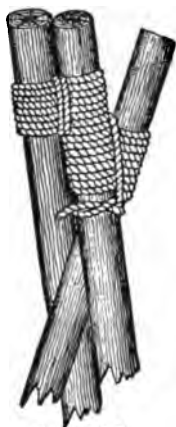


Fig. 112.

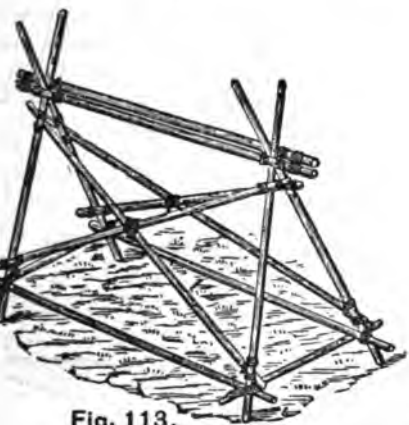


Fig. 113.

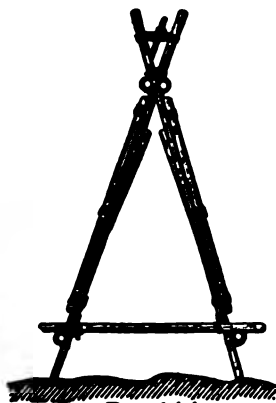


Fig. 114.

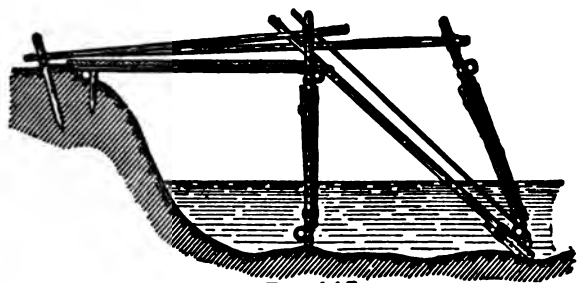


Fig. 115.



Fig. 116

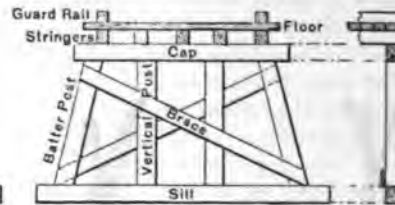


Fig. 117

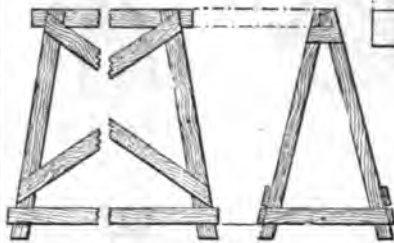


Fig. 118



Fig. 119

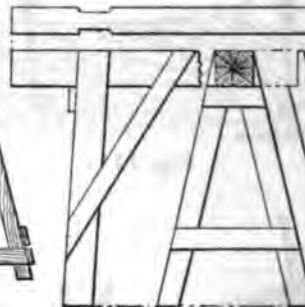


Fig. 120

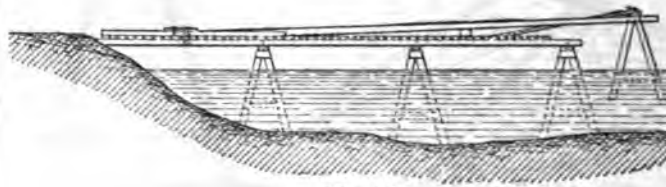


Fig. 121

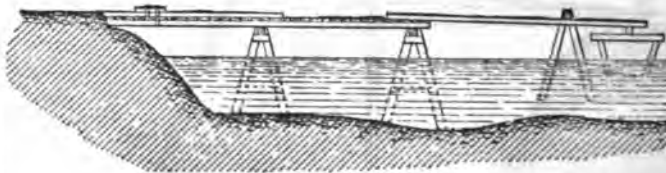


Fig. 122

trestles are usually erected by the use of a balance beam, Fig. 131, forward as the floor advances, and projecting beyond the last bent com-

Framed Trestles. The trestle is also one of the most useful methods of dimension timbers for bridge supports. In framed trestle bents, Figs. 117, the posts rest on a sill placed on the ground or supported by footings of some kind. The names of the principal parts of a trestle bent are indicated in Fig. 117. In varying the height of the trestle the cap remains of the same length and the batter posts have the same inclination. The length of the trestle varies, as indicated in dotted lines, Fig. 116.

The simplest framed trestle is the sawhorse. The relative dimensions and arrangement of its parts are as shown in Figs. 118, 119, 120. The figures and proportions given are to be regarded as typical only, with the widest latitude of variation to materials available.

Figs. 123 and 124 illustrate a trestle bridge designed to carry the loaded wagon with a factor of safety of 3. If the height of the trestle is not greater than its width, the bracing shown in Fig. 125 may be used. It has the advantage of giving a middle support to the transom. Figs. 126 and 127 show a trestle bridge thrown across Conemaugh River at Johnstown, Pa., by a committee of engineers, June, 1889. The piers are stiffened laterally by plank-uprights on both sides for some distance above the bottom, and are self-anchoring by filling the 6-inch space between the planks with scrap iron or other heavy material.

Trestles of considerable height may be made in two or more tiers, the cap of the lower tier forming the sill of the one next above and resting upon it, or the posts may be continuous, Figs. 128, 129, 130.

In trestle sills are supported on footings or piles, the points of support are under the posts.

Pile bents are similar in construction to trestle bents. The sill is omitted, and the posts are driven into the ground, and usually are all vertical. Pile bents are preferred on soft ground and in rapid streams. Piles should be from 8 to 12 in. in diameter at the butt for highway traffic, and must be approximately square at the top, or they can not be driven. Dimension timbers, the nearer square the better, make excellent piles.

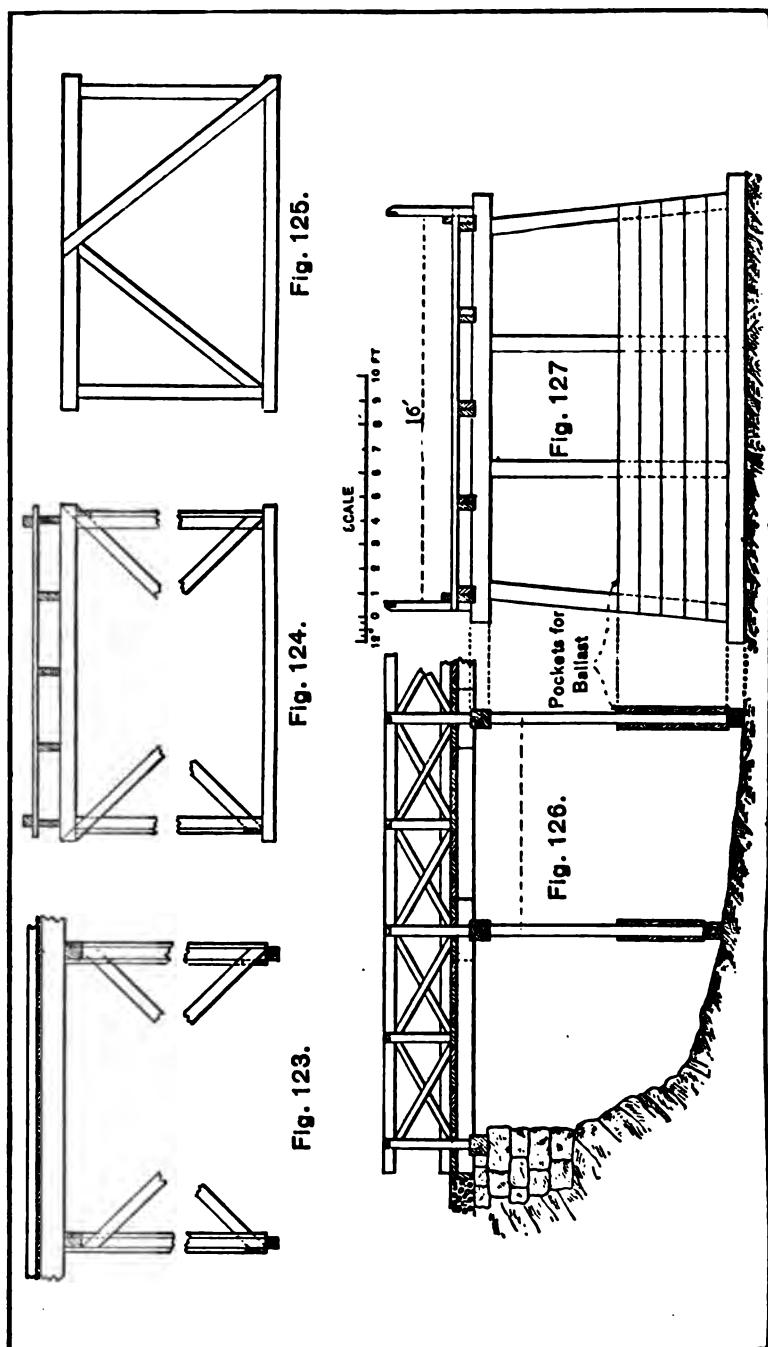
Various arrangements of piling for railroad work are shown in Figs. 132 to 136.

For bents more than 10 ft. high, the outside piles may be driven with a batter. Bents 10 to 20 ft. in height have one set of sway braces. Crossed diagonals of 4 in. plank, one on each side of the bent, suffice, Fig. 140. Heights of more than 20 ft. should have additional sets of crossed diagonals, with horizontal bracing between them, Fig. 142.

In streams subject to floods, longitudinal bracing also is required. It may be in one or more tiers, as described for sway bracing, or as is shown in Figs. 137, 138, 139.

A bent for water 10 ft. deep is shown in Fig. 137. Figs. 138 and 139 show bents built across the Portuges River, Porto Rico, and designed to allow boats to pass over it without other injury than carrying away the hand rail. The bents are lightly constructed with that end in view. Figs. 140 and 141 show a pile bridge of which several were built in the Philippines.

Pile-driving. Piles may be driven with a hammer in mud or any loose material except sand. In still water or moderate currents, and to the penetration of the pile sufficient for light work, piles may be driven with sledges or mauls. The best done from a platform attached to the pile and going down with it, as shown in Fig. 143. The weights of drivers balance, and after the pile is well



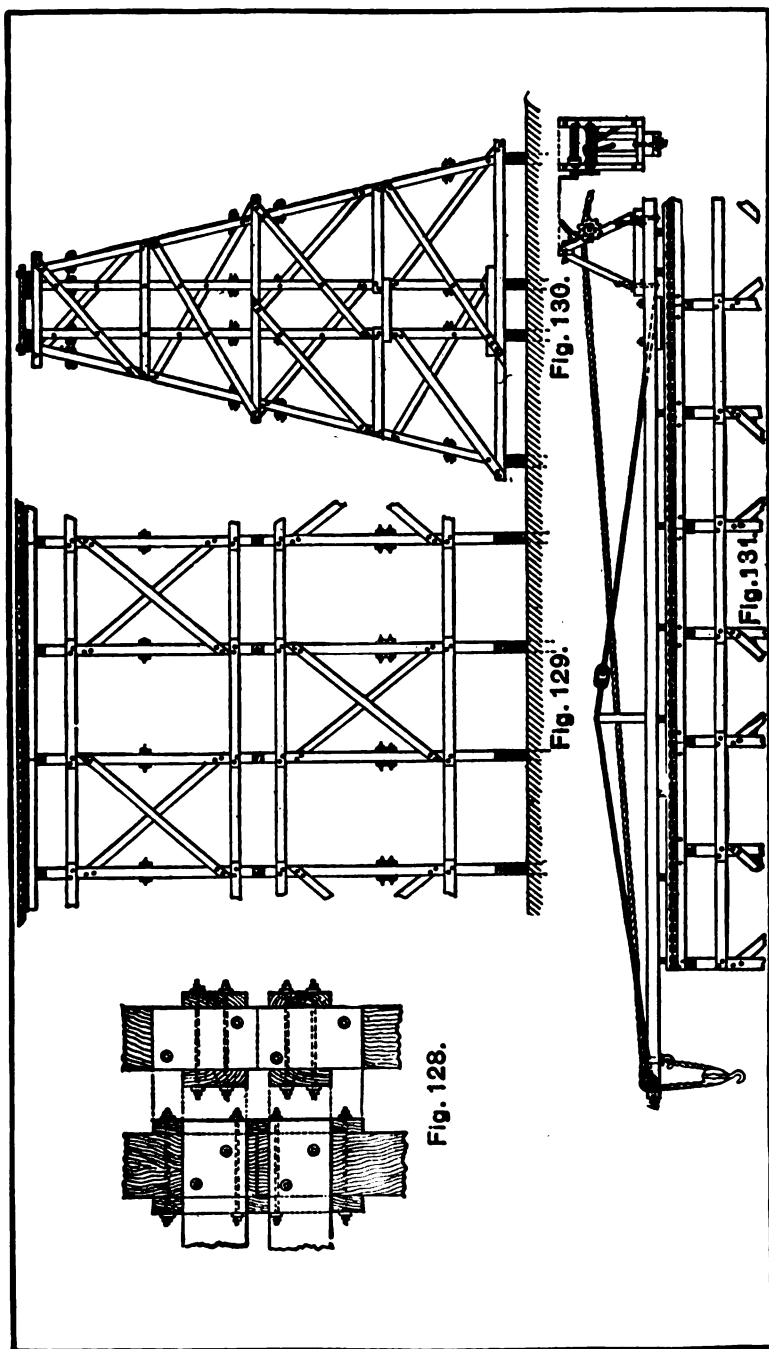


Fig. 132

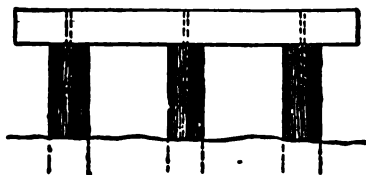


Fig. 133



Fig. 134

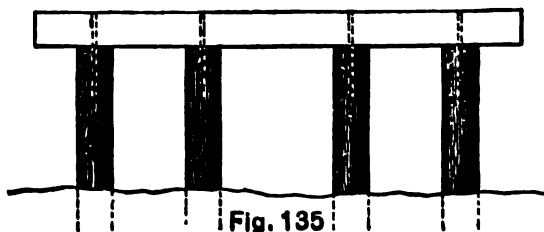
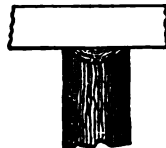


Fig. 135

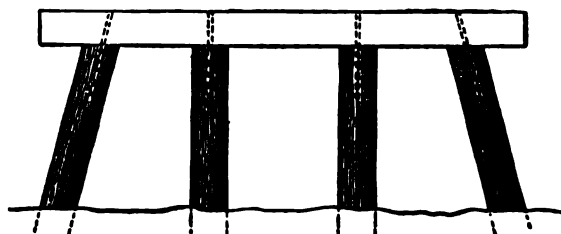


Fig. 136

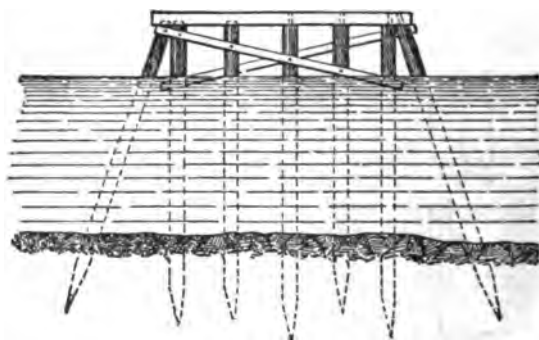


Fig. 137

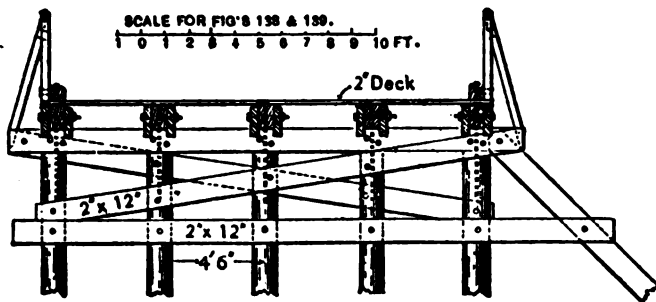


Fig. 138

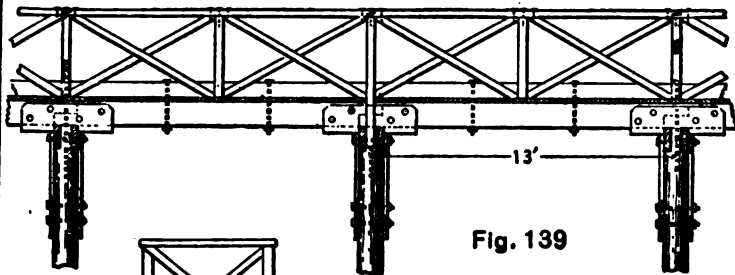


Fig. 139

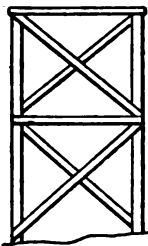


Fig. 142

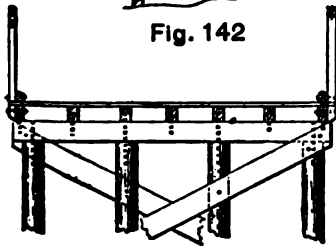


Fig. 140

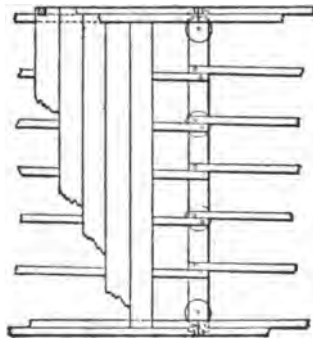


Fig. 141

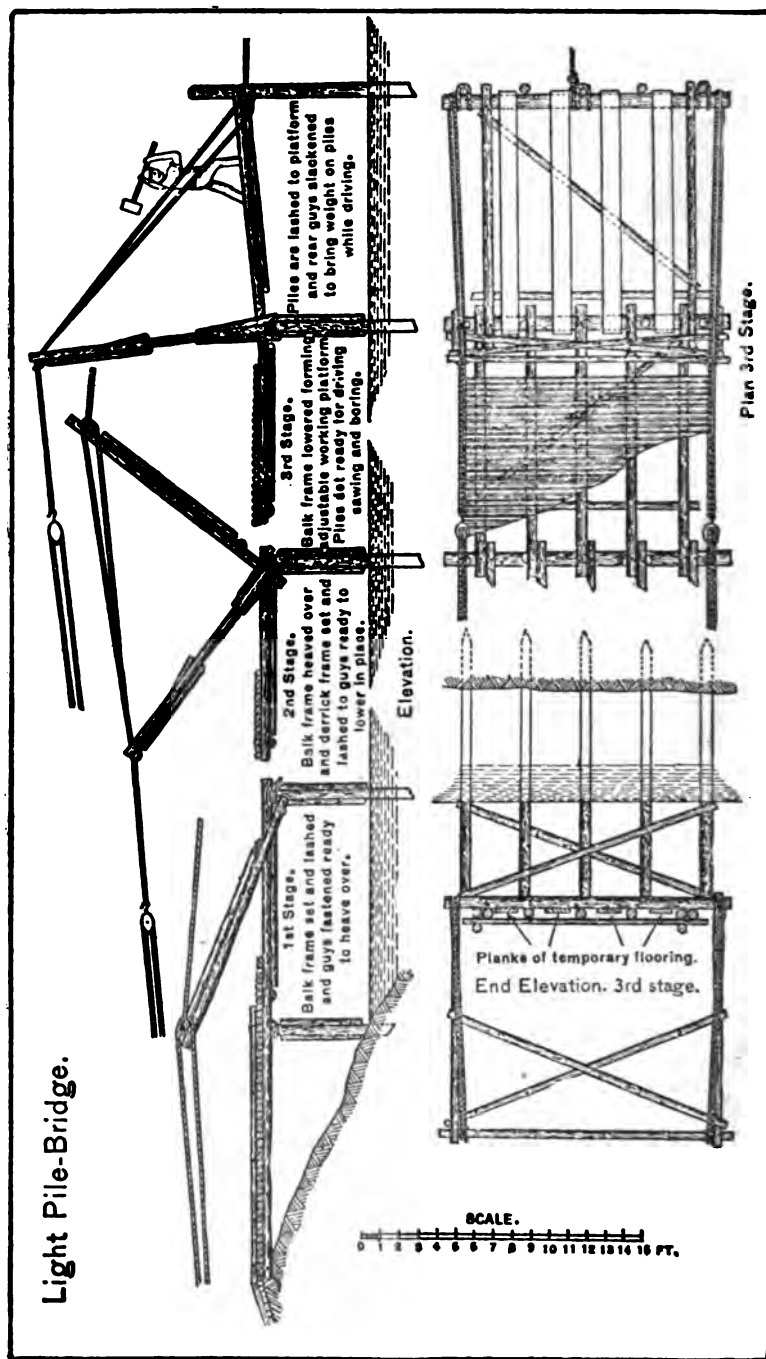


FIG. 142A.

place the shore ends of the spars may be held shoulder high and lowered as the pile goes down, so as to keep the platform horizontal for the hard driving. Heavier blows can be struck by the device shown in Fig. 143a. For four men the hammer may weigh 250 to 300 lbs.

For sand, a force pump and water jet are required, and these will often facilitate driving in other soils. For driving with the jet, a length of hose and a piece of wrought-iron pipe, long enough to reach from the point of the pile to a point above the water level when driven, are required. After the pile is hoisted into position, attach the pipe to one side, its lower end opposite the point, which should not be sharpened, using two or three wrought-iron spikes driven a short distance into the wood and bent over the pipe. Place the pile in position, lower the hammer onto the head, couple the hose to the pipe and start the pump. If the pile does not settle under the weight of the hammer, tap it lightly. Heavy blows are to be avoided, as they will dislodge the pipe.

In the Philippine streams piles are often placed by setting them up in position and working the tops back and forth by guy lines or twisting them by hand. On a tributary of Camilleis River between Bayambang and Camilleis, piles were sunk in the river to 10 or 12 ft. penetration. The peculiar softness of bottom and the great weight of native woods contribute to the success of this method.

When the piles of a bridge are to be driven by hand, the following method, which utilizes the floor of the bridge as a working platform, has been found to be admirably. It was devised by Captain Rees, instructor of engineering in the General Service and Staff College, Fort Leavenworth, Kans., and used by him in the instruction of his classes.

The first bent is driven at the water's edge, and connected with the shore by a roadway. A derrick frame is prepared as shown in Fig. 142A. The standards are forked to embrace the trestle cap. The floor frame is held by lashing two stringers to a trestle cap and placing a diagonal. This is laid on the floor of the last bay with the free ends of the stringers resting on the last cap and lashed to it, the lashings passing up on the rear side and down on the front side of the caps, Fig. 142a (first stage). The new cap and diagonal are on top of the stringers in this position. The frame is raised by hand and later by the fore guys and rotates about the cap to which the standards are lashed. As the frame passes the vertical, it is held by the back guys and lowered to a slightly inclined position (second stage). The derrick is then placed with its claws embracing the cap outside of the stringers, raised by hand, and the back guys made fast at the tops of its posts (second stage).

The two frames are then revolved about the cap by slacking the back guys until the floor frame is nearly horizontal (third stage). It then forms a working platform for driving the piles of the next bent. By lashing the cap to the standards and slacking the guys (fourth stage), the weight of the platform and standards may be thrown onto the piles to assist in sinking them.

Designs for Pile Drivers. If two service pontoons with balk and chess are used, a floating hand pile driver, shown in Figs. 144, 145, and 146, may be employed. The construction is obvious from the drawings. The hammer is a heavy wood 16 in. in diam. and 4 or 5 ft. long, flattened on opposite sides and loosely between the leads. Pairs of pins are inserted near the top and bottom of the block on both sides, to serve as guides.

Another form of field pile driver is shown in Figs. 147 and 148. It can be constructed from balk, chess, and 2-in. plank by six men in about six hours. It is rolled forward on the bridge as built.

The form of driver shown in Figs. 150, 151, and 152 also rolls forward on the bridge projecting beyond the last one driven far enough to drive the one ahead.

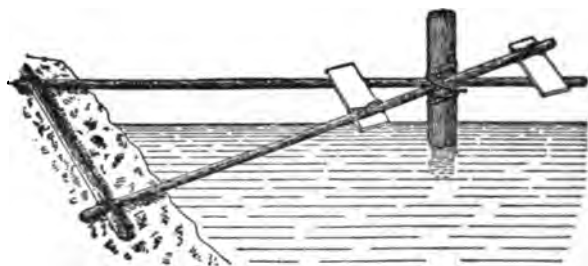


Fig. 143

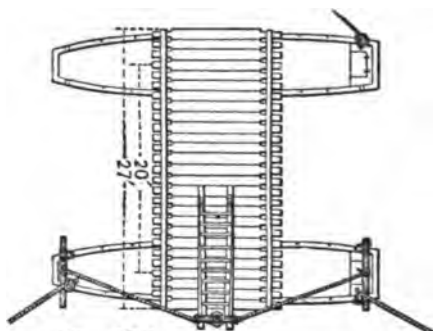


Fig. 144

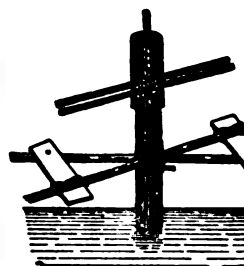


Fig. 143A

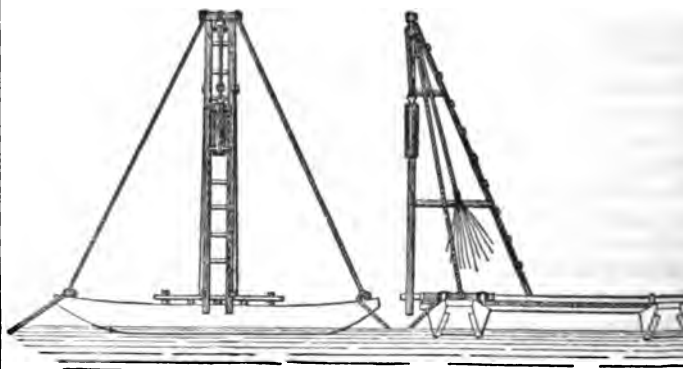


Fig. 145

Fig. 146

Improvised Hand-Power Pile-Driver.

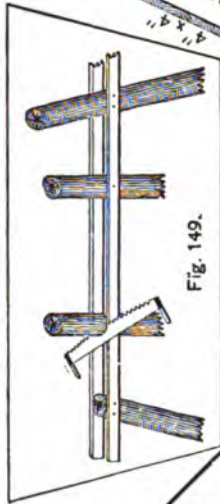
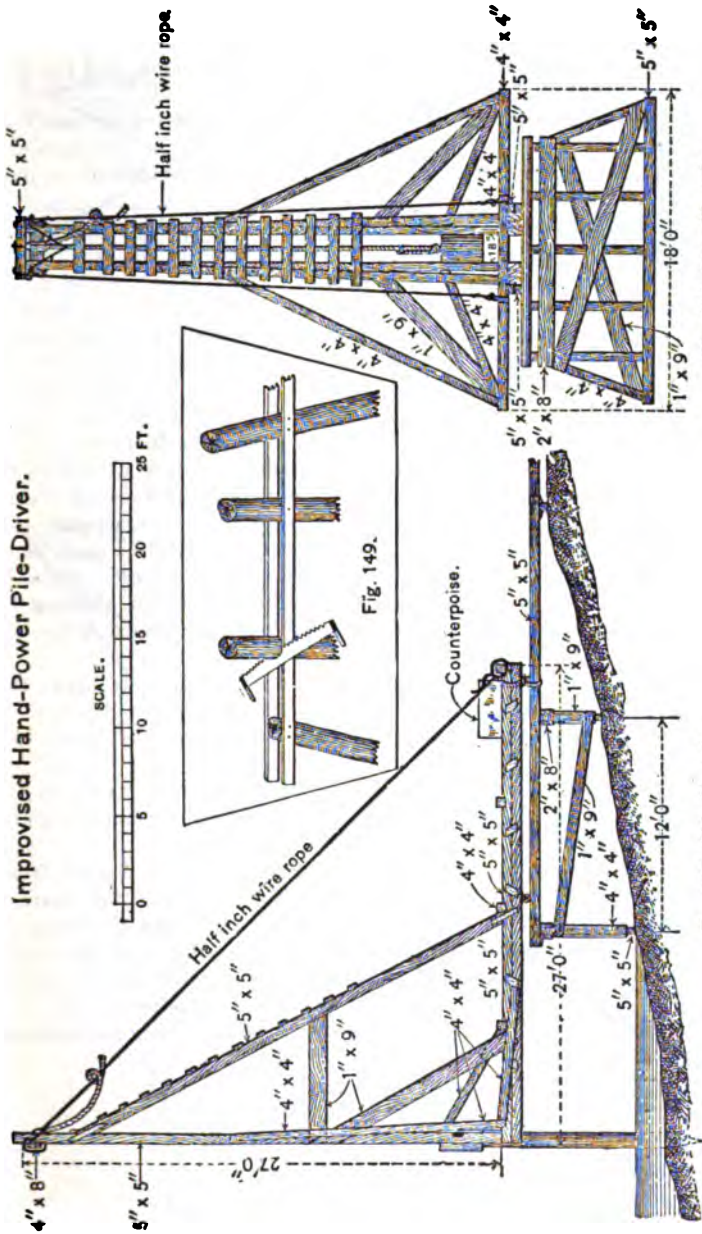


Fig. 148. Rear Elevation.

For two or four pile bents the double leads, shown in this construction, have the advantage, as they reduce the lateral shifting, besides doubling the resistance to the pile.

The tops of the piles must be cut accurately to the plane of the cap to give firm bearings. If cut by hand, nail a straight strip on each side of the pile with its upper edge in the desired plane, and run the saw on top of these strips, Fig. 149.

In the field pile driver shown in Figs. 150 and 151, a swinging saw is indicated. When in use it is hung from a pivot attached to the hammer. Starting the cut, the sag of the saw must be lifted until its middle is over its ends and held so until engaged in the cut.

69. Operating Field Driver. (Figs. 150, 151, and 152.) A bent just before overhaul the shifting tackles and attach them by straps to the last cap blocks to the caps on the outside of the sills of the machine to serve as a slush or soap the runners, and haul away on the shifting tackles to a machine the proper distance. Lash the heel of the machine to the cap. As soon as the leads clear the last cap, the hammers may be lowered in water to take off their weight. When made fast in the new position, lower the hammers to the top of leads; hook onto piles with the hoisting tackles and pull them in place; pass lashings to hold them and lower the hammers to their tops. Hoist and drop the hammers until the piles are driven to the required penetration or resistance. Hoist the hammers, hang the saw and adjust to proper height. While sawing off, hook onto a cap with the shifting tackles, sling it horizontally into position, and onto the piles as soon as the cap has bored through the cap into piles and drive driftbolts or treenails. Secure the longitudinal braces that stay this bent against the pull of the shifting tackles and advance to the next bent. Other bracing may be placed after the driver has passed.

Above applies to bents with two piles. For driving four-pile bents the machine is shifted laterally on cross skids with tackle or with handspikes. If mules are available they may replace the men on the hammer line to the advantage.

70. The supporting power of piles is not of paramount importance in bridges of hasty or temporary character, since a slight settlement is of no especial consequence.

It may be said in general that the bearing power of piles will vary from 70 tons according to the size of the stick, its penetration, and the character of the soil into which it is driven. A frictional resistance per sq. ft. of the pile in contact with the soil may have working limits of 200 lbs. The smaller should not be exceeded in alluvial and soft soil nor the larger in firmer material such as stiff clay, sand and gravel, or mixed material.

If it is necessary to insure against settlement, the following formula, known as the "Engineering News Formula," may be used:

$$L = \frac{2wh}{S_1 + 1}$$

in which

L = safe load in lbs.

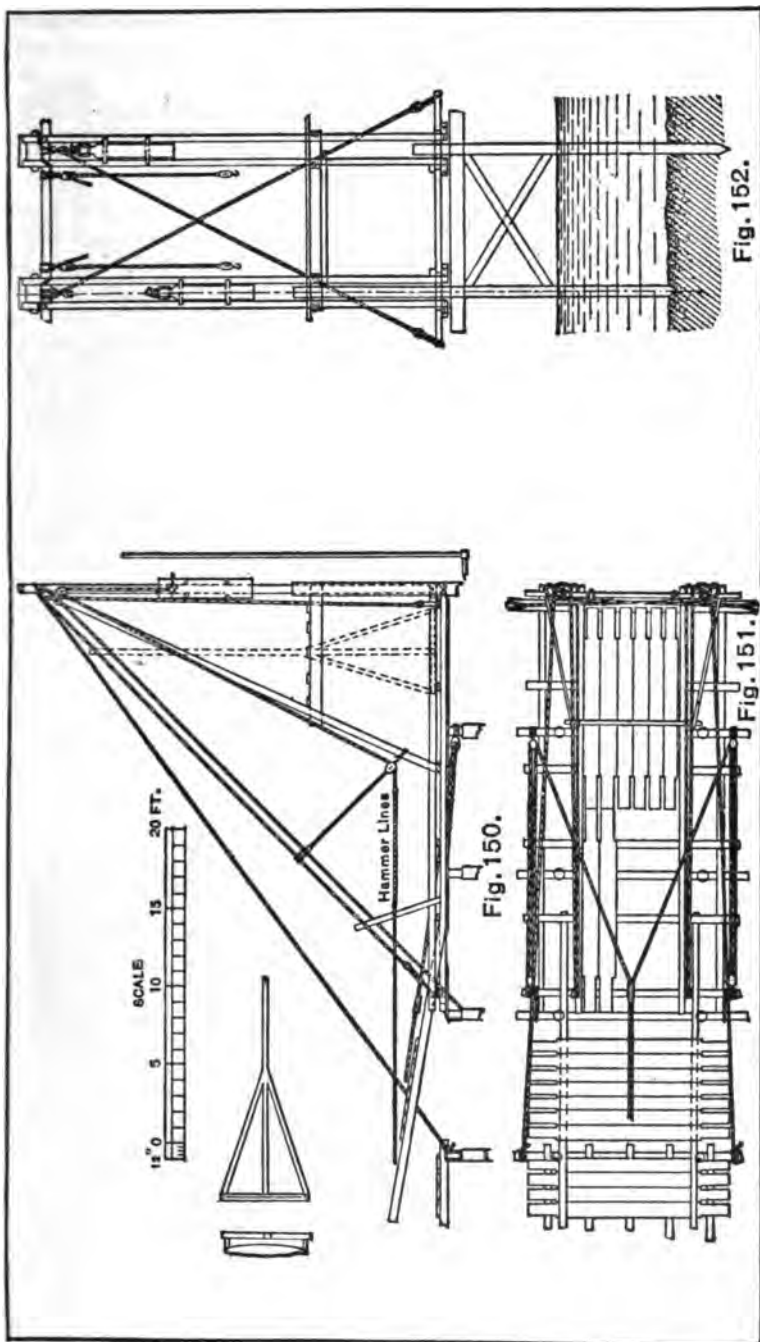
w = weight of hammer in lbs.

h = fall of hammer in ft. (average of last few blows).

S = penetration per blow in ins. (average of last few blows).

This formula includes a factor of safety of 6, or is based on the assumption that $\frac{12wh}{S+1}$ = the ultimate supporting capacity of the pile.

No pile formula yet proposed is absolutely reliable. The above is the latest and simplest, and probably among the best.



CRIB CONSTRUCTION.

71. In dry situations the cribs are built on the site and no fastenings are required. The ground is prepared to receive the bottom timbers, level and bearing firmly toward the ends and but lightly in the middle. The sticks of the next course are laid across their ends, noting that they rest fair and do not rock. If logs are used, the ends are flattened sufficiently to give bearing surfaces. With dimension timbers each piece which does not lay fair must be given a solid bearing by shims or wedges before the next one is put on. These small pieces must be fastened so that they can not jar out. The construction of a dry crib is shown in Fig. 153.

The part of a crib that is to stand in water must be tied together and adapted to form a cage for the ballast. Enough of the ballast to overcome the flotation of the wood should be so confined that it can not escape. For the rest, it is better to leave the ballast free to run out through the floor of the crib and fill any cavities in the bottom which may exist or be formed by the scour of the current. A crib may be given a level bearing on a rough or sloping bottom by holding it in the desired position and throwing in ballast which runs through.

A large crib may be made in compartments or pockets, the interior ones floored to take the sinking ballast and the others open at the bottom to allow ballast to run through, Figs. 154 and 155. A small crib made in one pocket may have extra logs in the second course on which a large rock can be laid to sink the crib, after which smaller ballast may be thrown in around it, Fig. 156.

72. Cribs are built on shore usually on inclined ways, and when up to a sufficient height to form a substantial raft may be launched. They are built up to a little more than the depth of the water in which they are to stand and are floated to their places. The sinking ballast is then placed in the closed compartments or on the floor prepared to receive it, until the crib is well grounded. By means of spars set at the corners with tackle attached, the lower corners may be raised until the crib is level, and the rest of the ballast thrown in.

The construction of the sides of a crib must be adapted to the ballast to be used. If large stones are available, the full interval may be left between sticks as described for dry cribs. If the ballast is small, the timbers must be gained together to make the spaces smaller, and it may even be necessary to plank the sides of the crib.

73. To resist the outward thrust of the ballast the logs may project in full size a foot or two at each end, so that each one rests in a notch cut in the one below. A log may be split into quarters and one of these placed in each outside corner, nailed or pinned to each timber. For light cribs in shoal water the projection may be small and a pole substituted for the quarter log. Both of these methods are shown in Figs. 155 and 156. For cribs of squared timbers, two planks nailed or pinned in the outside corner, as shown in Fig. 157, are best.

74. On a bottom of soft mud it may be necessary to distribute the weight of the pier over a greater area than its own bottom. For this purpose riprap stone is commonly used if easily procurable. A quantity is thrown in on the site of the crib and allowed to find its bed. When the bottom is well covered and no further settlement appears, the top is roughly leveled and the pier sunk on top of the mound.

If stone can not be had, a raft of logs may be sunk on the bottom and the pier built on that. The logs should run parallel to the short side of the crib or pier. Figs. 162 and 163.

75. A pier placed in running water increases the tendency to scour in its vicinity, and if the bottom is erodible may be undermined. To prevent this, a flexible construction of brush, called a mattress, may be used. Its construction and use are illustrated in Figs. 158-161.

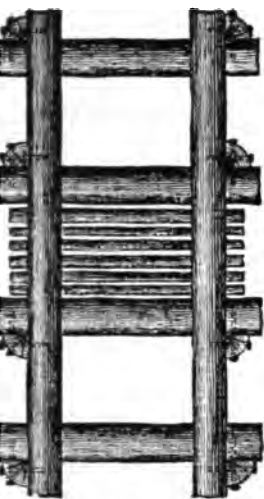


Fig. 155

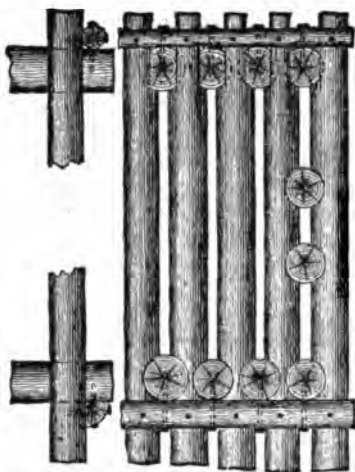


Fig. 156

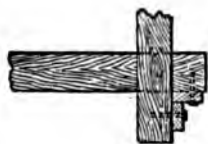


Fig. 157

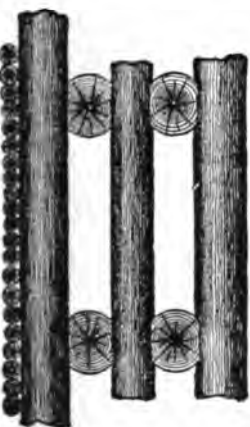


Fig. 153

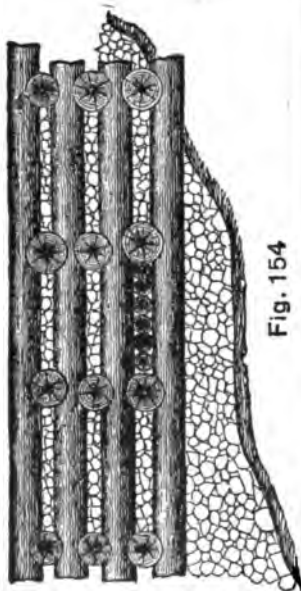


Fig. 154

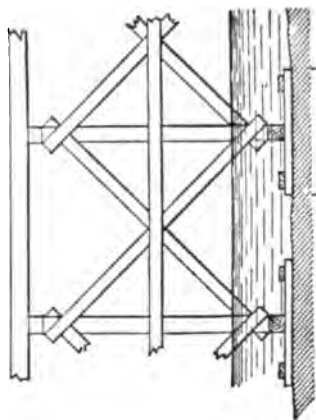


Fig. 163.

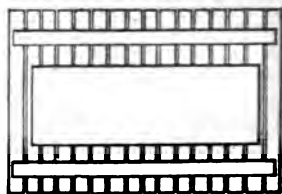


Fig. 162.

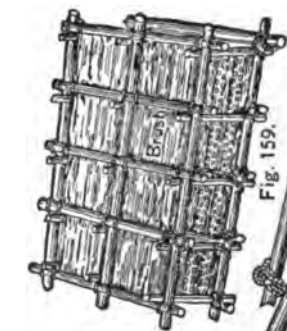


Fig. 159.

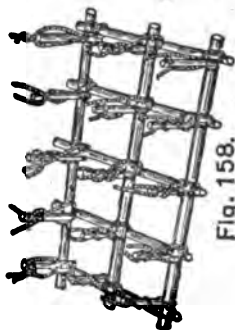


Fig. 158.



Fig. 160.

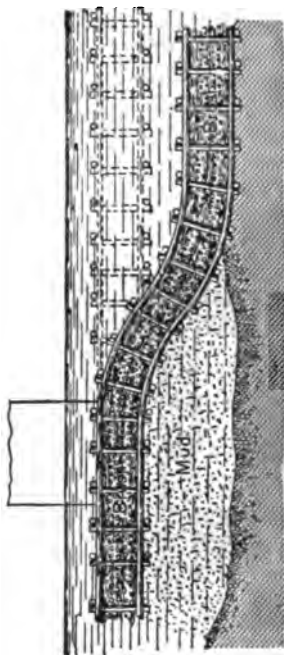


Fig. 161.

llage of poles is made on the ground or on skids, and at every intersection is set somewhat longer than the desired thickness of mattress. A lashing is attached to the grillage at each stake, brought to the top of the pile, and loosely fastened with plenty of end.

It is now laid on in one or more tiers until the desired thickness is obtained. A second grillage is laid on the top with its intersections at the stakes. The lashings are removed from the stakes, passed around the upper grillage, and taken up with levers and rack sticks, Fig. 160. Such mattresses are usually 18 to 2 ft. in thickness.

A mattress is launched and floated to its place, where it is sunk on the bottom by throwing on rock or other ballast. When in place the crib or pier is on top of it.

The effect of a mattress is shown in Fig. 161. As the current scours under the edge the mattress bends downward, following the bottom until the current ceases. The mattress must be large enough so that this action at the ends will not disturb the middle.

LANDING PIERS.

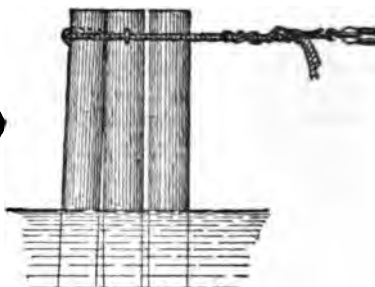
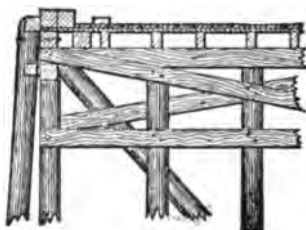
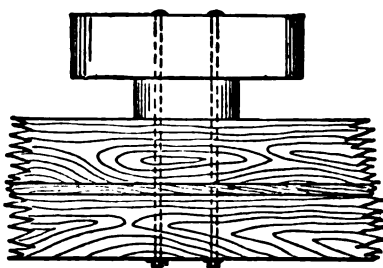
The dispositions described for pile and crib bridges are those usually adopted for temporary piers, wharves, or docks for loading or discharging vessels. The chief difference is in the provision made against lateral thrusts, which are much greater than in the case of bridges. Vessels warping in and out and striking the pier, which can not be avoided, cause excessive lateral strains and call for special features in addition to much heavier construction throughout.

Vessels can be discharged at a properly constructed dock in considerable numbers. Transports can also be discharged in a moderate seaway by providing suitable mooring devices at bow, stern, and on the outside, so that the vessel is held alongside of the pier, but not touching it. Only in perfectly proper situations can a large ship lie directly against a pier.

The best mooring is a massive structure of piles driven close together and tied near their tops by a cable, or by bolts, or both. Such a construction is called a dolphin. It yields readily to the first impact and develops resistance readily but rapidly. Fig. 164 shows the usual construction, and Fig. 165 shows the method of binding with wire rope. The end of the rope is stapled to a pile and the rope drawn around the dolphin until it bears on the next one. A strain is put on with a tackle, and a staple or spike driven in the second pile and so on. At least three or four complete turns should be taken. Wire rope is used in the chain next.

Such dolphins require heavy plant for their construction. If materials are abundant, a crib mooring may be made with ordinary tools. The crib should be square, with a side not less than the depth of water at low tide. It should be exceptionally well fastened. It should be constructed with a middle pile to be kept free from ballast until the crib is sunk and cluster of piles are then put down through the pocket and driven into the bottom as far as possible. The tops of the piles should be arranged like the dolphin. Ballast, of moderate size, will now be thrown into the middle pocket and piled closely around the piles to support them. Such a mooring is less elastic than the dolphin and will be more destructive of lines and of fastenings on the vessel but it can be made when a dolphin of sufficient strength can not.

Figs. 167 to 170 illustrate points which must receive especial attention in the design of pile docks. These are the arrangement of fender piles and chocks so that vessels may ride up and down against the dock without catching, the inner or spur piles driven to resist lateral thrusts, and the arrangement of fastenings on the dock to take heavy strains.

**Fig. 164****Fig. 166****Fig. 165****Fig. 167****Fig. 168****Fig. 169****Fig. 170**

FLOATING BRIDGES.

bridges of this class have several disadvantages, due to change in grade way with change of water level and with change of load, and to their capacity, which can not exceed the flotation of the supports. As a rule, bridges will be resorted to only when the materials for them are plentiful and materials for other kinds scarce.

As a rule finds an important exception in the organized bridge equipage prepared in advance to be carried with an army. Such a bridge possesses a great advantage in the paramount element of time, since it can be laid, crossed, and removed in less time than any other form of bridge can be built, and its components can be used as water transportation for several important purposes which no other kind of bridge can subserve.

The bridge equipage adopted for the United States service is of two forms, heavy and light. The heavy equipage is sufficient in capacity for all requirements of an army on the march, and is mobile enough to be carried at the ordinary rate of marching. In the light equipage, capacity is somewhat sacrificed for the sake of further mobility to enable a bridge to be carried with a rapidly moving column.

The heavy and light equipage are organized into trains and in each the train is composed of four divisions each complete in itself, with the necessary tools and tools for repairs and the requisite wagon transportation for land transport. With one train four short bridges can be built, or two twice the length in the same or different localities, or three four-thirds the length or one times the length in the same locality, with obvious intermediate combinations.

The principal parts in both forms of bridge are pontoons or boats; the long bearers or stringers joining them called balks; the cross planks, called chesses, and the beams which hold the chess in position, called side rails, Fig. 181.

In the heavy train each division will construct a bridge of 11 bays, or 225 feet in length, and is divided into four sections, two of which are called pontoon sections and the other two abutment sections. The two abutment or end sections suffice for any length of bridge. Increase in length is accomplished by adding one or more pontoon or interior sections. The pontoon section is never increased as it can not be done without breaking wagon loads. This equipage includes wagons included, 315 lbs. per ft. of bridge, or without wagon 169 lbs.

A division of light equipage will construct 186 ft. of bridge. It is not divided into sections, as each pontoon wagon carries the material for a complete bay, and the bridge may be lengthened by adding one or more pontoon wagons. This equipage weighs, including wagons, 275 lbs. per ft. of bridge, or without wagons 169 lbs.

Heavy Equipage. A division is loaded on 16 wagons. Eight of them are pontoon wagons and carry each a pontoon, 7 long balks, anchor, cable, 5 boat hooks, 20 lashings, 6 rack sticks, 2 scoops, ax, hatchet, bucket, and gun yarn. Four of the wagons carry chess or floor planks only, 60 each, enough for 3 bays, and are called chess wagons. Two wagons carry each a trestle, 7 long balks, 7 trestle balks, 2 abutment sills, and 2 coils of rope. The tool wagon carries axes, shovels, picks, tools and materials for carpentry, saddlery, calking and painting, and spare cordage. The forge wagon carries a forge, smithing tools, iron and other materials. Each wagon is drawn by mules with one driver.

Supporting Power of Boats. The boats of the heavy train are of wood, of 10 tons displacement, and weigh 1,600 lbs. Each can carry 40 infantrymen and fully equipped besides its crew, a total of about 9,300 lbs. This is the normal load of the boat and should be used only in favorable conditions. In rough water and swift currents 20 men and the crew make a suitable load. The pontoon should be loaded evenly, and uneven loading and shifting of loads must be avoided.

The light or canvas pontoon is of 6 tons capacity and weighs 510 lbs. The normal load is 20 men and crew, which should be reduced for unfavorable conditions.

85. The supporting power of the bridge is determined by that of the spans, which are purposely made less than that of the pontoons. With a factor of safety of 4, the safe uniform load of the standard heavy bridge of 5 balks is 9 tons, or the 14 ft. 4 ins. between the supports, or 660 lbs. per lin. ft. This is the weight of infantry armed and equipped in column of fours, but less than the weight of such a column if crowded by a check. The corresponding concentrated center load is 4,750 lbs., which is about that on one axle of a heavy wagon, or 2 tons gross weight. It is more than the field gun and carriage and less than the siege gun. Each additional balk above 5 adds 165 lbs. to the safe uniform load, or 1,280 lbs. to safe concentrated load. Seven balks will carry the siege gun with a factor of safety of nearly 4.

Six extra balks, or 11 in all, will carry as much concentrated load as the standard bridge will support. Extra balks when used should be added in pairs and centered under the wheel tracks.

When either end of a bay is supported at one point only, as on a trestle or saddle sill, 30% more balks must be used for the same load and span. If both ends are so supported, 50% more balks will be required for the same load and span.

The above loadings should not be exceeded except under unusual circumstances and with great caution. With new and perfectly sound materials, in emergency of actual service an officer in charge of a bridge would be justified in doubling the loads given, or, in other words, reducing the factor of safety to 2.

Heavy loads on wheels may be partially distributed by track plates, or by skidding the wagons over on shoes or runners. For long continuous spans, a false floor of common lumber should be laid to take the wear of the wheels. Such a floor serves also to partially distribute the load. A covering of straw is advantageous.

The floor system of the light train has $\frac{1}{10}$ the strength of the heavy train. The number of balks for concentrated loads and equal capacity per lin. ft. of span, or form loads, as the bays are shorter. The standard floor of 5 balks will support as much as the boats will safely support.

86. Names and dimensions of the principal parts of the light and heavy trains.

TABLE XXIII.

| Name of part. | Light train. | Heavy train. |
|-----------------------------------|---|---|
| Pontoon, $9\frac{1}{2}$ tons..... | ..... | 31 ft. by 5 ft. 7 ins. |
| Canvas pontoon, 6 tons.... | 21 ft. by 5 ft. 4 ins. by 2 ft. 4 ins. | ..... |
| Balks and side rails..... | 22 ft. by $4\frac{1}{2}$ by $4\frac{1}{2}$ ins. | 27 ft. by 5 by 8 ins. |
| Trestle balks..... | ..... | 21 ft. 8 ins. by 13 ft. 12 by 14 ft. by 8 by 20 ft. by 12 by 15 ft. by 7 by |
| Chess..... | 11 ft. by 12 by $1\frac{1}{2}$ ins. | ..... |
| Abutment sills..... | ..... | ..... |
| Trestle caps, 2 planks, each..... | ..... | ..... |
| Trestle legs..... | ..... | ..... |
| Trestle shoe..... | ..... | ..... |
| Suspension chains..... | ..... | $\frac{1}{2}$ in. by 8 ft. |
| Paddles..... | 8 ft..... | ..... |
| Oars..... | ..... | 18 ft. |
| Boat hooks..... | 8 ft., blunted points..... | 10 ft. |
| Rack sticks..... | $1\frac{1}{4}$ ins. diam., 2 ft. long..... | $1\frac{1}{4}$ ins. diam., 150 lbs. |
| Anchor..... | 75 lbs..... | ..... |
| Anchor cable..... | 3 ins. circ., 180 ft. long..... | 3 ins. circ., 240 ft. long..... |
| Lashings..... | 1 in. circ., 18 ft. long..... | 1 in. circ., 18 ft. long..... |
| Canvas-pontoon cover..... | No. 0000 cotton duck..... | ..... |
| Pontoon chest..... | 8 ft. long, 2 ft. 4 ins. wide, 18 ins. deep. | ..... |

Weights of wagons and their loads:

TABLE XXIV.

| Kind of wagon. | Light train. | | | Heavy train. | | |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | Wagon. | Load. | Total. | Wagon. | Load. | Total. |
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| 1. | 1,750 | 1,985 | 3,735 | 2,200 | 2,900 | 5,100 |
| ..... | 1,750 | 1,856 | 3,606 | 1,750 | 2,280 | 4,030 |
| ..... | 1,750 | 2,060 | 3,810 | 2,200 | 2,635 | 4,835 |
| ..... | 1,700 | 1,938 | 3,638 | 1,700 | 2,100 | 3,800 |
| and forge. | 2,081 | 600 | 2,681 | 2,081 | 600 | 2,681 |

Boat Bridges. When it becomes necessary to use boats found on the river or elsewhere, select those as nearly of one size as possible. Of these, select the largest for the shore ends and for the swiftest currents. Estimate their supporting power roughly by comparing their size with the pontoon boat, heavy scow, or compute as in par. 100. Support the bunks on saddle sills and transoms locked up from the frames of the boats. If boats differing very much in size are used, make the bays supported by the small boats shorter than those supported by the larger ones. Avoid getting a very large and a small boat adjacent. The floor system may be designed as in par. 59 for spar.

With scow-built barges, which will usually have excess of supporting power, a serviceable bridge is readily built. If the boats are large and well spaced, they may be placed endwise in the bridge, separated by 20 ft. or more, the intervals spanned by bays of roadway and the decks used for roadway on the boats themselves. With boats of different shapes and sizes, such a bridge should be attempted with great caution, and only under exceptional circumstances.

Barrel Piers. When barrels are available, floating piers can be made by placing a sufficient number of them by means of timbers or lashings, or both. An ordinary 50-gallon barrel has a buoyancy of about 400 lbs. when completely submerged; those of other sizes in proportion to their capacity. The supporting power of any barrel or keg can be determined with sufficient accuracy by weighing it when full of water and again when empty; the difference is the supporting power.

The number of barrels required for a pier is obtained by dividing the total weight to be borne by the supporting power of one barrel. A margin of 20% or more should be allowed, as the barrels of a pier must not be completely submerged.

In forming the piers the barrels are laid out in line with the bunks uppermost.

The gunwale timbers are placed over and the rope slings under the barrels. The slings are secured to the gunwales at each end of the line. Between each pair of barrels on each side a brace is secured to the sling and then led under the gunwale on its own side, round the opposite brace rope and back to its own gunwale, where it is made fast, Figs. 171, 172, and 173. Care should be taken in launching to avoid injuring the ropes by chafing on the ground. Rafts so formed may be united into larger ones as indicated in Fig. 174. Where timber is available the best method of forming a barrel pier is to make a cribbed box crib of lumber or timbers nailed, bolted, or lashed together. If the timber is as strong as it should be, it may be inverted over the barrels, which require no other fastenings. Fig. 175 shows this method.

Raft Piers. Rafts of timber may be used for floating piers when other materials are not at hand. They are durable if not disturbed and secure against sinking by hostile fire. Their defects are: small and decreasing buoyancy, weight, and bulk; Figs. 176 to 179.

Fig. 171

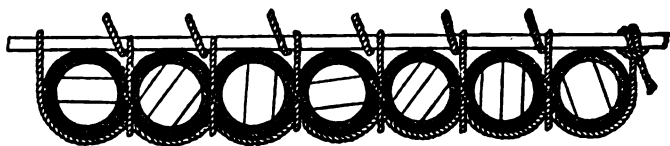


Fig. 172

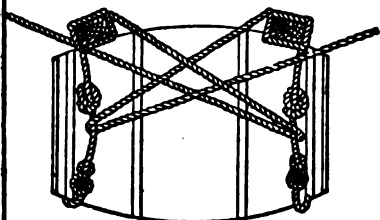


Fig. 173

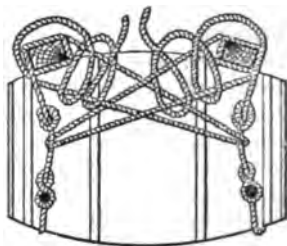


Fig. 174

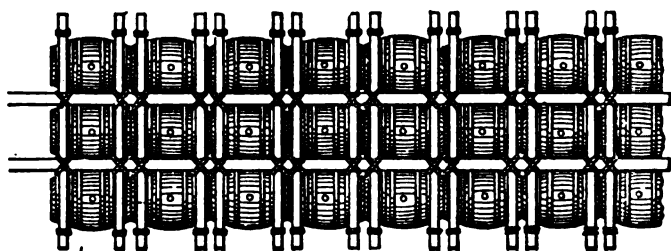


Fig. 175

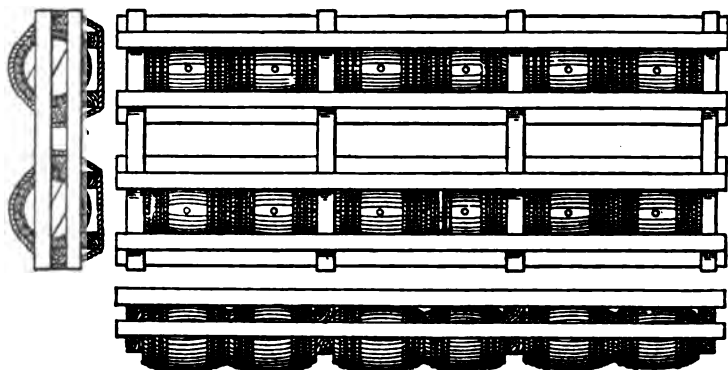
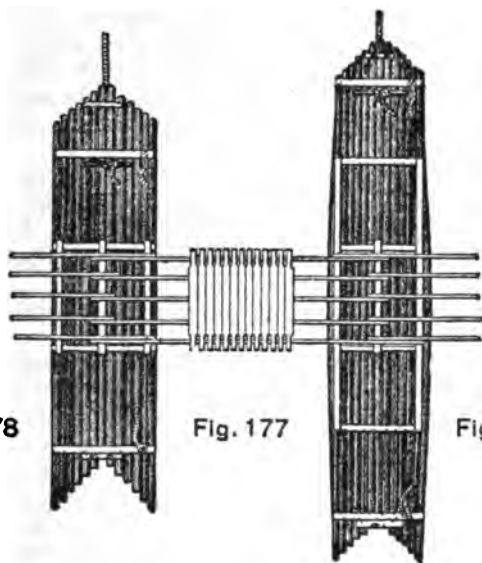




Fig. 179



g. 178

Fig. 177



Fig. 176



Fig. 180

The buoyancy of each stick used may be obtained from the following rule: Find the girth or circ. at middle point in ft., multiply it by itself, multiply this product by the factor 0.08, and multiply again by the length of the stick in ft. The result will be the volume of the stick in cu. ft., which, multiplied by the difference between $62\frac{1}{2}$ and the weight of a cu. ft. of the timber, gives the supporting power in lbs. when fully submerged.

Example: Find the net buoyancy of a pine log with a middle girth of 6 ft. and a length of 35 ft., and which weighs 40 lbs. to the cu. ft.

Volume in cu. ft. = $6 \times 6 \times 0.08 \times 35 = 100.80$ cu. ft.

Buoyancy = $100.80 \times (62\frac{1}{2} - 40) = 2,268$ lbs.

Allowing $\frac{1}{2}$ of this as available buoyancy, a bridge of 7 such logs in each pier, with 20 ft. bays, will carry the maximum infantry loads calculated in paragraph 85 for the heavy bridge.

91. Construction of the rafts is done in the water if possible. Arrange the logs side by side to form a point upstream, Fig. 177. The upstream ends should be beveled on the lower side, Fig. 176. The logs are held together by cross timbers pinned or spiked over the tops. Where the logs are of small size additional sticks may be placed in the intervals between the others, or two or more courses may be built up, the logs of each layer at right angles to those below. The latter method has been found advantageous in constructing rafts of bamboo.

92. Anchorage of Floating Bridges. The anchorage of the piers of a floating bridge is of the greatest importance. The piers should be so constructed and placed as to present the least obstruction to the current. In non-tidal streams all the bows are placed upstream; in tidal estuaries they should alternate up and down stream.

The piers near the shore should be secured by strong cables to rocks, trees, or deadmen on the shore above and below.

For the heavy and light bridge equipage the anchors provided are sufficient, and in moderate currents it will answer to anchor alternate boats upstream and every fourth one downstream; the downstream anchors always on boats which have upstream anchors also. In swift currents it may be necessary to anchor every boat upstream. Even in slack water every second or third boat should be anchored both up and down stream to reduce oscillation.

For any other kind of floating bridge every pier must be securely anchored. Ordinary anchors can be relied upon in good holding ground only; when it is poor or the current unusually swift, two anchors may be used, one backing up the other, Fig. 180. Or, the following devices may be used.

A line of schooners or large barges may be anchored above the bridge, and the piers moored to them, or,

A hawser may be stretched across the stream, buoyed on intermediate floats if necessary, and the anchor cables carried to it, or,

Long guys may be carried direct from each pier to the shore and secured as before indicated.

The length of cable between anchor and pier should be at least ten times the depth of the stream. Otherwise the anchor is likely to drag and a downward pull is brought on the upstream end of the pier. The anchor must be cast as nearly as possible directly upstream from the position which the pier is to occupy, so that the pier in the bridge will have the same position that it would assume at anchor.

Improvised anchors may be made of any heavy materials on hand, as railway iron, pieces of machinery, or large stones. Such anchors must be of considerable weight, as dependence is placed on their mass rather than their attachment to the bottom.

Construction of Floating Bridges. The regular bridge equipage is de-unloading, construction, removal, and reloading in the shortest possible and its systematic drill is given in a separate manual. This elaborate necessary only for troops handling the equipage habitually. The design of the methods of construction recommended involve the principles of the Pontoon Manual and are illustrated for the heavy equipage, but are applicable in language to all kinds of floating bridges, the pontoon equipage being considered simply as one kind of bridge of that class. The method selected depend upon the character of the stream, the kind and location of the force available, and the proximity of the enemy. It may be determined by combining two or more of the methods described.

For power launch is of the greatest assistance and no effort should be made to obtain one.

The methods available are: (1) By successive bays, (2) by parts, (3) by

Successive Bays, Fig. 181. In a trench 1 ft. deep and wide lay the sill horizontal and at right angles to the axis of the bridge. Secure large pickets, two in front and two in rear, near the ends. A support for the boat, barrels, or raft, is brought close to the bank opposite the abutment.

The free ends of cables, previously fastened on the bank 30 or more feet above and below, are passed onto the pier. A set of barks are brought up, the ends placed on the saddle sill of the pier and lightly secured. The barks are shoved off until the inner ends of the barks can be placed on the abutment and all fastenings are completed. The floor is then laid on the barks and the second pier is brought alongside of the first, its anchor having previously been cast. A second set of barks are brought up and the operation is repeated until the other shore is reached, where an abutment sill is laid as described and the shore bay completed. Unless the supports are man-boats, all anchors should be dropped from a special boat and the cables hauled to the piers.

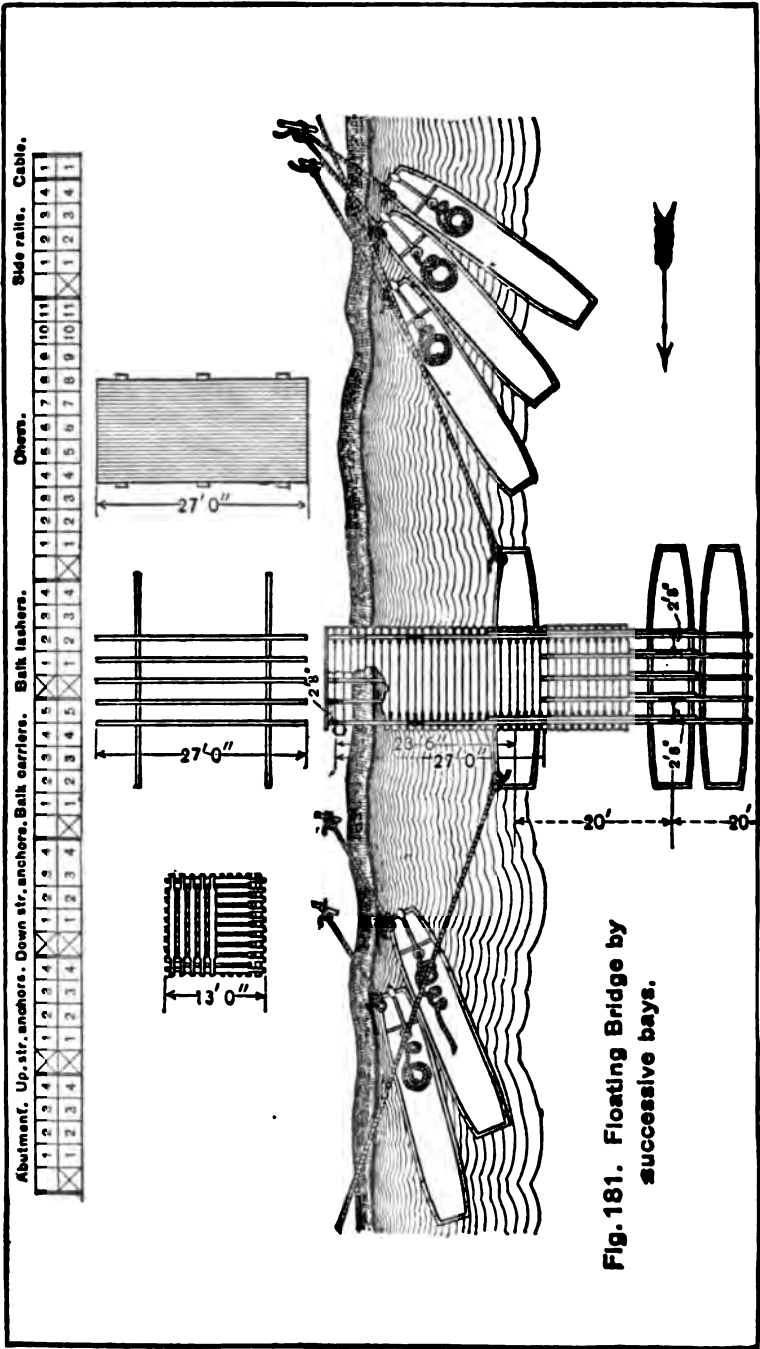
Construction by Parts, Fig. 182. For long bridges the method by successive bays requires materials to be transported considerable distances. These are reduced by constructing the bridge in parts along the shore above. The parts may conveniently consist of three bays. To construct the parts a support is placed close to the shore, and gangways are temporarily laid to it from the shore.

The other two piers are brought up outside the first, and two bays are constructed successively, as above described, except that the outer bay is constructed first and shoved out into the stream by the barks of the inner bay. The floor is omitted from each end of the part to permit fastenings to be made.

The materials for the floor of one bay are loaded on the part thus constructed, which is then pushed off and conducted to the line of upstream anchors, where it casts its anchors and drops down to its place in the bridge. If not manageable, the part may be swung out into the stream on an anchor and then laid.

When the abutment will have been formed and one or more floating bays constructed, the construction of the part, a few planks being omitted from the outer end of the first part is brought into position opposite the shore end and connected to it by constructing one bay of roadway from the material loaded on the part. The other parts are joined in the same way until the opposite shore is reached, when an abutment bay is formed, as before described.

Construction by Rafts, Fig. 183. Rafts differ from parts only in having the roadway completed. Rafts are assembled in the bridge with the outer piers at the ends in contact. The roadway is made continuous by connecting the rafts with planks laid on top of the floor over the outer barks and connected to them



to form a splice. For the heavy train, devices called rack collars are provided for clamping the false balks, Fig. 184.

This method is not often employed, as it requires more piers for the same length of bridge and distributes the support unequally, throwing the roadway into humps when loaded.

97. Draw Spans in Floating Bridges, Fig. 185. To form a draw a raft is introduced into the bridge over the channel of navigation. The attachments of the false balks are adapted to convenient removal and replacement. To open the draw the raft is disconnected from the bridge, the upstream cables slacked off, the raft dropped out of the opening, made fast at one end to the bridge and allowed to swing around. If the current does not suffice, the raft must be moved by hauling on the downstream cables and on a swinging cable laid for the purpose. A wide draw in a strong current may be made of two rafts, one swinging on each end of the bridge.

The draw is closed by hauling the raft around until parallel to the bridge and just below it, and then hauling it into the gap.

98. Care must be taken to provide a free hinging motion between abutment or trestle bays and those next to them. In case of a staunch boat with straight sides, the balks may join on one gunwale, one set only extending across. The hinge should be on the side toward the abutment or trestle, Fig. 186. A saddle sill on the first pier to receive the balks will answer, Figs. 187, 189. In fact, with the exception of the heavy bridge train, balks will usually be supported on saddle gills.

The abutment sill should be placed as low as possible without danger of being washed out. The abutment bay will usually be nearly horizontal when the bridge is light. When the bottom is of mud or sand, and shoals gradually, the sill may be placed about 2 ft. above high-water mark, and the part of the bridge near the shore built at high water by successive bays. As the water falls, the piers ground successively, forming a gentle ramp from the abutment to the floating part of the bridge. Ordinary boats can not be so used, as they will not support the weight when grounded. If the banks are high, ramps must be dug, reaching the proper level for the abutment sill, and long enough to give a practicable slope for the traffic using the bridge, Fig. 189.

A bridge may be laid with extended intervals to cover a greater length by placing the balks as in Fig. 188. Proper allowance must be made in loading.

99. Figs. 190, 191, 192, and 193 illustrate the assembling and placing of the Birago trestle, which forms part of the pontoon bridge equipage. Two methods are shown, one by means of a raft of two boats, and the other by a single boat. In either method the trestle assembled and in a vertical position is brought up to the end of the bridge, the trestle balks placed on the cap and lashed, and the boat or raft then pushed out until the inner ends of the balks fall in place. The trestle legs are then let go, and, when the shoes are on the bottom, the false legs are set and the boat or raft removed.

100. Examples of calculations for floating bridges:

To find length of bay: Piers of flat-bottomed boats with vertical sides, 5 ft. wide, 3 ft. deep, allowed immersion $2\frac{1}{2}$ ft. Mean length of part immersed 16 ft. Weight of boat = 1,000 lbs. Dead load, 80 lbs. per lin. ft.; live load, 560 lbs. per lin. ft.

Maximum displacement, 16 by 5 by $2\frac{1}{2}$ ft. = 200 cu. ft.

Weight of water displaced, 12,500 lbs.

Weight of boat deducted, 1,000 lbs.

Available buoyancy of one boat, 11,500 lbs.

Maximum length of bay = $\frac{11500}{560+80} = 18$ ft. nearly.

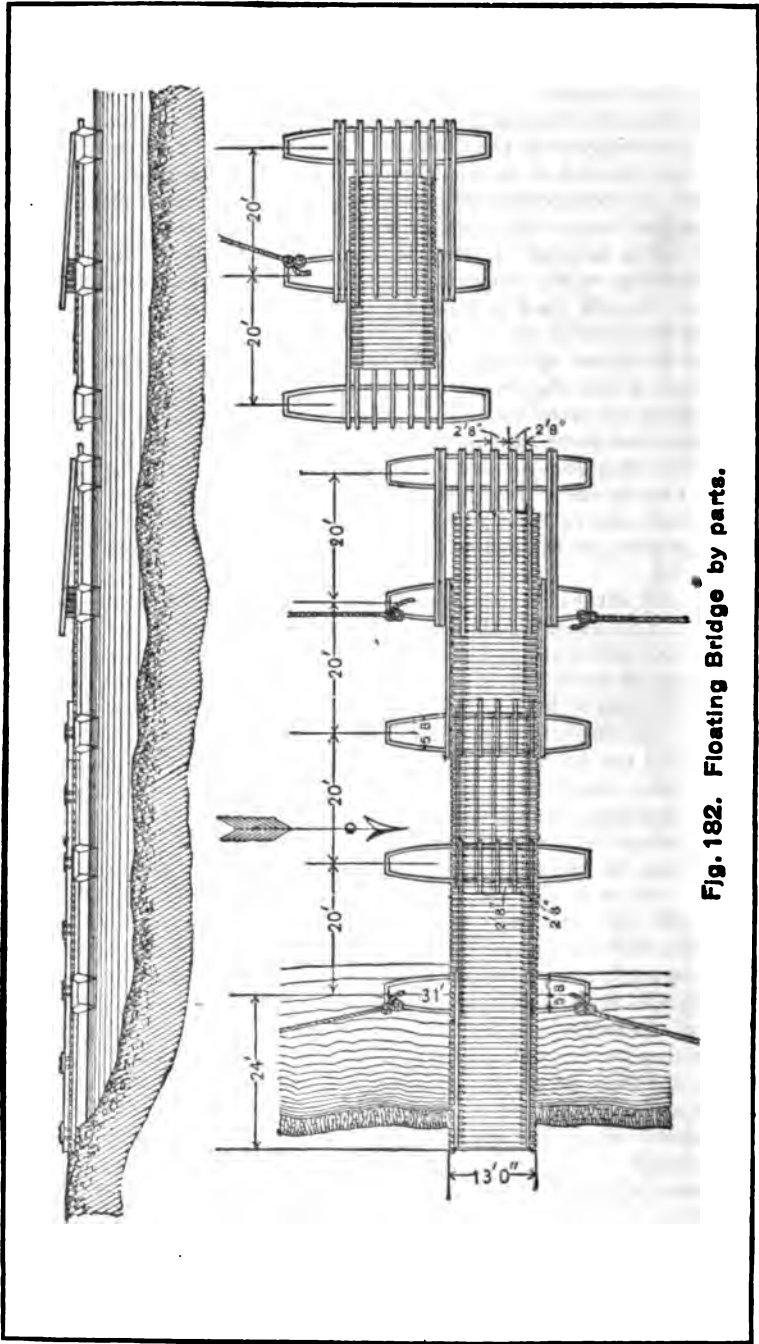


Fig. 182. Floating Bridge by parts.

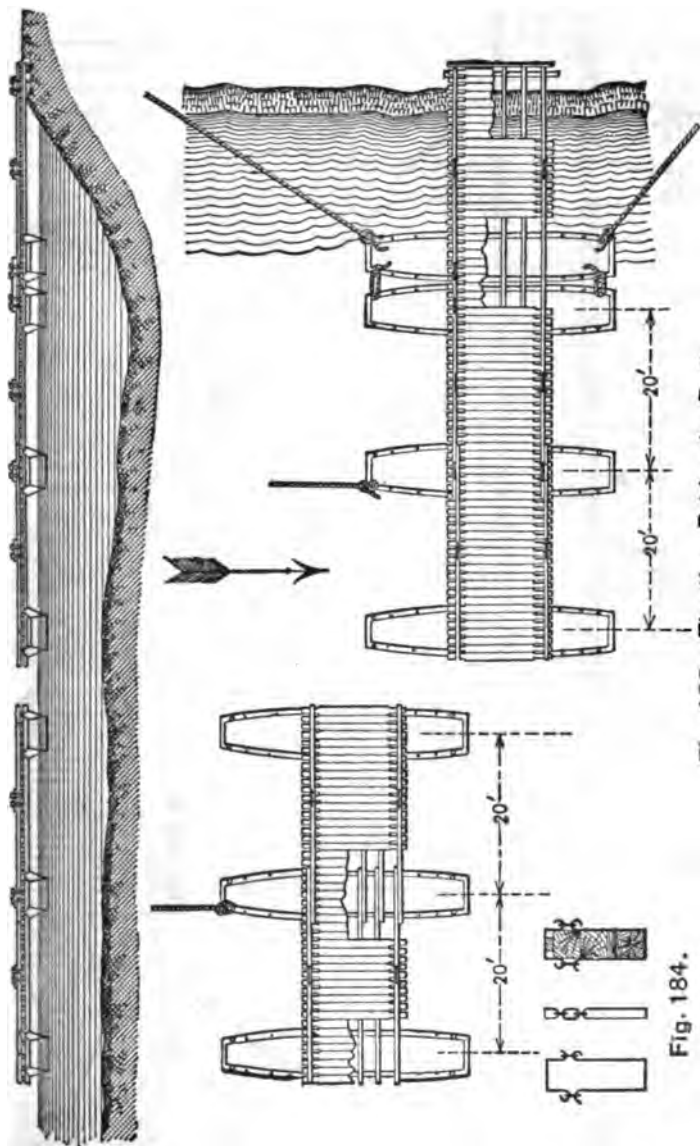
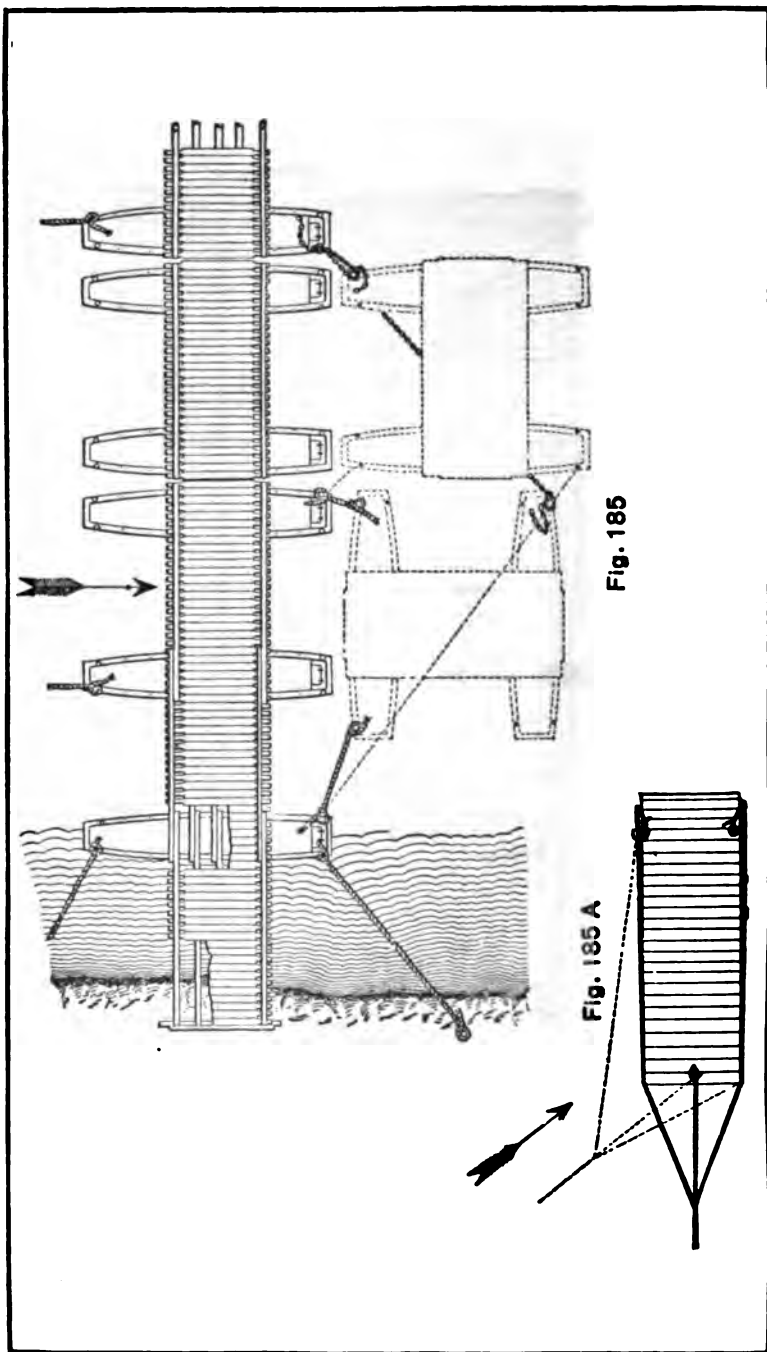


Fig. 183. Floating Bridge by Rafts.

Fig. 184.



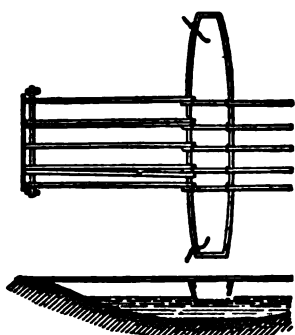


Fig. 186.

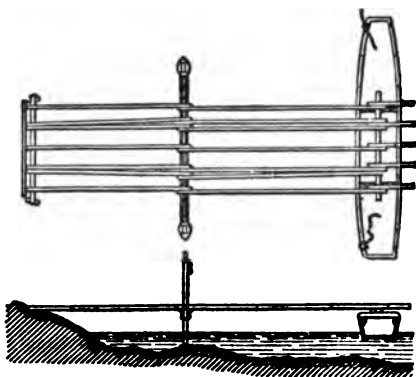


Fig. 187.

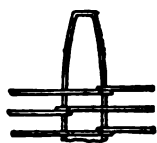


Fig. 188.

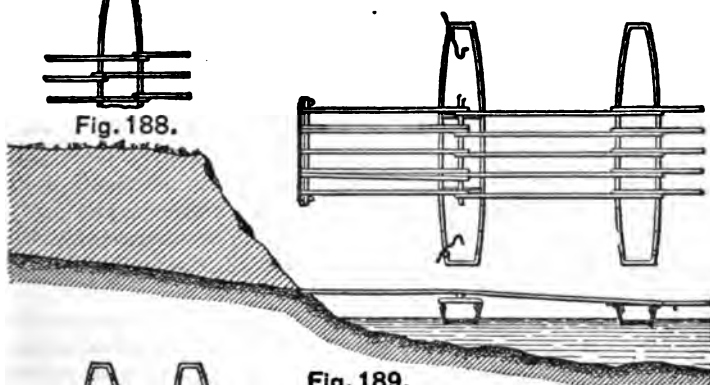


Fig. 189.

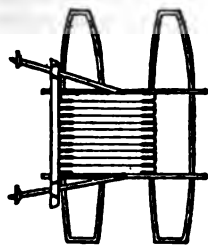


Fig. 190.

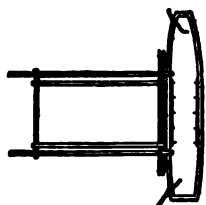


Fig. 191.



Fig. 192.

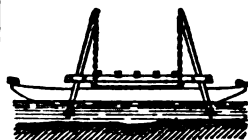


Fig. 193.

To find capacity of bridge with barrel piers: Pier of 70 barrels, buoyancy per barrel, $112\frac{1}{2}$ lbs.; length of bay, 10 ft.; dead load, 105 lbs. per lin. ft.

Required the maximum live load:

Available buoyancy of one pier $112\frac{1}{2} \times 70 \times .8 = 6,300$ lbs. Deduct weight of superstructure, 10×105 lbs. = 1,050 lbs.

Available buoyancy per bay, 5,250 lbs.

Maximum live load per lin. ft., $\frac{5250}{10} = 525$ lbs., or, length of bay for any assumed live load, say 400 lbs. per lin. ft., $\frac{5250}{400} = 13$ ft. +

To find capacity of bridge with raft piers: Piers of 7 logs each; length of logs 45 ft.; mean girth, $4\frac{1}{2}$ ft.; weight of timber, 35 lbs. per cu. ft.; dead load, 150 lbs. per lin. ft. of roadway; intervals between centers of piers, 19 ft.

Required the maximum live load: Volume of log, par. 90, $4.5 \times 4.5 \times 0.08 \times 45 = 72.5$ cu. ft. Volume of 7 such logs, 507.5 cu. ft. Supporting power of pier, $507.5 \times (62.5 - 35) \times 0.8 = 11,160$ lbs. Deduct dead load, $150 \times 19 = 2,850$ lbs. Net buoyancy per bay, 8,310 lbs. Maximum live load for 19-ft. span, $\frac{8310}{19} = 437$ lbs. per lin. ft., or, length of bay for any assumed live load, say 500 lbs. per lin. ft., $\frac{8310}{500} = 16.6$ ft.

101. Precautions in Passing Floating Bridges. Infantry must break step and music cease; distances must be maintained or extended; riders and drivers must dismount and all horses must be led. Halting on a bridge should be avoided. If it is absolutely necessary to halt on a floating bridge, concentrated loads, such as the wheels of wagons and guns, should rest between piers. Interruptions of the column of march and alternations of direction should be made as few as possible. The greatest strains on the bridge occur when part of it is empty and the rest loaded. The column should also be so arranged as to make the alternations among the different classes of loads, as troops, artillery, and trains, as infrequent as possible.

If a bridge begins to sway or oscillate considerably the column must be halted and not allowed to resume its march until the swaying has ceased.

102. Protection of Floating Bridges. The bridge must be kept clear of drift and other floating objects, especial attention being given to the anchor cables. If the objects are not too large or too numerous they may be passed under the bridge by men working with pike poles from the piers and roadway. Large trees may be disposed of in this way by sawing them up into logs of manageable length. Floating objects may be prevented from striking the bridge by a guard upstream, or by a draw span in the bridge, or by a floating boom crossing the stream obliquely.

A guard, if used, is placed about 1,000 yards above the bridge. It is stationed in boats at different points across the stream and is provided with cables, grapnels, anchors, dogs, hammers, saws, etc. The business of this guard is to anchor or tow ashore dangerous drifting bodies.

The floating boom is constructed of trees united by chains and forms a continuous barrier to surface drift. Its general direction should form an angle of about 20° with the current, giving it a length about $2\frac{1}{4}$ times the width of the river. A boom is not a very reliable protection.

A guard should always be posted at a floating bridge with a sentry at each end, and, if the bridge is long, at intermediate points. Sentries turn out the guard whenever the bridge is in danger from any cause. The body of the guard should be stationed near one end of the bridge.

ward will regulate the traffic over the bridge and enforce orders as to way of vehicles desiring to cross in opposite directions. They will see that greater than those prescribed for the particular bridge do not enter. The officer in charge of a floating bridge must frequently inspect the cables to see that they are not chafing and that the anchors do not drag. He will cause the cables to be tightened up when they work loose and see that boats are pumped when they leak or ship water. A suitable depot of spare planks, cordage, etc., should be established on shore near one end of the bridge. The guard will be stationed at the same end.

Thin or rotten, is a serious obstacle to crossing a stream; if thick and strong is a very good bridge itself. Boats used in ice must be protected with ice pieces, especially near the water line at the bows. Heavy ice, rapidly changing, makes a crossing impracticable.

On sound ice, infantry may pass on 3 ins. thickness and cavalry on 4, but at long intervals. Fieldpieces are safe on 6 ins., and ice 10 ins. thick will support a load that an army is likely to have.

Heavy loads may be carried on lesser thicknesses or on unsound ice by distributing the loads in small boats. Infantry may cross on lines of planks. The wheels of wagons may be supported on planks. Wagon boxes may be placed on boards and used as storage for supplies. Animals may be hauled across on platforms.

Low lakes, springs are apt to cause weak spots. A path should be marked by chopping through the ice at frequent intervals to determine its thickness and quality, and when a safe track is found it should be marked on both sides by bushes stuck in holes in the ice.

BARGES.

Several types of barges of simple, quick construction are shown in the illustrations. They are useful in towing and lightering, are easy to manage, and are of great use in rough weather. Fig. 194 shows a barge or flying bridge used at Vicksburg during the civil war for crossing men and wagons over the Tennessean river. It will carry four 6-mule teams and wagons besides infantry and artillery. The cable was attached to an island above and was supported upon posts. The connection with the boat was made by a rope with both ends attached to the end of the cable, passing through snatch blocks at the bow and stern of the boat on the upstream side and around a windlass at the middle. The direction of the boat was controlled by turning the windlass to give the hull the proper position with respect to the current. Leeboards near bow and stern were used to catch the current and increase its force.

In strong currents the scow can not be held broadside to the stream. The boat must then be made across instead of along the deck. To make the boat cross the stream, attach the end of the main cable at the middle of the bow. Stop the cable by a line to the cable 50 to 75 ft. above the scow and lead its ends to tackles on the starboard and port sides. By slacking the port tackle and holding the starboard, a bridle is formed to the right, and by the reverse process a bridle is formed to the left, Fig. 185a. If it be desired to stop quickly, as on landing or unloading floating objects, let both tackles go, and the scow rides at ease on the cable.

Fig. 185b shows a smaller barge than the preceding. It is operated by the force of the current, but by means of a traveler or trolley running on a cable stretched across the stream. It will carry two field pieces, with four horses each, side by side. It differs from the former one in having the flooring on the bottom of the boat instead of being decked. For temporary use, loose planks called floats can be laid on the bottom frames.

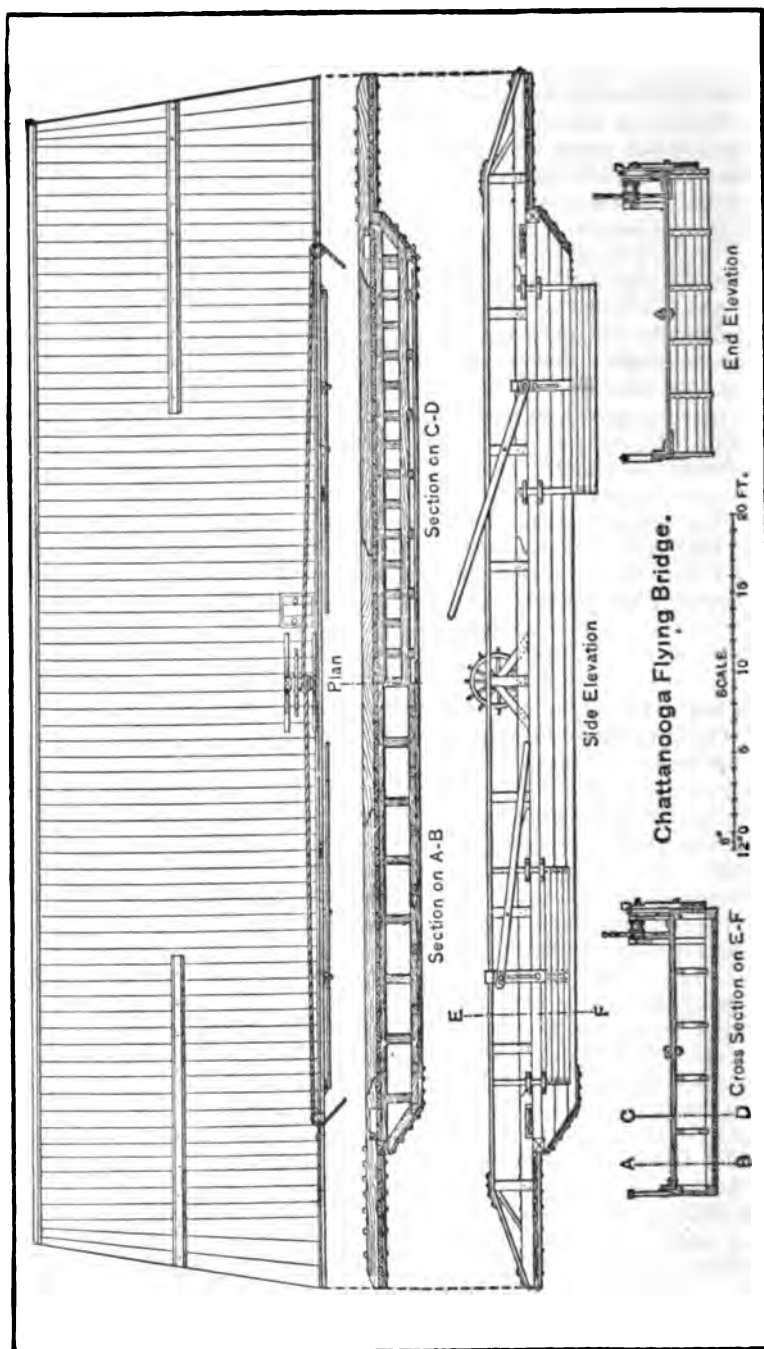


FIG. 194.

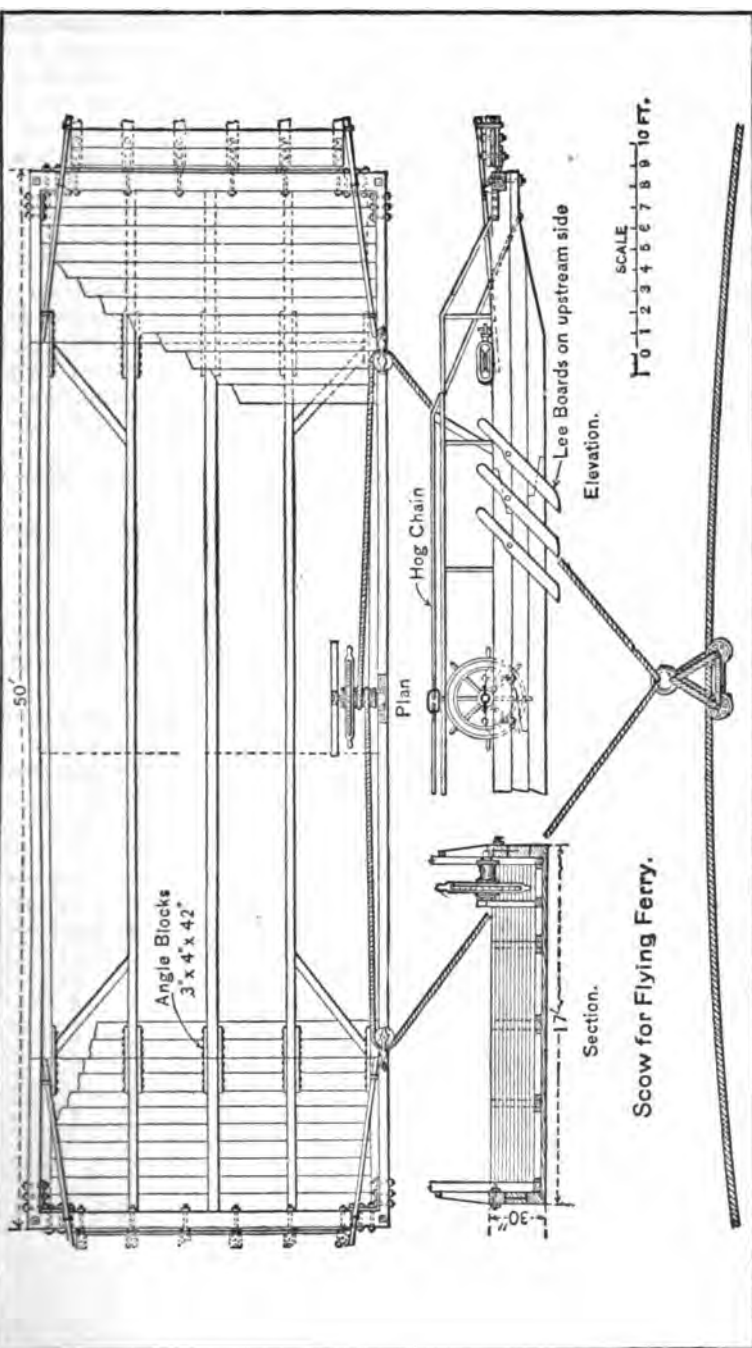


FIG. 195.

Figs. 196 to 199 show a type of barge easily built by ordinary carpenters. It is best built bottom side up. Place skids or ways on or near the ground parallel to each other and about 10 ft. apart, with their upper sides in a plane, horizontal or slightly inclined. Get out the gunwales complete, with timberheads attached, and place them on the ways in their relative positions, but upside down. Build the intermediate frames in their relative positions, also upside down. Plank the bottom, making close joints on the inside and beveling the plank at the edges so as to have a $\frac{1}{8}$ to $\frac{1}{4}$ in. open seam on the outside. This is called outgauge and facilitates calking. Put on the head blocks and the corner irons. Then calk, and stay the gunwales by spiking a few deck planks on. Slide the barge into the water, still bottom side up.

Calking is done with oakum or cotton, which is driven into the seam with the calking tool and calking mallet. Oakum comes in bales and must be picked and spun before use. Picking is the process of loosening up the compressed fibers of the oakum by pulling and beating. The loose oakum is spun by rolling it into a rope or strand usually under one hand across the knee, feeding the material from the loose pile with the other hand. The spun oakum is $\frac{1}{2}$ to 1 in. diam., according to the thickness of planks and size of seams.

Calking cotton comes in a strand wound into balls and is ready for driving.

Seams should be well filled with material driven hard.

In recalking, the old work should be horsed up, which is done by driving it in with the large tool and a sledge.

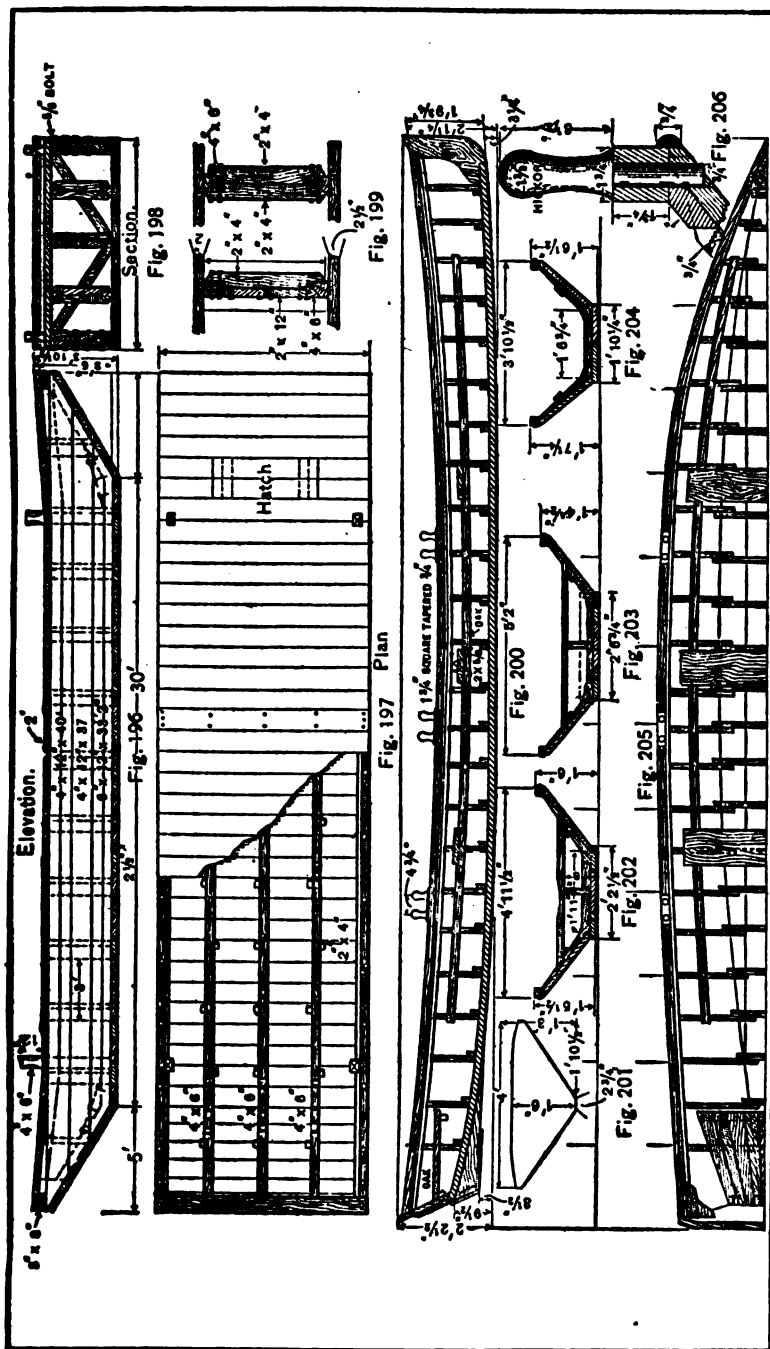
The seam is finished by a paying with paint or pitch.

Certain marine animals destroy calking by eating the oakum. This may be prevented by laying a strand of hard-twisted rope, called ratline, on the top of the seam, secured to the planks by staples. If the seams are wide, wide strips of wood may be used.

To turn the barge over lay her along the bank. Fasten two lines to the outside gunwales, pass them under the boat, and lead well upstream. Shovel earth on the outer edge of the bottom till it is partially submerged, then slack off the upper line, allowing the upper end to swing out into the stream until the barge lies with one end to the bank instead of the side. Hold fast both lines and the current will right the boat. A depth of water of somewhat more than half the width of the boat and a current of $1\frac{1}{2}$ miles per hour are necessary to the success of this operation. It is most conveniently done at the shore, but may be done in the stream or in slack water if a tug or other means be available to set a strain on the lines.

104. Bill of materials:

- Gunwales, 2 pieces, 4 by 12 ins. by 40 ft.
- Gunwales, 2 pieces, 4 by 12 ins. by 37 ft.
- Gunwales, 2 pieces, 6 by 12 ins. by 33 ft. 2 ins.
- Head blocks, 2 pieces, 8 by 8 ins. by 10 ft.
- Knees, 6 pieces, 4 by 6 ins. by 3 ft.
- Struts, 42 pieces, 2 by 4 ins. by 2 ft. 10 ins.
- Braces, 4 pieces, 2 by 4 ins. by 7 ft.
- Timberheads, 4 pieces, 4 by 6 ins. by 4 ft., oak.
- Deck stringers, 3 pieces, 4 by 6 ins. by 40 ft.
- Floor stringers, 3 pieces, 4 by 6 ins. by 33 ft.
- Rake stringers, 6 pieces, 4 by 6 ins. by 6 ft.
- Bottom planks, 45 pieces, $2\frac{1}{2}$ by 12 ins. by 10 ft.
- Deck planks, 43 pieces, 2 by 12 ins. by 10 ft.
- Driftbolts, 20, $\frac{3}{8}$ in. by 3 ft. 10 ins.
- Driftbolts, 4, $\frac{5}{8}$ in. by 2 ft. 6 ins.
- Driftbolts, 4, $\frac{5}{8}$ by 12 ins.



Design for a large Barge.

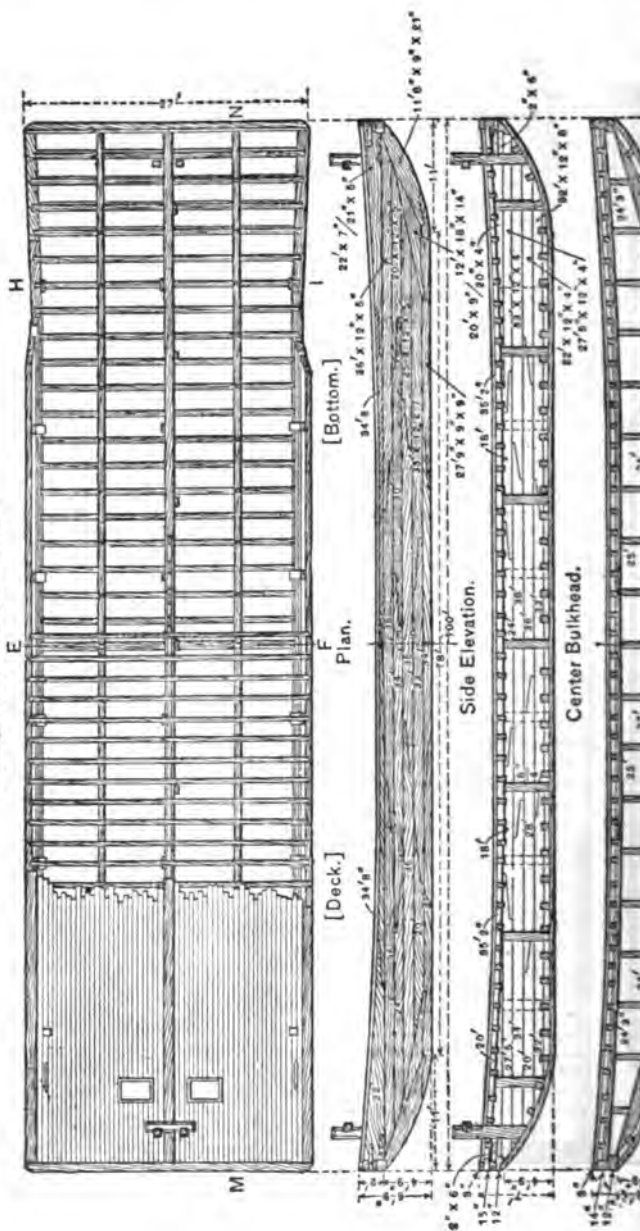


FIG. 207.

Driftbolts, 4, $\frac{5}{8}$ by 8 ins.
Carriage bolts, 20, $\frac{5}{8}$ by 9 ins.
Carriage bolts, 12, $\frac{5}{8}$ by 12 ins.
Spikes, 6-in., 150 lbs.
Spikes, 5-in., 250 lbs.
Corner bands, 4, $\frac{3}{4}$ by 4 ins. by 4 ft.
Countersunk-head spikes, 40, $\frac{1}{4}$ by 4 ins.
Oakum, 30 lbs.
Pitch or seam paint, 5 gals.

Figs. 200 to 206 show a skiff easily constructed and valuable for a number of purposes. It may be 18 to 26 ft. long, with parts proportioned as in the drawings.

Figs. 207 and 208 show a design for a 100-ft. barge. This barge is of greater dimensions than any of the preceding and somewhat more elaborate in construction. It was designed specially for carrying stone and would be useful in heavy water transportation generally. The construction is shown in detail and to scale, and is within the limits of ordinary rough carpentry. It should be built on ways, top side up, and planked from below.

CANTILEVERS.

105. A cantilever is a projecting or overhanging support, transmitting all of its load to one of its ends.

The cantilever principle may be utilized in military field bridges for short spans and moderate loads. Some typical forms are shown in Figs. 209 to 212. The main points to be observed are that the maximum pressure on the abutment is greater than the heaviest load, live and dead, on the projecting part of the cantilever; that any settlement of the abutment causes a greater disturbance of the bridge; and that the weight or resistance of the anchor multiplied by its distance from the abutment must be greater than the greatest concentrated load multiplied by the length of the projecting part, or the greatest uniform load multiplied by half that length.

If the anchorage is beneath the beams as in Figs. 209 and 210, the roadway may be laid directly upon them. If the anchorage is above the beams, separate road bearers must be provided resting on transoms carried by the cantilevers, and high enough at the inner end to pass over the anchorage; or the cantilevers may be at the sides only, as in Figs. 211 and 212.

Bear in mind that the safe load of a cantilever, concentrated or uniform, is $\frac{1}{4}$ of the corresponding safe load of the same beam supported at both ends with the same span, and that the deflection of the cantilever under any load less than the safe load will be 10 to 16 times greater than the deflection of the same beam under the same load when supported at both ends. Much greater vibrations must be expected than in girder or truss bridges.

If the two cantilevers meet at the middle of the bridge they must be fastened together. This doubles the safe concentrated load for the bridge, making it equal to one-half the safe uniform load of both cantilevers instead of one, or one-half the safe concentrated load on a beam of the size and length of one cantilever supported at both ends.

When separate road bearers are used, the transoms are better arranged so that there will be a middle bay resting one end on each cantilever, Figs. 211 and 212.

If the cantilevers do not meet, the gap is filled by a girder or truss supported by the ends of the cantilevers. This arrangement may be useful in case timbers too short to span the gap have to be used. To get the maximum strength



Fig. 209

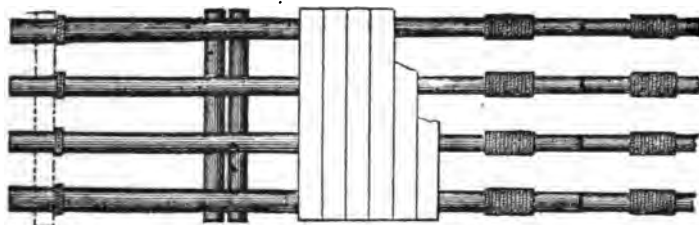


Fig. 210

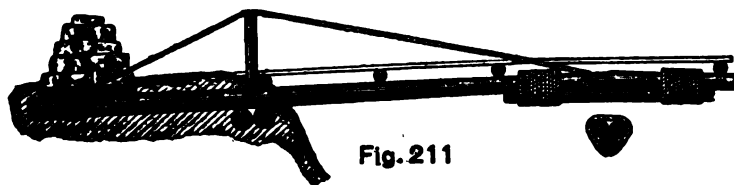


Fig. 211

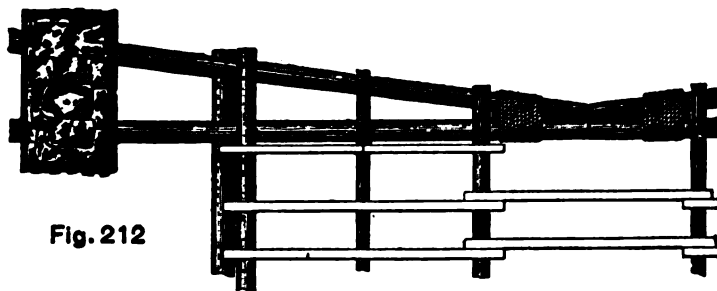


Fig. 212

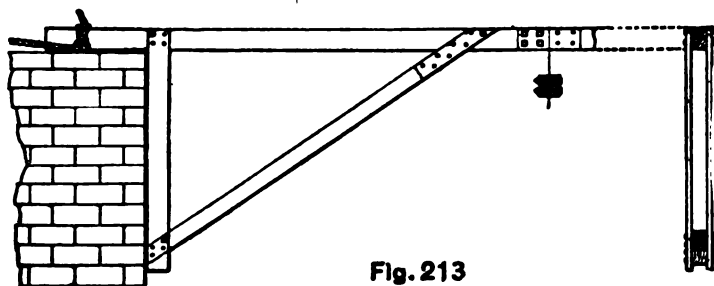


Fig. 213

for timbers of a given size, the cantilevers should be $\frac{1}{7}$ and the girder the span.

106. When objects of sufficient mass and stability are available, the balance is not necessary and the cantilevers take the form of brackets. If the opposite brackets meet and are well connected the structure is of the spar-bridge type, and there is no overturning moment on the abutments which will sustain the weight of the cantilevers themselves. Working parties before they are connected will permit the construction of a bridge. The two brackets on the same side should be connected by a cross member.

107. The horizontal and inclined members of a bracket are single members built up as may be most convenient. They are connected by fish plates. The vertical member is best made in two pieces. The parts should be assembled on the ground and bored for the bolts. The fish plates are used as the strut. Place the strut between the verticals and connect them at the ends by a single bolt. Launch the three over the edge of the wall or lower until the tops of the ties are at the proper height, and make fish plates an auxiliary piece bolted or lashed to the ties on the outside, leaving them free to rotate about the bolt at its foot. Then raise the end of the beam to the top of the strut and connect by one bolt. Launch out the beam until its end falls in place between the ties. Then set all the bolts and tighten up.

TRUSS BRIDGES.

108. A truss is a compound beam the parts of which are so disposed as to form one or more triangles in the same plane. The triangle is the only figure which is rigid. Four given sides may be formed into an infinite number of quadrilaterals, and similarly for a greater number of sides. It is the resistance of the joints to bending which prevents the distortion of any figure, or its complete collapse. But a given three sides can be formed into a triangle and only one; hence, if the joints do not separate, no side of the triangle can leave the position in which it is placed for another in the same plane.

Except in some of the simplest forms, the parts of a truss are subjected to tension and compression only, transverse strains being practically eliminated. For this reason parts can be combined into a truss of much greater strength and supporting power than a possible single beam.

109. The simplest form is the trussed beam, in which a part of the load is taken up at an intermediate point and transferred directly to the ends. See Figs. 218 and 219.

In the king-post truss, Fig. 214, the upright member is in tension and carries the gross load on the truss, or $\frac{1}{4}$ the gross load on the bridge. On the other hand, the inclined struts, or $\frac{1}{8}$ the gross load on the bridge, is transmitted in compression to the ends of the beam at B and C. See Table XXV.

In the queen-post truss, Fig. 215, two points of the beam are supported, forming three equal bays. The counter braces in the middle panel are frequently omitted, and the resulting combination of two triangles and a parallelogram is not rigid and is not a true truss. As half of the bridge is loaded the beam tends to rise, permitting the loaded half to sink, the beam taking the form of an S. If the beam be stiff enough to withstand this double bending the bridge will be safe, but no stronger than if the beam were divided into three bays instead of three. In this form each post carries $\frac{1}{6}$ of the total load, and live, on the bridge, all of which is transmitted down the corresponding posts.

110. The stresses in king and queen post trusses depend upon the load and the inclination of the struts. The load may be stated in tons or lbs.

ridge. The inclination of the struts is represented by the ratio between height of posts and the length of bay.

As the stresses on rods and struts there is a tension on the beam. It is in the same way as the other stresses, and sufficient cross section must be given to the beam to withstand it, in addition to that figured for the transverse stress. In the queen-post truss the upper horizontal member or straining beam takes this same stress, but in compression.

Stresses on members of king and queen post trusses in terms of total height of bridge, for various inclinations of struts:

TABLE XXV.

| Height of post to length of bay. | King-post. | | Queen-post. | |
|----------------------------------|-----------------------|----------------------|-----------------------|----------------------|
| | Stress on each strut. | Stress on each beam. | Stress on each strut. | Stress on each beam. |
| 1. | 2. | 3. | 4. | 5. |
| Range for king post truss. | 0.05 | 2.50 | 3.33 | 3.33 |
| | 0.10 | 1.25 | 1.66 | 1.66 |
| | 0.15 | 0.84 | 1.12 | 1.11 |
| | 0.20 | 0.64 | 0.85 | 0.83 |
| | 0.25 | 0.52 | 0.69 | 0.66 |
| | 0.30 | 0.42 | 0.58 | 0.55 |
| | 0.40 | 0.34 | 0.45 | 0.42 |
| Range for queen post truss. | 0.50 | 0.28 | 0.37 | 0.33 |
| | 0.60 | 0.25 | 0.32 | 0.28 |
| | 0.70 | 0.22 | 0.29 | 0.24 |
| | 0.80 | 0.20 | 0.27 | 0.21 |
| | 0.90 | 0.19 | 0.25 | 0.18 |
| | 1.00 | 0.18 | 0.23 | 0.17 |

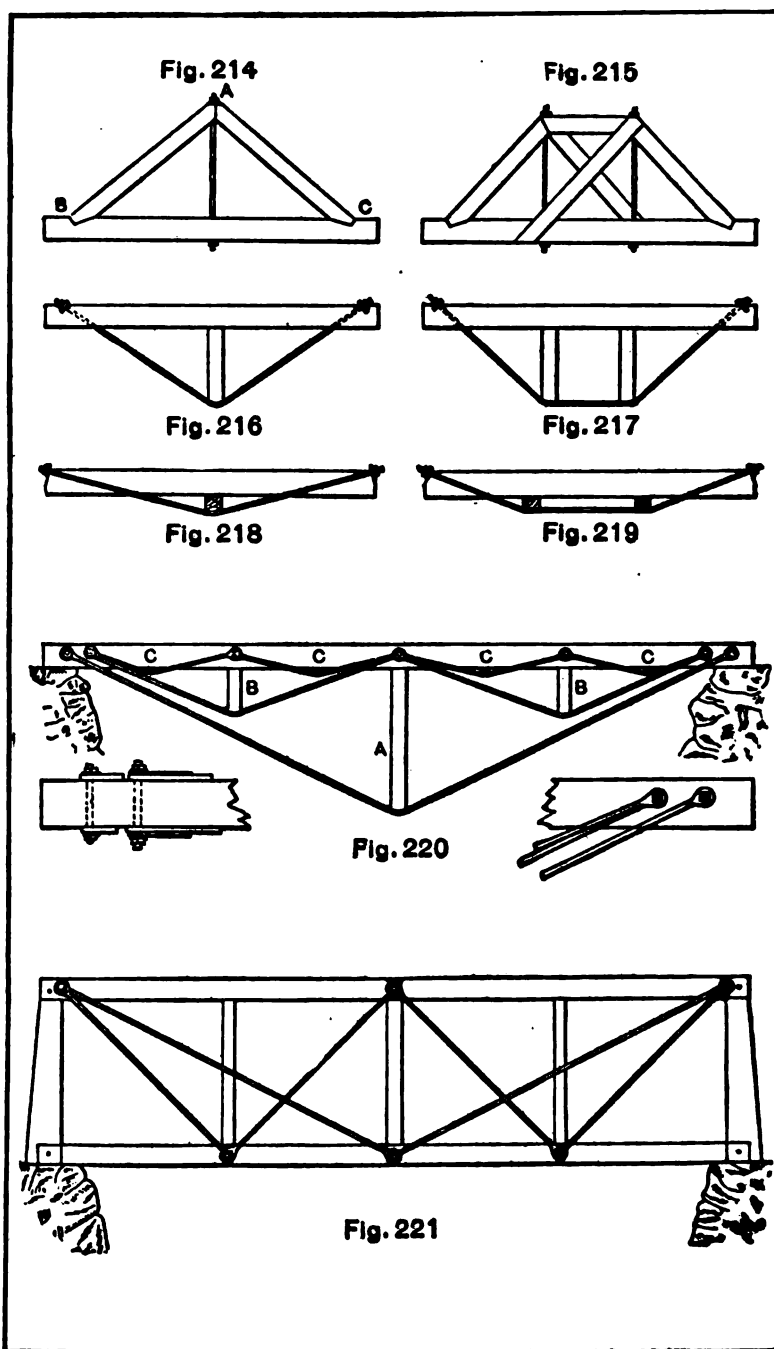
Sizes and tensile strengths of iron rods, standard threaded, with assumed limit of 30,000 lbs. per sq. in., strength computed for area inside threads:

TABLE XXVI.

| | Tensile strength. | Diameter of rod. | Tensile strength. | Diameter of rod. | Tensile strength. |
|--|-------------------|------------------|-------------------|------------------|-------------------|
| | <i>Pounds.</i> | <i>Inches.</i> | <i>Pounds.</i> | <i>Inches.</i> | <i>Pounds.</i> |
| | 294 | 1 1/4 | 23,857 | 2 1/4 | 85,119 |
| | 1,178 | 1 1/2 | 29,453 | 2 1/2 | 95,426 |
| | 2,650 | 1 3/4 | 35,638 | 2 3/4 | 106,322 |
| | 4,712 | 1 7/8 | 42,412 | 2 7/8 | 117,809 |
| | 7,363 | 2 | 48,774 | 3 | 129,886 |
| | 10,603 | 2 1/8 | 57,727 | 3 1/8 | 142,552 |
| | 14,432 | 2 1/4 | 66,269 | 3 1/4 | 155,803 |
| | 18,850 | 2 1/2 | 75,399 | 3 1/2 | 169,646 |

To design such a truss, determine the span and gross load per lin. ft., then find the total load on the bridge. Take from Table XXVI the size of rod corresponding to the load. This size gives a factor of safety of 4 for king post and 6 for queen-post. If timber is used, divide the load by the tensile strength of the wood, Table II, column 4. The result will be the required cross section in ins. of each post, with the same factors of safety as before.

To determine the size of struts, divide the length of post by length of bay, then the quotient enter Table XXV and take out the factor from column 2 for king-post or column 4 for queen-post truss. Multiply the load by the factor. The result will be the maximum stress on the strut. With the length of strut enter Table IV and take out the size corresponding to a load next above the result found. Sticks of this size will give a factor of safety of 5.



Multiply the load by the factor in column 3 or 5, Table XXV, corresponding to the inclination of the strut already found, and the result will be the stress (tension) on the beams. Divide this stress by the tensile strength of the material, Table II, column 4. The result, multiplied by 5, will be the sq. in. of cross section to be allowed for this stress, with a factor of safety of 5. Unless the posts are short, this strain may be neglected.

Consider $\frac{1}{4}$ the load applied uniformly to $\frac{1}{2}$ the beam for king-post and $\frac{1}{6}$ the load to $\frac{1}{3}$ the beam for queen-post, and determine, as in paragraph 13, the size of beam of sufficient transverse strength. Add the cross section found above for the tensile strain. The sum will be the entire cross section of the beam.

114. Example. To design a queen-post truss for a span of 45 ft., a dead load of 150 lbs., and a live load of 850 lbs. per lin. ft., or 1,000 lbs. gross. Total load, 45,000 lbs. Assume height of posts at 10 ft.

Size of rod, Table XXVI, $1\frac{1}{8}$ ins. diam.; or, if wood be used, then—

Size of posts (yellow pine), $\frac{45,000}{9,000}$, Table II, column 4 = 5 sq. in. area of cross section. A larger post with excess of strength would be used to give better joints.

Size of Struts. Height of the post, 10 ft. \div by length of bay, 15 ft., = 0.67. From Table XXV, column 4, opposite 0.70 in column 1, take factor 0.22. 45,000 multiplied by 0.22 = 9,900 lbs. = maximum stress on each strut. Length of struts = $\sqrt{15^2 + 10^2}$ = 18 ft. In Table IV, opposite 18 ft. in column 1, the load 10,182 lbs. corresponds to a post 7 by 7 ins., which is the minimum size for struts.

Longitudinal Stress on Beam. Multiply 45,000 by the factor 0.24 in column 5, Table XXV, corresponding to 0.70 in column 1. The result, 10,800 lbs., is the longitudinal stress on the beam. This divided by the tensile strength, 9,000, gives 1.2 sq. ins., which multiplied by a f. s. of 5 gives 6 sq. ins. to be added to the cross section of beam on account of this stress.

For Transverse Strength of Beam. One-sixth of load, 7,500 lbs. uniformly distributed over a clear span of 15 ft., breadth $\frac{3}{4}$ of depth, requires, by Formula A, paragraph 13, a beam 6.2 by 9.3 ins. = 57.66 sq. ins. Add the area to resist tensile strain on the beam, 6 sq. ins., as found above, and there results a total cross-sectional area of 63.66 sq. ins., or, in practice, a beam 7 by 10 ins.

The compression on the upper chord or straining beam is the same as the tension on the lower beam, 10,800 lbs. Its length is 15 ft., and from Table IV a 7 by 7 in. stick is found to be amply strong.

Each truss will then consist of a beam of 45 ft. clear span, not less than 7 by 10 ins. in cross section; two struts 18 ft. long, not less than 7 by 7 ins. in cross section; one straining beam, 15 ft. long, not less than 7 by 7 ins. in cross section; and two rods $1\frac{1}{8}$ ins. diam., or wooden posts of not less than 5 sq. ins. in cross section. In framed wooden structures it is desirable to have one dimension the same in all the pieces that meet at a point, and a considerable excess of material in the structure often results. In this case it will be convenient to take the beam 7 by 10 ins., struts 7 by 7 ins., straining beams 7 by 7 ins., and posts, if of wood, double, each half 3 by 7 ins.; or else beams 6 by 11 ins., struts 6 by 8 ins., straining beams 6 by 8 ins., and posts 3 by 7 ins., double.

Fig. 232 shows arrangement of a 30 ft. queen-post truss for a highway bridge, having about the dimensions above computed.

115. For a light railroad bridge of 30 ft. span and 10 ft. high, the following dimensions may be used for a king-post truss: Chord 10 by 18 ins., struts 10 by 10 ins., and rods $2\frac{3}{4}$ ins. diam. or better, two rods at each post, each $1\frac{1}{8}$ ins. diam., and several inches apart transversely of the bridge.

116. Inverted Forms. Both king and queen post trusses may be inverted, Figs. 216 and 217. All stresses of tension and compression are then reversed. The principles of design are not affected by the change, but wood must be used for posts, and iron is much better for the inclined members and for the lower chords of queen-post trusses. The rods are best made double, one on each side of the beam, and fastened to bolts through the beam at the middle point of its depth. Three or more inverted trusses may be placed beneath a single-track roadway. Of the erect type but two can be used. Double-track bridges are often built with three erect trusses.

117. Erection of Small Trusses. With a single beam long enough to span the opening the truss may be built in place. The same may be done with a spliced beam, provided it is stiff enough to support its own weight plus that of the men and materials necessary to complete the truss.

The simplest way to get a beam across an opening is to attach a rope to one end and pass it over to the other side; then launch the beam out and haul the front end up with the rope, Fig. 222.

Two methods, in which the further bank need not be occupied, are illustrated in Figs. 223 to 225. In one case an auxiliary beam, and wheels and axle from an ordinary wagon or cart, are used as indicated to place the beam on its abutments. No support between banks is needed. In the other case, two spars are stepped on the bottom as indicated, and their tops lashed together to form a fork, into which the beam is placed. The beam is then pushed across, the spars revolving on their lower ends. The spars must be long enough to reach the higher of the two banks.

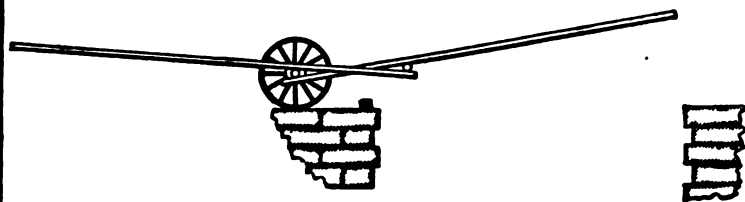
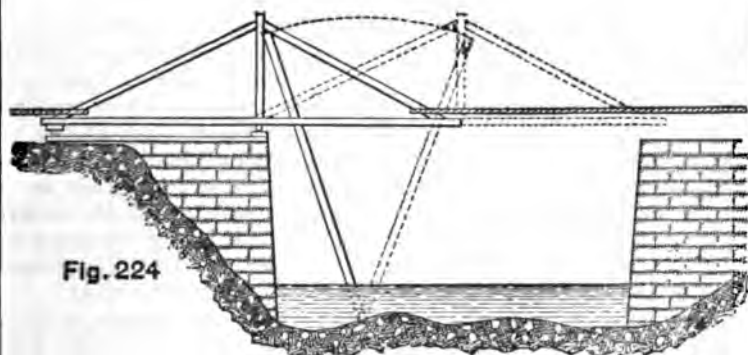
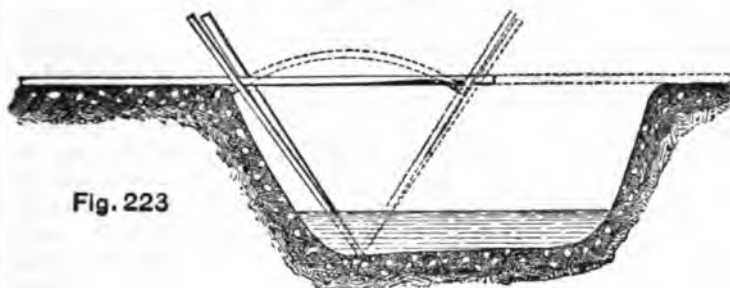
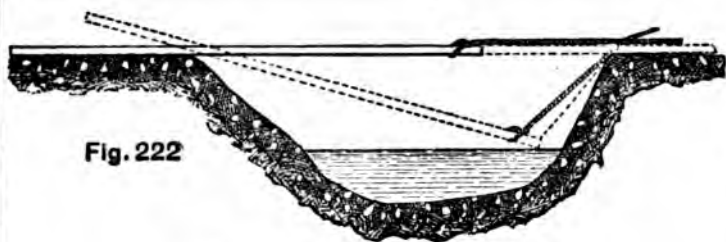
Complete trusses may be sprung across by similar means. The application of the second method to an erect king-post is illustrated in Fig. 224. Inverted trusses may be kept upside down until on the abutments and then turned over, provided the chord has sufficient lateral stiffness.

118. Completion of the Bridge. The trusses being in position, vertical and parallel to each other and secured, lay floor joists from truss to truss 18 to 30 ins., c. to c., and on them lay a double course of diagonal planking, the upper course at right angles to the lower. Or, lay floor transoms at intervals of about 5 ft., and on them stringers, the latter carrying a single course of cross plank, or two diagonal courses crossed. Planks should be at least $1\frac{1}{2}$ ins. thick; if less, lay more courses.

Assuming a live load of 100 lbs. per sq. ft. for highway bridges, 3 by 10 in. floor joists spaced 30 ins., c. to c., will be safe up to 12 ft. clear width between trusses, or 3 by 12 ins. up to 16 ft. For the same load, floor transoms 5 by 10 ins., 5 ft. apart, will be safe up to 13 ft. clear distance between trusses, or 6 by 12 ins. up to 17 ft. On these transoms stringers should be 4 by 6 ins., spaced 18 ins., c. to c., for single, and 30 ins., c. to c., for double planking.

If the beam of the truss has not been designed to take transverse strains, the floor transoms must be placed at the panel points on the beam, or hung below them, as in Fig. 232. Such a transom must be strong enough to take the load on one span of the bridge. The stringers, spaced as above, must be increased in size for their increased length. If a queen-post truss, it will be necessary to introduce the diagonal counter braces which may be smaller than the struts. One must run through and the other be made in two pieces so that both counters may be in the same plane, Fig. 232.

119. The Fink truss, Figs. 220 and 221, is a superposition of king-post trusses. It is practicable in the inverted form only, but may be elevated on posts as shown in Fig. 221. In this case all the posts are best made of equal length to



form the supports of the roadway. A primary post supports the middle, which becomes a central support for two secondary trusses, and the two points supported by the secondary posts BB, become in turn supports for four tertiary trusses CC, and so on. The stresses in the primary truss are worked out as in paragraph 113. The stresses for secondary and tertiary trusses are worked out in the same way, taking $\frac{1}{2}$ the load on the bridge for the secondaries and $\frac{1}{4}$ for the tertiaries. The details of fastenings are shown in Fig. 220.

120. The Howe Truss (Fig. 226). This useful form consists of two parallel chords, usually continuous built-up beams, divided by posts in tension into equal panels, each of which has diagonals in compression. The upper chord is in compression, the lower in tension. Each chord is made up of three or more parallel timbers of uniform size, with lengths adapted to properly distribute the splices. The timbers are separated by the diameter of the largest rods so that the later may pass through the spaces. The main braces are one less in number than the pieces in the chord and abut, top and bottom, against angle blocks of metal or hard wood, triangular in section and extending entirely across the chord. Against these blocks the counter braces, one less in number than the main braces, also abut. The vertical rods of each post are equal in number to the main braces. The relative positions of members at the panel points are shown in Figs. 227 and 228. In permanent structures a cast-iron angle block is generally used. The ends of struts abut squarely against the ends of the block and are kept in place by tightening up the nuts on the rods. Iron angle blocks are formed to hold the braces in place even if slightly loose. When wooden blocks are used, cleats should be nailed on or dowels inserted in the ends of the braces for the same purpose. The timbers of the Howe truss are all square-sawn and have no mortises or tenons.

121. The stresses in a chord of a Howe truss are a maximum at the center and when the truss is loaded throughout its length. This maximum stress = the total load on the bridge \times span in ft. \div 16 times height of truss in ft.

The chord stress in the end panels will not exceed $\frac{1}{4}$ the load on the bridge unless the length of the panel is greater than its height, which should never be the case. Between these lower and higher limits the chord stresses vary, but not by equal increments. The change is more rapid near the ends and less so toward the middle. For wooden trusses, convenience in framing requires that all chord pieces have one dimension the same, and it is not customary to make more than one change in the aggregate chord sections. This is done by bolting extra timbers on each side of the lower chord over its middle third.

122. The stresses in the braces are greatest at the ends and least in the middle. The maximum stress in the end brace is $\frac{1}{4}$ the load on the bridge divided by the length of the post and multiplied by the length of the brace. It will not exceed $\frac{1}{3}$ of the total load on the bridge, unless the panel height is less than the panel length, which should never be permitted. The maximum stress in the middle brace will not exceed $\frac{1}{2}$ the total load on one panel of the bridge, divided by the length of the post and multiplied by the length of the brace. Between these limits the stresses in the braces vary uniformly.

123. The stresses in verticals are greatest at the ends and least in the middle. The maximum stress in an end rod will not exceed $\frac{1}{4}$ of the total load on the bridge. The maximum stress in a middle rod will not exceed $\frac{3}{4}$ of the total load on one panel. Between these limits the stresses in verticals vary uniformly.

The stresses in counter braces, commonly called counters, depend upon the ratio of live to dead load per unit of length, and the distribution of the live load on the bridge. With the live load uniformly distributed over the entire length, there are no stresses in the counters. For the bridge partially loaded, the maximum stresses in counters are in the center panels and diminish rapidly toward the ends.

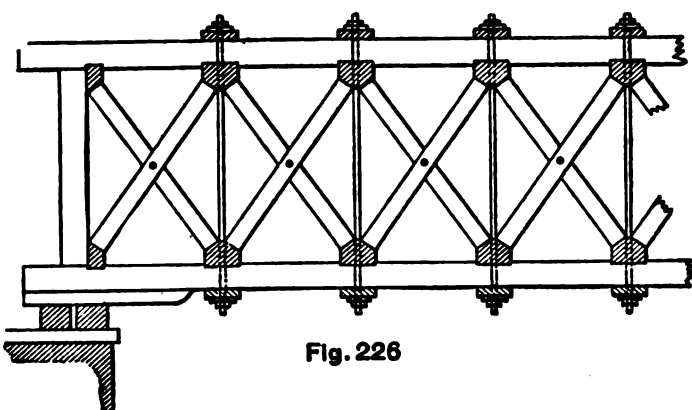


Fig. 226

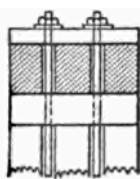


Fig. 227

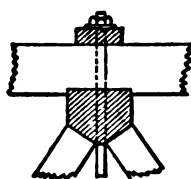


Fig. 228

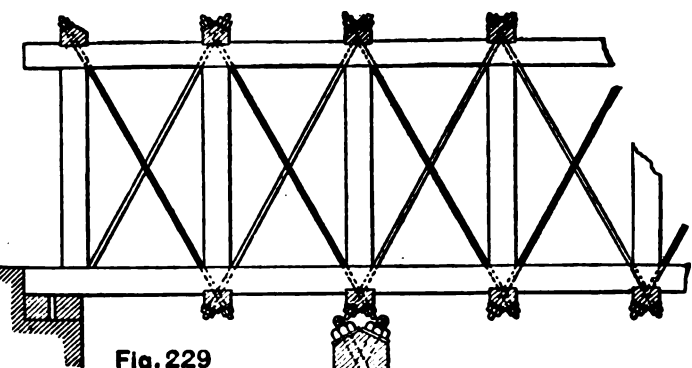


Fig. 229

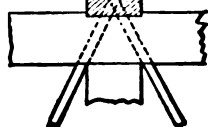


Fig. 230

The assumption that the maximum uniformly distributed live load will not exceed the maximum uniformly distributed dead load per unit of length is safe for military truss bridges of 75 to 100 ft., or 6, 8, and 10 panels in length. Under this assumption, the 6-panel truss needs no counters.

The 8-panel truss requires counters in the panels adjacent to the center of $\frac{1}{4}$ the strength of the main diagonals in the same panels. No other counters are required.

The 10-panel truss requires counters in the same panels of $\frac{1}{2}$ the strength of the main diagonals. No other counters are required.

For a ratio of live to dead loads of 2 to 1 the 6-panel truss requires counters in the middle panels of $\frac{1}{2}$ the strength of the corresponding main diagonals; the 8-panel truss requires counters in the same panels of $\frac{2}{3}$ the strength of the main diagonals, and the 10-panel truss requires counters in the same panels of equal strength with the main diagonals.

For ratios greater than 2 to 1, and especially for rapidly moving live loads, the center counters should be equal to the main diagonals, and counters of half the size should be placed in the next panels toward the ends.

These rules apply principally to trusses in which the inclined members are of metal and for which the areas can be conveniently varied. In the Howe truss, convenience of framing has made it the usual practice to put counters of uniform size in all panels.

124. Dimensions for each of two Howe trusses of a single-track railroad bridge. Authority, Trautwine. Working stress of timber, 800 lbs. per sq. in. Working stress of iron, 12,500 lbs. per sq. in. The middle third of each lower chord must be reinforced by $\frac{1}{6}$ of the cross section given in the table.

TABLE XXVII.

| Clear span. | Rise. | Number of panels. | Upper chord. | | Lower chord. | | End brace. | | Center brace. | | Counter. | | End rod. | | Center rod. | |
|-------------|------------|-------------------|--------------|-------------|--------------|-------------|------------|-------------|---------------|-------------|----------|-------------|----------|-------------|-------------|-------------|
| | | | No. pcs. | Size. | No. pcs. | Size. | No. pcs. | Size. | No. pcs. | Size. | No. pcs. | Size. | No. pcs. | Size. | No. pcs. | Size. |
| <i>Ft.</i> | <i>Ft.</i> | | | <i>Ins.</i> | | <i>Ins.</i> | | <i>Ins.</i> | | <i>Ins.</i> | | <i>Ins.</i> | | <i>Ins.</i> | | <i>Ins.</i> |
| 25 | 6 | 8 | 3 | 5 x 6 | 3 | 5 x 12 | 2 | 5 x 8 | 2 | 5 x 6 | 1 | 5 x 6 | 2 | 1 3/4 | 2 | 1 1/2 |
| 50 | 9 | 9 | 3 | 6 x 9 | 3 | 6 x 14 | 2 | 6 x 9 | 2 | 5 x 8 | 1 | 5 x 8 | 2 | 2 | 2 | 1 3/4 |
| 75 | 12 | 10 | 3 | 6 x 12 | 3 | 6 x 14 | 2 | 6 x 11 | 2 | 6 x 8 | 1 | 6 x 8 | 2 | 2 3/8 | 2 | 1 1/2 |
| 100 | 15 | 11 | 3 | 6 x 14 | 3 | 6 x 16 | 2 | 8 x 12 | 2 | 6 x 10 | 1 | 6 x 10 | 2 | 2 3/4 | 2 | 1 3/4 |
| 125 | 18 | 12 | 4 | 6 x 14 | 4 | 6 x 16 | 2 | 9 x 14 | 2 | 6 x 12 | 1 | 6 x 12 | 2 | 3 1/4 | 2 | 2 |
| 150 | 21 | 13 | 4 | 8 x 14 | 4 | 8 x 18 | 3 | 8 x 14 | 3 | 6 x 10 | 2 | 6 x 10 | 3 | 3 | 3 | 1 1/2 |
| 175 | 24 | 14 | 4 | 10 x 16 | 4 | 10 x 20 | 3 | 8 x 15 | 3 | 8 x 10 | 2 | 8 x 10 | 3 | 3 1/4 | 3 | 1 3/4 |
| 200 | 27 | 15 | 4 | 12 x 16 | 4 | 12 x 20 | 3 | 9 x 16 | 3 | 8 x 14 | 2 | 8 x 14 | 3 | 3 3/4 | 3 | 2 |

The above dimensions will be safe for a double-track highway bridge of the same span, or for a single-track highway bridge of $1\frac{1}{2}$ times the span, the number of panels being increased one-half. Spans greater than 150 ft. should not be attempted in the field unless the difficulty of obtaining an intermediate support is very great.

The end posts and the upper chords and counters of the end panels of the Howe truss are not necessary and are frequently omitted. Fig. 231 shows the details of a 50-ft. truss so designed.

125. The safety of existing bridges may be tested by the rules for maximum stresses given above. Thus:

To determine the safe load on a bridge of two trusses of the dimensions given in the table for 100-ft. span.

Maximum chord stress = load \times span \div 16 times height of truss.

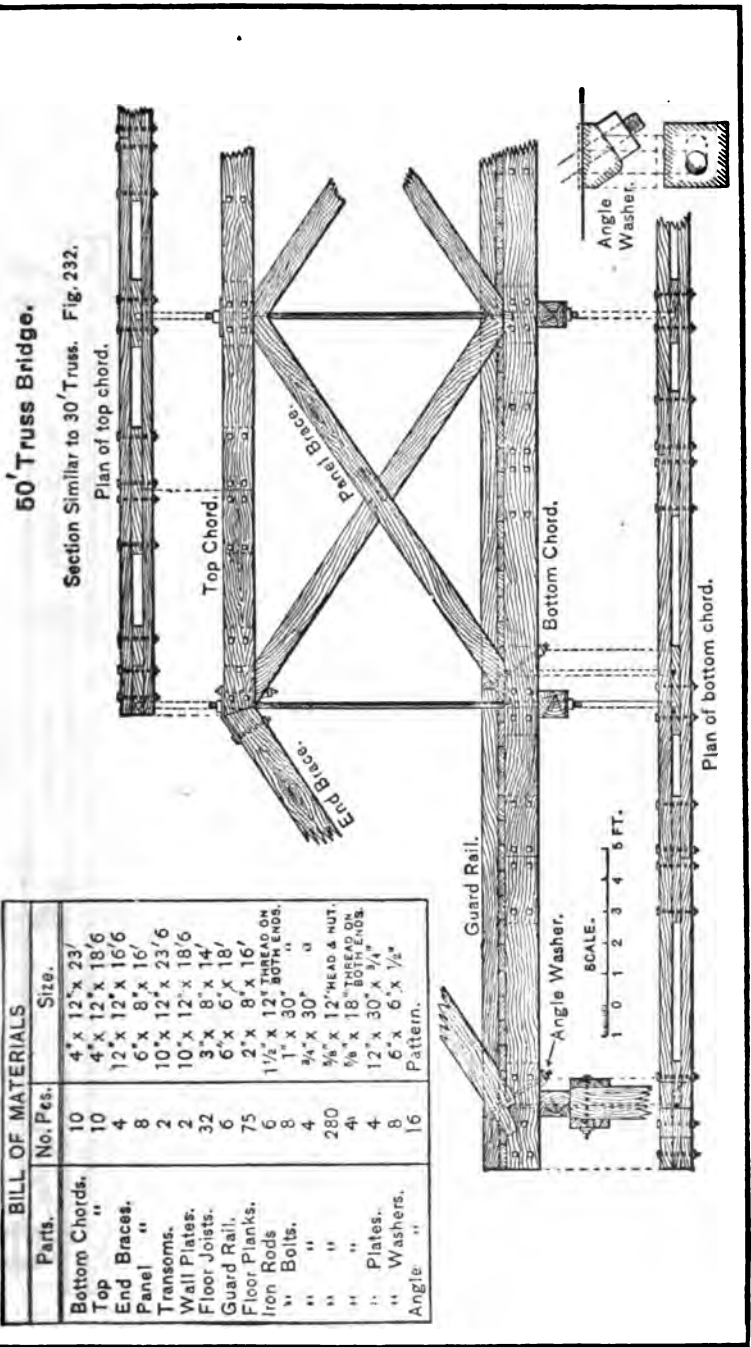


FIG. 231.

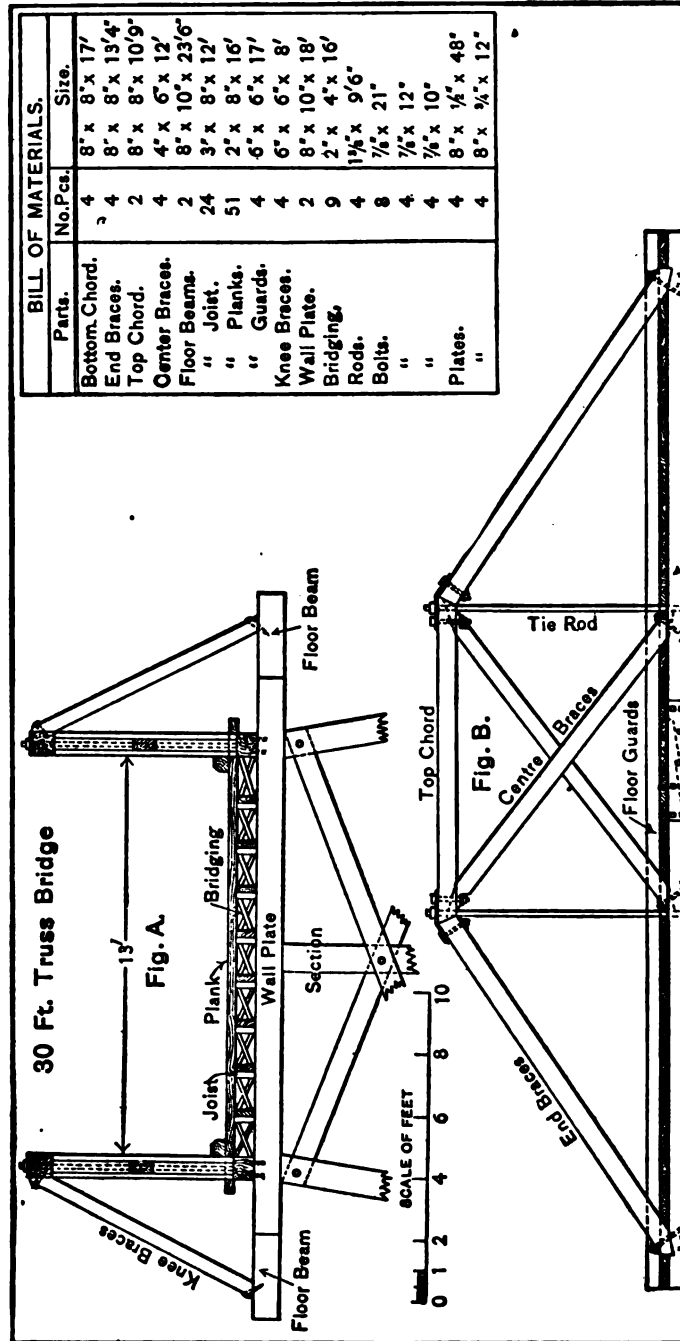


FIG. 223.

section of chord at middle = 288 sq. ins. At 800 lbs. per sq. in. the total g stress = 115 tons. Hence, $115 = \frac{\text{load} \times 100}{16 \times 15}$, or load = 276 tons, which by the span gives 2.76 tons load, live and dead, per lin. ft.

End brace, two 8×12 , or two 10×10 , $17\frac{1}{2}$ ft. long, working load, V, 35 tons, divided by length of post, 15 ft. = $2.33 \times$ length of brace, = 44 tons $\times 4$ = 176 tons total load, or 1.76 tons per lin. ft.

The verticals: The area of two rods $2\frac{3}{4}$ ins. diam. = 11.88 sq. ins. At 800 lbs. per sq. in., the total working stress = 74 tons $\times 4$ = 296 tons total load, or 2.96 tons per lin. ft. For a middle post, area of two rods $2\frac{3}{4}$ ins. diam. = 3.53 sq. ins. at 12,500 lbs. = 22.1 tons $\div \frac{3}{4}$ = 28 tons panel load, or 3.08 tons per lin. ft.

The value 1.76 tons for the end brace is the least and is the safe load of the truss. Compute the dead load per ft. and subtract it from 1.76 tons; the remainder will be the safe live load. In this case the safe live load is about 1.2 tons per lin. ft.

Pratt Truss (Figs. 229 and 230). The form and the distribution of materials are the same as the Howe. The disposition of materials in web members is reversed, the verticals being of wood and in compression and the diagonals of metal and in tension. The arrangement at panel points is modified accordingly. The chords are the same as for a Howe truss of the same span, and load.

The Pratt truss is frequently modified by giving its end panels the same form as in the 50-ft. truss, Fig. 231, the end posts, upper chords, and rods of the end panels being suppressed and a brace run from the end of the lower chord to the top of the upper one.

With Howe and Pratt trusses care must be taken not to introduce unnecessary strain by setting up the rods too tight. The upper chord should be made longer than the lower one for each 100 ft. of span; the excess to be divided equally among the panels. This prevents the upper chord becoming shorter than the lower when it is compressed and the lower one stretched under load. The effect when the bridge is light is to give the truss a slight upward camber.

Erection of Trusses. A scaffolding or false work must first be erected to hold the parts of the truss until they are assembled. The false work is ordinarily some form of trestle construction. The bottom chords are laid with their ends in place on the abutments, and leveled. The top chords are then raised on temporary supports, footing on the false work, to stand a few inches above their final ones, so that the web members may be slipped into place. The top chord is then lowered until its weight comes on the braces in the Howe, or the posts in the Pratt truss. The nuts are then turned, working uniformly along the entire truss, until the camber is developed and the middle of the truss rises, leaving its weight wholly on the abutments.

Completion of the Truss. The floor transoms are placed at the panel points. In the Howe truss they may hang by the rods below the lower chord, or rest on the upper chord if a deck bridge.

In the Pratt truss the transoms may be doubled, resting on the bottom or top chords on either side of the panel point and as near together as possible. The system is completed by stringers and planking, as in paragraph 118.

Truss bridges require lateral bracing to withstand wind pressure and vibration. It consists of a horizontal truss connecting the top chords and another connecting the bottom chords. The truss between the loaded ends should be proportioned by the foregoing rules for a load of 300 lbs.

per lin. ft. if a highway or 450 lbs. if a railroad bridge. The truss between the other chords should be proportioned for a load of 150 lbs. per lin. ft. for all bridges.

The lateral trusses may be of the Howe or Pratt type. If the Howe, the braces must be in the same plane, one solid and the other framed into it, like the counters of the queen-post truss. The ends of the braces must be held in place by cleats spiked or bolted to the chords, or if iron angle blocks be used, by flanges cast on their bottom edges.

If the Pratt type be adopted, the ends of the posts must be similarly secured. For the loaded chords the road transoms serve as posts of a Pratt truss, which may be completed by adding the iron ties and without boring the chords. The ends of the transoms are shaped as angle blocks.

Generally the Pratt type will be best for the loaded chords and the Howe for the other lateral.

Unless the main truss is higher than the required head room on the bridge, the roadway must be placed on the upper chords, or else the trusses must be steadied by braces from the floor transoms, made longer and extending outside the trusses for that purpose; Fig. 232.

SPECIAL FORMS.

130. Figs. 233 to 235 show a double bowstring truss which can be constructed of common boards and nails, or even with boards and pins. It does not possess advantages warranting its adoption when materials for standard trusses can be procured with equal convenience.

Lay out the truss by drawing on the ground two arcs of circles corresponding to the inner surfaces of the chords with a radius $2\frac{1}{2}$ times the length of the truss. Along these arcs drive stakes, around which bend the boards and nail securely to each other but not to the stakes. The boards are 1 by 12 ins.; the upper chord has 5 layers, the lower 6. The boards break butts and are nailed about every 4 ins. with 10d. nails; bolts or 6-in. spikes should also be driven through the lower chord at intervals of 6 to 12 ins. Bolts $\frac{1}{2}$ in. diam., set up tight, are the best.

The truss is divided into 10 panels by posts of 2 by 12 in. plank and tie-rods of $1\frac{1}{4}$ in. iron at each panel point. Main and counter braces of 2 by 12 in. plank are used in all the panels except at the ends, which are filled solid for about $4\frac{1}{2}$ ft. The chords are nailed to the blocks and the whole bolted through from top to bottom with 5 or 6 bolts at each end.

It will be found advantageous to cover the boards with a mixture of pitch and tar before they are nailed together to increase friction between them.

TABLE XXVIII.

131. Bill of materials required for two double bowstring plank trusses for each foot of span:

Lumber, 1 by 12 ins., 30 ft. B. M.
 Lumber, 2 by 12 ins., 12 ft. B. M.
 Lumber, 2 by 8 ins., 9 ft. B. M.
 Nails, 10d., 2.5 lbs.
 Nails, 20d., 1 lb.
 Spikes, 6 in., 1 lb.
 Iron rods, $1\frac{1}{4}$ ins. diam., 10 lbs.
 Iron bolts, $\frac{1}{2}$ by 6 ins., 3 lbs.

above quantities are approximate only, but suffice as a basis of estimate. Trusses built as described will carry a live load of 500 lbs. per ft. on a span of 100 ft. and proportionally more for shorter spans.

Roadway can best be carried on the top chord. The transoms should be supported by the posts. The middle one and the two on each side of it may rest on the chord. Those at $\frac{3}{10}$, $\frac{4}{10}$, and $\frac{5}{10}$ of the span from the middle side should be blocked up from the chord, 0.005, 0.010, and 0.018 of the span, respectively. This arrangement gives a camber of $\frac{1}{8}$ of the span. With roadway on top, the trusses must be cross-braced with 2-in. plank as indicated in Fig. 235.

It is necessary to keep the trusses up, as for example to get above high ground the roadway may be carried between or below them. If between, bolt transoms to the posts and extend them beyond the trusses far enough to receive steady braces, Fig. 232. The end transoms may rest on the abutments and the next ones to them on the lower chord. Stretch a line between the ends of the two which rest on the chord, raise this line at the middle post the amount of camber desired, and mark on each intermediate post the point where the line crosses it, which will be the top of the transom on that post.

Supporting the ends of the truss on posts or piers, the roadway may be carried at or below the bottom. The middle transom should be held firmly to the bottom of the chord. The next one on each side will be bolted to the chord through a block 0.006 of the span in thickness. These three transoms should extend beyond the trusses to receive steady braces. The third, and fourth transoms on each side of the middle will be hung below the chord by bolts or lashings, with clear intervals between bottom of chord and top of transom of 0.016, 0.038, and 0.062 of the span, respectively; this arrangement gives a camber of $\frac{1}{8}$ of the span.

Three floor systems described are shown in Fig. 234. If dimension timbers are not to be had for transoms, they may be made by nailing inch boards to the posts. If such timbers are used they must be set with the boards on edge and braced against lateral bending.

The lattice truss, Fig. 236, may be built entirely of 2 or 3 in. planks and pins. The latter will not be used if bolts can be had.

Disposition of material is clearly shown in the drawing. If there are pairs of planks the pairs must be in the position of braces and the single planks of counter braces. The planks are 2 or 3 ins. thick and 9 to 12 ins. wide, depending on the span. They are placed about $2\frac{1}{2}$ ft. apart, measured along the span. Two to four pins or bolts, depending on width of plank, are placed at each intersection. The chords are formed of planks or timbers, with an aggregate section determined by the general rule for trusses, paragraph 121, and pinned or bolted to the upper and lower edges of the lattice as indicated. If the roadway be on the lower chord, its upper edge must be so placed that a transom can pass through the lattice and rest on it.

Lateral bracing may be as described for other trusses, paragraph 129, and is very important, as a chief defect of the lattice truss is its lack of lateral resistance.

The lattice truss may be used for highway bridges up to 150 ft. span with a camber of $\frac{1}{8}$ of the span.

SUSPENSION BRIDGES.

In this type of bridge the roadway is hung to two or more cables and from bank to bank, with their ends attached to fastenings called anchorages. The cables are allowed to sag; the greater the sag the less the

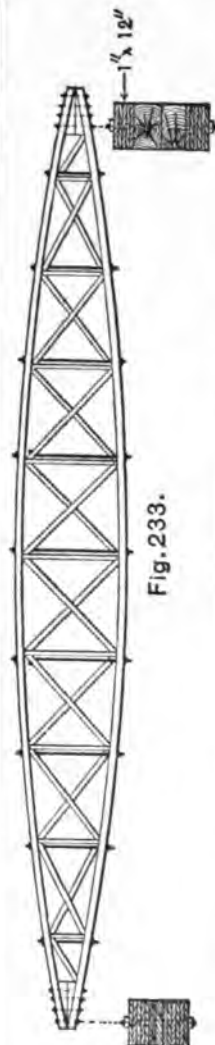


Fig. 233.

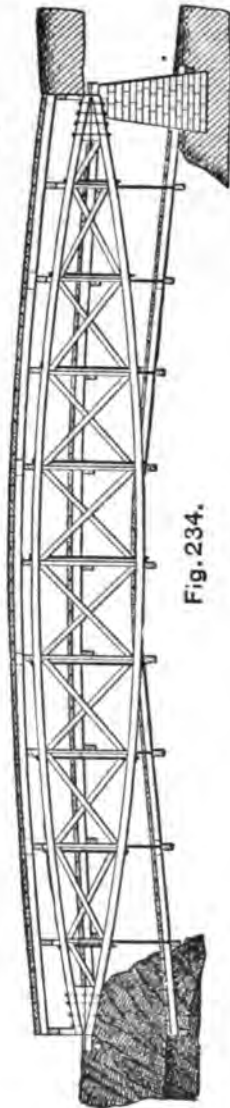


Fig. 234.



tension, but the more the vibration. A sag of $\frac{1}{4}$ to $\frac{1}{12}$ the span is the best for field bridges. This fraction will be referred to as the ratio of deflection. The cables are usually passed over elevated supports called towers, to keep their lowest point above the roadway. The parts of the cables between the towers and the anchorages are called backstays. The connection between cables and roadway is by rods called suspenders, ties, or slings. The latter designation will be used. There is a sling at each end of each transom.

The principal features of a suspension bridge are indicated in Fig. 237.

134. In military field operations the suspension bridge is best adapted to light loads or long spans or the two combined. The construction of a suspension bridge for heavy traffic will usually be impracticable with field equipment. When materials for non-floating bridge must be carried with a column, the suspension type is best because it is lightest for a given capacity and its materials are divisible into small portions for transportation.

135. Data for calculating main cables for suspension bridges; authority, Trautwine:

TABLE XXIX

| Deflection in parts of the chord. | Length of main cable between towers in parts of chord. | Tension on all the main cables at either tower in parts of entire suspended weight of bridge and its load. | Tension at the center of all main cables in parts of entire weight. | Angle of direction of cables at piers = A = angle made by cable with horizontal. | Radius = deflection multiplied by— |
|-----------------------------------|--|--|---|--|------------------------------------|
| 1. | 2. | 3. | 4. | 5. | 6. |
| ☆☆ | 1.012 | 1.94 | 1.870 | 14° 55' | 28.625 |
| ☆☆ | 1.013 | 1.82 | 1.740 | 15° 57' | 25.000 |
| ☆☆ | 1.016 | 1.70 | 1.620 | 17° 6' | 21.625 |
| ☆☆ | 1.018 | 1.57 | 1.490 | 18° 33' | 18.500 |
| ☆☆ | 1.022 | 1.46 | 1.370 | 19° 59' | 15.625 |
| ☆☆ | 1.026 | 1.35 | 1.250 | 21° 48' | 13.000 |
| ☆☆ | 1.033 | 1.23 | 1.120 | 23° 58' | 10.625 |
| ☆☆ | 1.041 | 1.12 | 1.000 | 26° 33' | 8.500 |
| ☆☆ | 1.053 | 1.01 | 0.881 | 29° 45' | 6.625 |
| ☆☆ | 1.070 | 0.90 | 0.750 | 33° 41' | 5.000 |
| ☆☆ | 1.098 | 0.80 | 0.625 | 38° 40' | 3.625 |

The above table is based on the assumption that the curve of the main cables is a parabola, which is not strictly correct, though near enough for all practical purposes. For ratios of deflection in the table, the curve is practically the segment of a circle, the radius of which may be taken from the 6th column of the table.

136. Having the span and total live load on the bridge, to determine the total area of the cables, compute the dead load as in paragraph 4; add the live load to it and multiply the sum by the factor in column 3 of the table corresponding to the adopted ratio of deflection. Multiply this result by the factor of safety. The product will be the ultimate strength which all the cables together should have. This divided by the number of cables to be used gives the ultimate tensile strength of each one, and its size and composition may be determined from Table XXX. A lower factor of safety is admissible for wire than for most other materials, as it is very homogeneous in structure.

137. Composition of main cables of suspension bridges; factor of safety $2\frac{1}{2}$; live load 200 lbs. per lin. ft.; dead load 100 lbs. per lin. ft.; ratio of deflection $\frac{1}{4}$:

TABLE XXX.

| Span. | No. of strands of ¾-in. wire rope in main cables. | | Number of parallel steel wires in main cables. | | | | | | |
|--------------|---|--------|--|--------|--------|--------|---------|---------|---------|
| | Iron. | Steel. | No. 6. | No. 7. | No. 8. | No. 9. | No. 10. | No. 11. | No. 12. |
| <i>Feet.</i> | | | | | | | | | |
| 45 | 4 | 2 | 14 | 16 | 20 | 24 | 28 | 34 | 42 |
| 60 | 4 | 2 | 18 | 22 | 24 | 30 | 36 | 46 | 56 |
| 75 | 4 | 2 | 22 | 26 | 32 | 38 | 44 | 56 | 70 |
| 90 | 4 | 2 | 28 | 32 | 38 | 44 | 54 | 70 | 84 |
| 105 | 4 | 4 | 32 | 38 | 44 | 52 | 64 | 80 | 98 |
| 120 | 6 | 4 | 36 | 42 | 50 | 60 | 72 | 90 | 112 |
| 135 | 6 | 4 | 40 | 48 | 56 | 68 | 80 | 100 | 122 |
| 150 | 8 | 4 | 46 | 54 | 62 | 74 | 90 | 112 | 140 |
| 165 | 8 | 4 | 50 | 58 | 68 | 82 | 100 | 124 | 154 |
| 180 | 8 | 4 | 54 | 64 | 76 | 90 | 110 | 136 | 170 |
| 195 | 10 | 6 | 58 | 70 | 80 | 98 | 118 | 146 | 182 |

For any other ratio of deflection less than $\frac{1}{10}$, increase the tabular numbers by $\frac{1}{10}$ for each unit of the denominator above 7. For other loads, greater or less, increase or decrease the tabular numbers pro rata.

Example: How many No. 8 steel wires are required for the main cables of a bridge of 105 ft. span, ratio of deflection $\frac{1}{10}$, and a gross load, live and dead, of 600 lbs. per lin. ft.?

From the table, 105 ft. span, No. 8 steel wire, take 44. Add for change of ratio of deflection from $\frac{1}{10}$ to $\frac{1}{100}$, $\frac{1}{10}$, or $\frac{1}{2}$, making $58\frac{3}{4}$. For change from 300 to 600 lbs. load multiply by 2, making $117\frac{1}{2}$. Take next even number above, 118, which is the number required. If two cables are used, make each of 59 wires.

138. Tension on Backstays. If the cables are free to move on the tops of the towers, the tension on the backstays will always be the same as that on the cables. In this case the towers are stationary and should be massive.

If the cables are fixed to the tops of the towers, the tension on the backstays will be equal to, less than, or greater than the tension on the cable, accordingly as the slope of the backstay at the top of the tower is equal to, less than, or greater than the slope of the cable. It is usually best to make these slopes equal.

139. Stresses on the Towers. When the slopes of cables and backstays are equal, the stresses on each tower will be vertical and equal to the entire weight and load of the clear span.

When these slopes are unequal the pressure on the towers will be oblique. If the slope of the backstay is less than that of the cable, the tower will tend to revolve or slide toward the anchorage, and the pressure on each tower will be less than the weight and load of clear span. If the slope of the backstay is greater than that of the cable, the towers will tend to revolve or slide toward each other, and the stresses in each will be greater than the weight and load of clear span.

When possible, the horizontal distance from the foot of a tower to the corresponding backstay should be $\frac{1}{4}$ of the clear span or greater. In such case the tension on the backstay will not exceed that on the cable, and the pressure on the tower will not exceed the total weight and load of the clear span.

140. Making Cables. Three-quarter in. wire rope weighing 92 lbs. to the 100 ft. can usually be carried in lengths sufficient for practicable suspension spans, and will be the most convenient form.

If ordinary wire must be used, cables can be made by stretching wires, seven

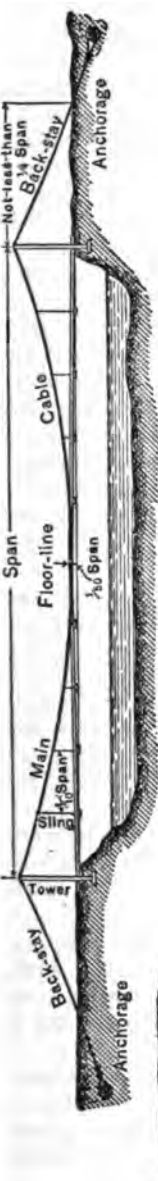


Fig. 237



Fig. 238

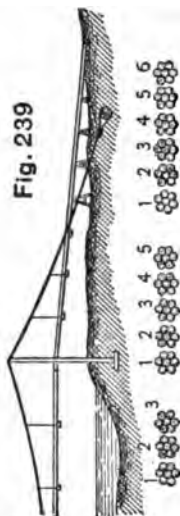


Fig. 239

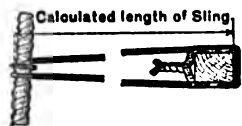


Fig. 240

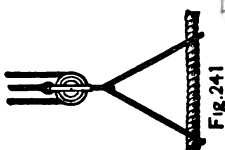


Fig. 241

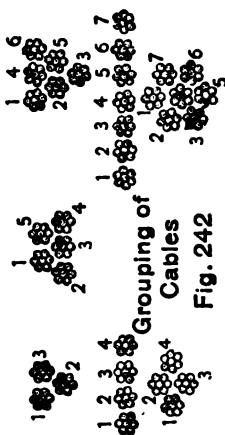


Fig. 242

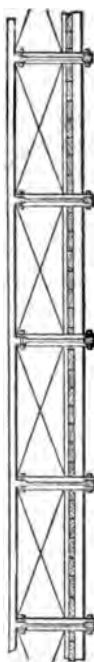


Fig. 244

Fig. 240

is a good number, close together and under equal strain, and binding them together at intervals of a ft. with marline or wire. If short cables are required, time may be saved by making one of two or more times the length and cutting it in pieces.

141. Anchorages. These are of prime importance and must be secure and as rigid as possible. Their character will often be determined by accidents of the site. When the stumps of large trees are available they will usually be chosen. Ledge rock or large bowlders are the best, but require care and some skill in making the fastenings. Heavy staples leaded or wedged into holes drilled into the rock will usually be most convenient. If Portland cement can be had, a grouting will hold the iron firmly after it is set. See also description of deadman, paragraph 49.

142. Towers. Large trees will be used if available; otherwise trestles of timber; see paragraph 64. With high banks it may be feasible to start the cables from the surface of the ground or a short distance above it and provide approaches to a depressed roadway as indicated in Fig. 238. For low banks the roadway must be kept above the grade as in Fig. 239, the backstay carrying it beyond the tower.

The towers must be high enough to bring the supports of the cables called saddles above the level of the roadway at the tower by the desired deflection plus $\frac{1}{16}$ of the span, see paragraph 131.

143. Placing cables may be done by hauling across tops of towers, or by laying out cable from one anchorage to the other and raising the bights to the tops of the towers by shear poles, Fig. 240. The cable should hang in a bridle, Fig. 241. In the former case the cable will usually have to be slushed, which is an inconvenience in the subsequent operations.

The saddle should be a smooth, firm bearing, sufficient to take all the cables side by side. In binding the small cables together to form a larger one, adopt the most compact arrangement, the outside strands as they lie side by side on the saddle generally going into the upper half, and the central ones into the lower half of the complete cable; and note carefully that the arrangement is identical at all points, so that the strands do not ride or cross each other anywhere. The bunching should include the backstays, but need not be carried across the towers, leaving the strands flat on the saddles. Several groupings are illustrated in Fig. 242.

In either method of placing, the cables should be permanently fastened at one end and be connected with the anchorage at the other end by a luff tackle, to be used in adjusting the length. When the adjustment is finished, this end is made permanently fast and the tackle removed.

144. In clear weather the dip of the cables may be determined by direct observation. Fix the elevation of the bottom of the transom at each tower, and above it, a distance equal to $\frac{1}{16}$ of the span, fasten a batten or stretch a line horizontally. Adjust the cable so that its lowest point ranges between the battens or lines.

If wind, fog, or darkness prevents this operation, lay the cables out side by side before they are hoisted up, and put them under as uniform strain as possible. Mark each with a few turns of soft wire, as near the point where it will rest on the saddles as can be computed. The distance between marks on all the cables must be exactly the same. When the cables are in place, adjust them so that these marks coincide, and the deflections will be sufficiently uniform to develop the combined strength of the strands.

145. Lengths of slings depend upon the curve of the main cables and the camber of the roadway. The latter must be liberal in field suspension bridges. The cables will stretch, especially those made of wire rope, and the anchorages

and tower footings will give more or less. One-fiftieth of the span will usually be enough.

The lengths of slings are reckoned from the cable to the lower side of the transoms in a vertical line, Fig. 243. They must be determined in advance and adhered to during construction, regardless of the appearance of the bridge when partially done. When the roadway is completed the distortion will disappear.

From the following table the lengths of slings at intervals of $\frac{1}{100}$ of the span, starting from the middle, may be readily determined.

146. From the line corresponding to the ratio of deflection take out the successive factors and multiply each by the span in ft. The results will be the lengths of slings in ft. at the corresponding points on each side of the middle.

As the length of the middle sling is 0, the middle transom will rest directly on the cable. If transoms are not of same depth, allowance must be made for the difference.

Note especially that these tabular lengths do not include any fastenings. Be sure to add enough for that purpose, but when the fastenings are made see to it that the distance from cable to bottom of transom is precisely the corresponding tabular distance.

In this table allowance is made for a camber of $\frac{1}{100}$ of the span in two straight lines from the ends to the middle.

TABLE XXXI.

| Ratio of deflection. | Distance of sling from center in parts of span. | | | | | | | | |
|----------------------|---|--------|--------|--------|--------|--------|--------|--------|--------|
| | 0.05. | 0.1. | 0.15. | 0.2. | 0.25. | 0.3. | 0.35. | 0.4. | 0.45. |
| $\frac{1}{100}$ | 0.0036 | 0.0107 | 0.0209 | 0.0346 | 0.0516 | 0.0720 | 0.0953 | 0.1267 | 0.1529 |
| $\frac{2}{100}$ | 0.0034 | 0.0097 | 0.0188 | 0.0308 | 0.0456 | 0.0634 | 0.0840 | 0.1074 | 0.1336 |
| $\frac{3}{100}$ | 0.0032 | 0.0090 | 0.0172 | 0.0280 | 0.0412 | 0.0570 | 0.0752 | 0.0960 | 0.1192 |
| $\frac{4}{100}$ | 0.0032 | 0.0084 | 0.0160 | 0.0258 | 0.0377 | 0.0519 | 0.0684 | 0.0871 | 0.1080 |
| $\frac{5}{100}$ | 0.0030 | 0.0080 | 0.0150 | 0.0240 | 0.0350 | 0.0480 | 0.0630 | 0.0800 | 0.0990 |
| $\frac{6}{100}$ | 0.0029 | 0.0076 | 0.0142 | 0.0226 | 0.0327 | 0.0447 | 0.0585 | 0.0742 | 0.0916 |
| $\frac{7}{100}$ | 0.0028 | 0.0073 | 0.0135 | 0.0214 | 0.0308 | 0.0420 | 0.0548 | 0.0693 | 0.0855 |
| $\frac{8}{100}$ | 0.0028 | 0.0071 | 0.0129 | 0.0203 | 0.0292 | 0.0397 | 0.0517 | 0.0652 | 0.0803 |
| $\frac{9}{100}$ | 0.0027 | 0.0069 | 0.0124 | 0.0194 | 0.0278 | 0.0377 | 0.0490 | 0.0617 | 0.0759 |
| $\frac{10}{100}$ | 0.0027 | 0.0067 | 0.0120 | 0.0187 | 0.0267 | 0.0360 | 0.0467 | 0.0587 | 0.0720 |

147. **Form and Strength of Slings.** Wire will usually be the material used. The load on each sling may be taken as the total load, live and dead, divided by the number of slings. It is really somewhat less. Knowing the size of wire on hand, divide the number of wires of that size which are used or would be required for the main cables, Table XXX, by the number of slings. The quotient will be the number of wires of that size which should be in each sling.

The slings may be made single and fastened at top and bottom by loops around cable and transom, or, more conveniently, made of half size and double length, taking a round turn on the cable at the middle, bringing the two ends around the transom in opposite directions and twisting them together on top of it, Fig. 243.

A very useful attachment of wire to wood is made by means of a nail or spike partly driven beside the wire and the head bent over so as to embrace the wire like a staple. A staple, if available, is of course better.

148. **Construction of the Roadway.** A transom will hang in each pair of slings. On the transoms lay longitudinal stringers of number and size deter-

mined by the load, length of bay, and materials available, see paragraph 8. The stringers should be long and should lap 3 ft. or more and be firmly lashed or spiked together; the lap need not be on a transom, but is better near one. On the stringers the planks are placed and spiked down or held by side rails.

Place the first pair of slings on the cables, taking the turns loosely so that they will slide. Sling the first transom so that its bottom shall be the calculated distance from the cable measured along the sling. Fasten two stringers to it and push it out, the slings sliding on the cables, until the transom is in its proper position and the slings vertical. Crimp the turns at the top and place the second pair of slings and transom in the same way. Follow up with stringers and planks.

149. A hand rail should be provided, and a screen on each side of brush or other light materials will be useful.

150. Suspension bridges change their shape vertically and laterally from the live load and from wind pressure. Vertical distortions are referred to as undulations, and lateral ones as oscillations. Undulations result principally from changes in the moving load and to a less extent from the vertical component of wind pressure. Oscillations are caused principally by horizontal wind pressures and in a lesser degree by the moving load. Both must be kept within small limits. Undulations may be reduced by making the hand rail or balustrade fairly high and trussing it lightly, Fig. 244. Also by using deep stringers well lapped and fastened so as to be practically continuous.

Oscillations may be reduced by placing the cables farther apart at the towers and drawing them in at the center. This will affect the length of slings, but not seriously. Also by a lateral truss under the roadway, using the transoms for posts, and adding diagonal ties or braces. See paragraph 129.

Both undulations and oscillations may be controlled by guys attached to the roadway and carried inshore and up and down stream to secure fastenings.

151. **Railway Bridges.** With proper assumptions as to loads the foregoing rules for designing and proportioning the several types of bridges will give safe structures for railway traffic. See also paragraphs 66 and 115, and Table XXVII.

A railroad bridge should not be built on an incline if it can be avoided. The approaches at each end should be straight and nearly level for a distance equal to at least twice the maximum train length.

Foundations must be especially unyielding, as settlement is more troublesome than in other bridges.

For a single-track standard-gauge railway bridge the clear width between trusses or girders should be 14 ft. In double-track bridges the distance from c. to c. of tracks must not be less than 13 ft. No part of the truss may be less than 7 ft. from the c. of the nearest track at a height exceeding 1 ft. above the rail.

The clear head room must be 21 ft. above the base of the rail for a width of 6 ft. over each track.

Stringers are put under the rails and are best made in two or more pieces long enough to span two bays and breaking joints. The pieces are separated about 2 inches by blocks and well bolted together. Ties are placed 18 to 24 ins. c. to c., and every third or fourth one should be spiked to the stringers. A guard rail should be placed along the ends of the ties, and it is better to place under the tie a lighter stringer and bolt the guard rails to it.

PART III.

ROADS.

1. Military road making will, in most cases, be a question of repairing existing roads to make them temporarily passable, the work to be done in the shortest possible time. Labor is likely to be plentiful, though not the most efficient. Machinery and transportation will be scarce. Materials actually on the line or very near it must be used. To decide upon the best plan under such circumstances, and to carry it out most successfully, it will be helpful to have a general knowledge of the conditions which make good roads and those which make bad ones, and of the best methods of converting the latter into the former, or, in other words, of the principles of road construction. These principles are the same for all roads, though the practice resulting from their application may differ in military roads from that considered best for civil roads.

2. The supporting power of cohesive compacted earth, moist but not wet, is sufficient to bear without objectionable indentation the weights on hoofs and wheels which result from ordinary highway traffic. The supporting power of the same earth when thoroughly wet is only about $\frac{1}{10}$ as much, and is not sufficient to carry the weights on hoofs and wheels until the wagons have sunk to their axles and the animals to their bellies, when traffic becomes impossible. Between these extremes lie many gradations of good and bad roads.

3. Civil roads are also rated as bad when the surface, though hard, is rough, as when there are projecting bowlders or ledges of rock crossing the road, or stumps or roots in the way; and also when any of the grades exceed the limit at which a team can pull its own load.

As to roughness, its principal effect is to increase the wear and tear of vehicles and the discomfort of passengers, and to prevent a faster gait than a walk; hence it is of secondary importance for military traffic. As to gradients, it is to be remembered that army transportation is always in trains, so that teams can be doubled when necessary, and also that there is usually an ample supply of labor in reach so that loads can be broken. Within the limits of possible wheel transportation, steep gradients alone may delay military traffic, but can not stop it.

Extensive work for reduction of grades will rarely be worth while so long as the prevailing natural grades do not exceed 3° , and the maximum are short and not steeper than 6° . Rolling country, classed as decidedly rough, will be found within these limits.

For long grades, as in mountain roads, considerable work may be profitably expended in keeping prevailing grades within 2° , with a maximum of not more than 4° on short ones.

4. The paramount question to be dealt with will be the supporting power of the roadbed as affected by water. This supporting power will be a maximum when the soil is sufficiently damp to compact well and yet not wet enough to yield considerably under the pressure. It is not desirable to remove all the moisture from the soil, because if this is done it loses its compacting power, and any particles dislodged from cohesion to adjacent ones remain on the surface in a friable condition, refusing to reunite under pressure until moisture is supplied.

The supporting power of wet earth may be increased in two ways: first, by removing the surplus water and keeping it out, and, second, by introducing

rigid material, or a combination of materials, which will afford a proper bearing surface and so distribute the pressures as to reduce them below the supporting power of the wet soil. The application of methods involving one or both of these principles will constitute the bulk of military road work, whether of construction or repairs.

5. **Drainage.** The water to be disposed of in connection with any road is: that which flows toward the road from adjacent slopes; that which falls on the surface of the roadbed, and that which finds its way beneath the surface, commonly called ground water.

6. **Side Ditches.** Surface water flowing toward the road is intercepted and carried off by ditches along one or both sides of the road, according to the direction from which the surface water comes. If on one side only, the water is carried under the road—across it in some cases—and discharges down the slope, preferably in a gully or natural drainage line.

7. Drainage of the road surface takes care of the water which falls on the roadbed itself, and is effected by making the surface of the roadbed smooth and compact and giving it regular slopes longitudinally or in the direction of the road and laterally or toward the sides. The longitudinal slope is the grade, and the lateral slope is called the crown. The compacting or consolidation of the road surface reduces the rate of absorption of water, and the smooth regular slopes cause the rainfall to run off promptly. Compacted earth absorbs water slowly if the surface is not disturbed. By digging in a beaten road or footpath it will be found, even after a hard rain, that the ground is wet for a slight depth only. The surface stratum when wet seems to form an impervious coating which keeps the rest dry. If the surface is disturbed during the rain, as by traffic, the protection of the surface stratum is lost, and the water penetrates deeper. An earth road in constant use in wet weather will become muddy no matter how much attention is paid to drainage, but with proper drainage a road will not become muddy so soon, nor stay muddy so long, nor will the mud get so deep.

To maintain a road in good condition under traffic in wet weather it must be given a surface the supporting power of which is not diminished by moisture, so that the wetted surface is not disturbed by the traffic. Various kinds of such surfaces are formed artificially, and are called pavements. In addition to their qualities just described they also act in an important way in distributing the pressures from the wheels to the earth foundation. It has been noted that all binding materials lose their efficiency when absolutely free from moisture. As the distributed pressure on the ground surface can be borne by earth carrying more moisture, and as such earth underneath the pavement has a tendency to prevent the latter from becoming too dry, it is readily seen that where a road is covered with pavement it is possible to do harm rather than good by too much underdrainage.

8. The crown of an earth road should be 6 in. for a road of ordinary width. Theoretically the crown should increase with the grade, but this is an unnecessary refinement in practice. The convenience in construction of a fixed crown outweighs any advantages of a variable crown. If the grade is so steep that water flows too far along the road, causing scour in the wheel ruts, it is better to build low ridges across the road at intervals to turn the water to the side than to attempt to produce the same effect by a greater crown. The ridges may be wide and flat, amounting, in fact, to a reversed grade for a few feet, perfectly effective, and yet so gentle as not to materially disturb traffic.

The best distribution of the crown is to give $\frac{3}{8}$ of it to the outside quarters and $\frac{3}{8}$ to the inside quarters of the road. The resulting crown is nearly an arc of a circle. With inexperienced men it may be necessary to use a form for

a crown. Fig. 1 shows its construction. The upright forms a convenient handle, and may be provided with a plummet to level the gauge across the road.

9. Subdrainage is resorted to when it is desirable to lower the surface of the ground water. By the ground-water level, at any point, is meant the depth at which the soil becomes fully saturated. It is the depth at which water will stand in a well or pit. If it is 4 ft. or more below the surface, it will not affect the condition of a road in good soil. Ground water rises in wet and falls in dry weather. It probably rises when the ground is frozen, regardless of the rainfall.

If the ground water comes nearer the surface than 4 ft. its effect may be bad or not, depending upon the character of the soil and the elevation of the road. Generally, however, high ground-water level and poor soil for road making go together.

10. Subdrainage will not often be a feature of military road work, but when it is done it is best accomplished by a tile drain laid on one or both sides of the road under the side ditches, Fig. 3. The tile should be of the bell-and-spigot pattern, laid with open joints, the bell up grade. As water flows along the outside of the pipe as well as on the inside, it should be surrounded by porous, nonerosible material, such as broken stone or gravel.

On military roads substitutes for the tile must often be used. The essential is a continuous conduit into which water may percolate through the sides and along which it may flow with a relatively high velocity. Broken stone, plank, or layers of fascines or brush will do much good. Any form except a pipe or box tends to quickly choke up with fine silt washed into the interstices. This may be partly prevented by interposing a layer of filtering material such as straw, turf, grain sacks, etc., between the material of the drain and the surrounding earth, especially on the top. If turf is used, put the grass side toward the drain.

Side ditches act as subdrains to the extent of their depth. A free outlet is necessary for the efficient operation of subdrains and side ditches.

11. **Importance of Side Ditches.** It is obvious that the side ditches contribute to the improvement of a road in so many ways that they must be of great importance. They assist in every class of drainage and also offer the most convenient source for material to crown and raise the roadbed. Ample side ditching is the consideration of first importance in every road project, except in arid climates or very sandy soil.

12. **Form of Side Ditches.** The best form of side ditch is shown in Fig. 2. Its advantages are that it is favorable for a variable flow of water at relatively uniform velocity; that it does not fill up by caving or from the wash of earth from the road; that if a wagon is run into it accidentally or in an emergency no especial trouble follows, and that it furnishes earth enough to crown the road. This form is suited to a road which has ample width and is on good ground. If these conditions are reversed, the road narrow, and the ground wet, a ditch of the form shown in Fig. 3 will be better. It takes less space and is deeper. It will fill up more rapidly and require more work to keep it open. The form in Fig. 2 can be opened with scrapers. The form in Fig. 3 must be dug with shovels.

13. The slope of side ditches will usually be that of the road, though if the latter is less than 1 in 125, the slope of the bottom of the ditch should be increased by making it shallower at the upper and deeper at the lower end. A long ditch on a steady grade will do its work better if made gradually larger from the upper to the lower end. In all cases, the bottom should have a uniform or increasing grade to the outlet to prevent the formation of pools. Large springs near the road should be tapped below the surface and led into the side ditches.

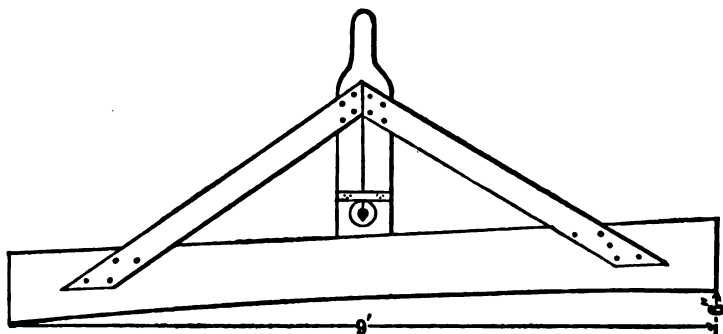


Fig. 1

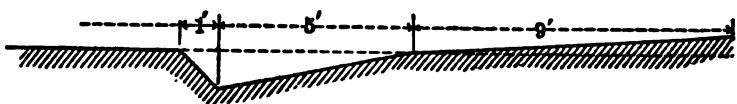


Fig. 2

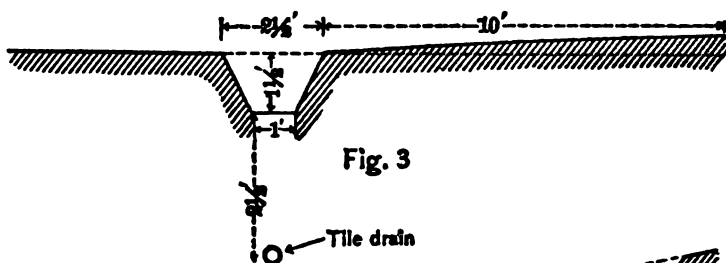


Fig. 3

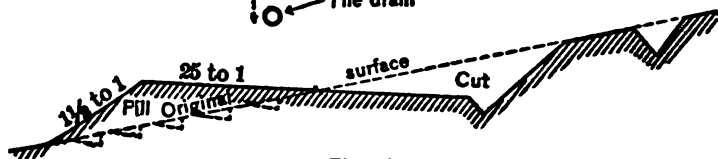


Fig. 4

very steep hills roads are often badly damaged by the scour of water in the side ditches. To prevent this, the ditches may be roughly or may have weirs of logs and brush or stone built across them at intervals. These dams should not be tight enough to hold any water permanently. Or, the ditch may be stepped, paving the steps at top and bottom, to prevent scour by the overfalls.

Embankments. Raising the surface of a road or carrying it on an embankment produces the same relative effect, so far as saturation of the soil is concerned, as lowering the ground water. Roads may also be carried on embankments to reduce grades. This is especially advantageous when a cut is made at the top of a hill and the material can be placed in the roadbed at the same level so as to raise it materially. The haul is short and down hill, and the movement of the earth accomplishes a double benefit in reducing the grade by grading the road at the top and raising it at the bottom.

When there is no near-by cutting, the material for embankments must be obtained in areas outside of the line. Excavations made for this purpose are called borrow pits. If the material along the roadbed is fit for use, the borrow pits are borrowments of the side ditches. The superior convenience of this arrangement determines its use in many cases when the material is poor. It is indeed true that the material from side ditches cast up on an unimproved road and then surfaced and compacted will not make the road temporarily better than it was before.

Embankments should have a top or crown at least 5 ft. wider than the existing roadway, and should have side slopes not steeper than $1\frac{1}{2}$ to 1, unless the material stands naturally at a steeper slope. An allowance for settlement should be made of about $\frac{1}{10}$ the height. If the embankment is put up in such a way as to be compacted by traffic during its construction, this allowance for settlement may be considerably reduced.

Cuttings. Excavations on the line of the road may be made either to correct extreme elevations and grades or to give a level surface for the roadway. In the former case they are usually called cuts, and in the latter side cuttings. Sometimes cuts and fills, since the material excavated is usually used to make an embankment to carry part of the road, Fig. 4.

The bottom will have a bottom width sufficient for the roadbed and narrow side ditches. The top width will depend on the depth of the cut and slopes of the side slopes. Side slopes in earth will usually be $1\frac{1}{2}$ to 1. In rock they may be steeper; in sand and in some clays they must be flatter. In northern latitudes the slopes are sometimes made with very flat slopes to prevent them from drifting in snow.

In side cuttings the same remarks apply so far as the upper side is concerned.

The embankment may be made, as indicated in Fig. 4, to prevent the material from sliding bodily down the hill. Stepping of the slopes under the fill is a good rule for heavy embankments where there is likely to be a good deal of sliding or slumping against them from above. On ordinary sidehill slopes and with ordinary embankments stepping is not necessary. On very steep and unstable slopes it will be better not to cut at all, but to make the fill on the natural slope with earth brought from a distance. As the embankment in a cut and fill settles, it is best to make it higher at the start than the floor of the cut, and to arrange for all the drainage to go into the side ditch on the uphill side.

If the face of the cut presents two materials, a pervious one above and an impervious below, as sand and clay, it may be necessary to cut a drain in the cut at the junction of the two.

Retaining Walls. This term is here applied only to walls which are built to support made ground, and will include all devices for giving a

vertical face to such ground whether of masonry or not. For military fieldwork, the easiest and quickest will usually be preferred to the best.

A crib of logs or timbers (see Bridges) may be made and filled with earth or stone and filling deposited against it. Such a crib should be half as wide as it is high. For stiff soils the rear wall of the crib may be omitted and the front one held in place by logs running back into the bank, Fig. 5. These logs may be replaced by cables made fast to posts. This construction can best be applied when the cables can be carried back to solid ground, Fig. 6.

Vertical posts with their feet let well into the ground and the tops anchored by either of the above methods may support horizontal planks, which in turn support the fill, Fig. 6. Constructions in timber for this purpose are usually called bulkheads.

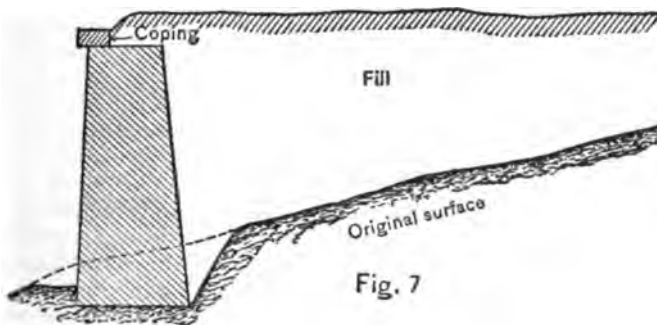
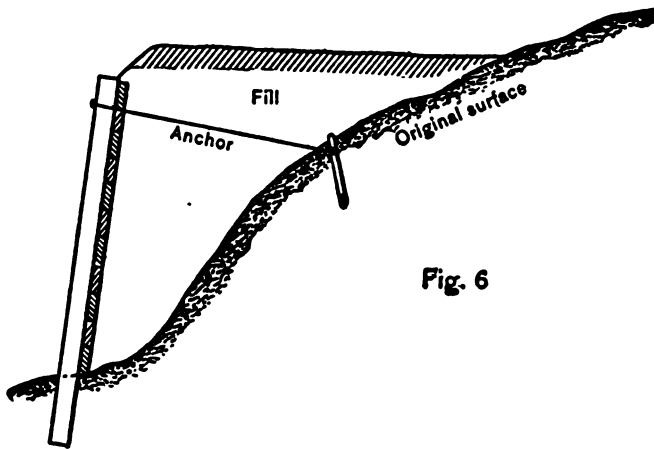
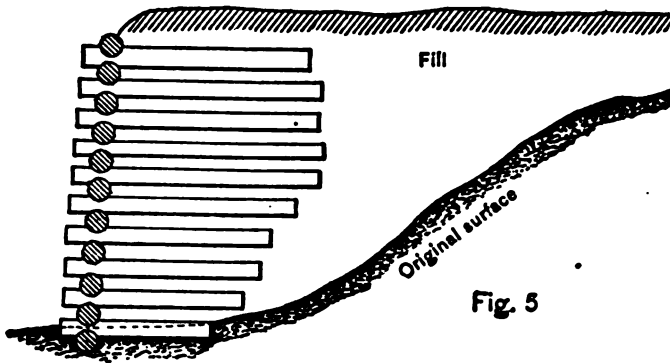
Masonry retaining walls should have an average thickness of $\frac{1}{4}$ to $\frac{1}{3}$ their height above the ground, the former for good rubble laid in cement mortar, the latter for dry rubble. The thickness may be the same from top to bottom, or it may be greater at the bottom and less at the top, the average remaining the same. If the wall is high, the latter section should be adopted, as it requires less material for a given height and strength. Dry rubble must be of large stones fairly well fitted together. Whether with or without mortar, it is desirable to avoid through horizontal joints. Some stones should be so placed as to lie partly in two adjacent courses, acting as dowels to prevent the upper part of the wall from sliding along the joint between the two courses. Walls should be built with a batter on the front from $\frac{1}{2}$ to 1 in. to the foot, as they will always move out a little at the top, and, if originally built plumb, will then overhang and look unsafe.

Especial attention must be given to the character of the foundation at the foot of the front face. A trench must be excavated deep enough to get to a firm bearing at this point. The front of this trench should be kept as solid as possible to form a support to the wall against sliding on its base, Fig. 7. If the wall yields to the pressure against it, it will most probably revolve around the toe, and its entire weight will come on the front edge of the foundation trench, which must be able to support the weight or the wall will overturn.

17. Culverts. An inclosed conduit for passing drainage under a road is called a culvert. The distinction between bridges and culverts is vague. Some small bridges are often called culverts, and some large culverts have been called bridges. If the traffic is borne directly on the top or roof of the conduit, it must be designed as a bridge, and may be called a bridge, no matter what its length or height. If a considerable thickness of the roadbed passes over the conduit so that water may stand above it at one end and pass through under pressure, the structure may properly be called a culvert.

18. The area of waterway required can not be determined by any rule. It depends upon the maximum rate of rainfall, the kind of soil, whether rocky, sandy, clayey, etc., and the slope of the surface and its condition, whether cultivated or not, timbered or not, frozen or not, etc.

If the culvert conveys the flow of a side ditch under the road, its capacity should be equal to that of the ditch. The discharging capacities of channels of different forms are to each other as the squares of their areas divided by their surface widths; thus, the area of the side ditch in Fig. 3 is $3\frac{1}{2}$ sq. ft. The area squared = 12.25. The surface width is $2\frac{1}{2}$ ft.; hence the area squared divided by the width = $12.25 \div 2\frac{1}{2} = 4.9$. To find the dimensions of a rectangular conduit of equal capacity, assume the width $1\frac{1}{2}$ ft. Then the area squared divided by $1\frac{1}{2} = 4.9$; hence, the area squared = 7.3, or the area = 2.7; the depth equals the area divided by the width = $2.7 \div 1.5 = 1.8$; hence a conduit of equivalent section will be 1.5 by 1.8 ft.



Required, the size of a circular conduit equivalent to the side ditch. Divide the equivalent number 4.9 by 0.616, and take the cube root of the quotient, which will be the diameter of the circle; thus, $4.9 \div 0.616 = 8$; the cube root of $8 = 2$, which is the diameter of the equivalent circular conduit.

These relations are true only when the water has a good approach to the culvert and free discharge from it, and when the fall of water surface from the upper to the lower end of the culvert is not less than the fall of the ditch in the same length. These conditions can ordinarily be secured in construction. In fact a considerably greater fall can usually be obtained through the culvert than exists in the side ditch, so that areas computed by the rule will usually be in excess.

When the drainage to be handled is that of a natural drainage line, estimate as well as can be done the area and surface width of the maximum cross section of flow, and convert it into the equivalent regular section by the rule. If the conversion gives a size larger than can conveniently be constructed, consider the possibility of giving a greater fall through the culvert. The area of the culvert may be reduced as the square of the slope increases. If twice the fall of the natural flow can be obtained, one-fourth the culvert area will answer.

PART V.

FIELD FORTIFICATION, INCLUDING MINING AND DEMOLITIONS.

1. Fortification is the art of increasing by engineering devices the fighting power of troops occupying a position. These devices have for their object to increase the effect of the fire action of troops protected by the fortifications and their mobility on the field, or to diminish the effect of the fire action of the assailant and his mobility.

2. Field fortification deals with the preparation of such devices of a temporary character for immediate—not permanent—use, in a position which derives its tactical value from the incidents of a pending campaign and which may lose that value at or before the close of the campaign.

3. The principal classes of field fortification devices are:

Those which produce an unobstructed field of fire in front of the line of defense—clearings, demolitions, grading.

Shields or shelters, which protect the defender from the assailant's fire—trenches, galleries, redoubts, blockhouses, etc.

Masks, which conceal the defender from the assailant's view—plantations, embankments, screens, etc.

Obstacles, by which the advance of the assailant is retarded—abatis, slashings, entanglements, etc.

Facilities for communication for the defender—roads, bridges, telegraphs, etc.

Obstructions to communication of the assailant—destruction of bridges, obstruction of roads, obstacles, etc.

Many devices fall into more than one of the above categories.

4. Field fortification may be divided into hasty intrenchments, deliberate intrenchments, and siege works. Hasty intrenchment includes devices resorted to by troops upon a battlefield to increase or prolong their fighting power, usually constructed in the presence of the enemy and in haste. Deliberate intrenchment comprises works constructed by troops not in line of battle, for the protection of depots, lines of communication, supply, or retreat, etc. As they are usually intended to enable a small force to resist a much larger one, they are more carefully designed than hasty intrenchments and have greater defensive strength. Siege works comprise devices used by besiegers and besieged in the attack and defense of strong fortifications, and especially those devices which enable troops to advance under continuous cover.

The lines of division of the three classes are not definite. Some devices may belong to more than one class, and a work begun in one class may be merged into and be completed in another.

5. Cover. Protection from fire or view is usually called cover. Protection from fire is divided into horizontal and overhead cover. Horizontal cover gives protection against direct or horizontal fire. It usually takes the form of a shot-proof barrier, vertical or nearly so. Overhead cover gives protection against indirect or high-angle fire, and against the fragments of shells and shrapnel bursting overhead. It ordinarily takes the form of a shot-proof barrier, horizontal or nearly so. Overhead covers are often referred to as bombproofs or splinter proofs—the latter if they are light, but proof against rifle fire or fragments of shell or shrapnel, the former if they are strong enough to resist the curved and vertical fire of siege guns and mortars. The term

splinter proof is also applied to horizontal cover thick enough only to stop fragments of shell or shrapnel.

6. Profiles. A profile is a section of any cover made by a vertical plane perpendicular to its general direction or practically parallel to the direction of fire against and over it. Fig. 1 is a typical profile on which the names of the component parts are indicated.

In dimensioning a profile the plane of site (supposed horizontal) is taken as the plane of reference. The distances of points of the profile from this plane are stated in feet and fractions—those above with the plus sign and those below with the minus sign. These quantities are inclosed in parentheses and are called references. Generally speaking, the plus quantities relate to embankments, and the minus quantities to excavations. If the site is not horizontal the plane of reference is assumed to pass through a point of the site vertically below the middle point of the interior crest.

7. Command has reference to difference of elevation; a higher point commanding a lower one; the latter commanded by the former. "The command," used without qualification, means the height of parapet, or the elevation of interior crest above plane of site. The degree of command of one point over another may be expressed by the difference of elevation in feet, or, better, by the gradient of the line joining them.

The relief of a parapet is the elevation of the interior crest above the lowest surface immediately in front—the bottom of the ditch, if there is one. With no ditch and a level site, the relief and the height of parapet or command become the same.

The clear height behind the parapet will be referred to as vertical cover. It is the elevation of the interior crest above the bottom of the trench, or above the natural surface if there is no trench.

By the thickness of a parapet is meant the horizontal distance between the tops of the interior and exterior slopes. It is used as a measure of the amount of horizontal cover.

8. The principal conditions which determine the form of a profile of horizontal cover are the following:

The interior slope or breast height should be nearly vertical, and its height must correspond to one of the adopted firing positions, i.e., lying, kneeling, or standing.

The thickness is regulated by the kind of fire against which protection is desired, as rifle, field, or siege artillery, and the range.

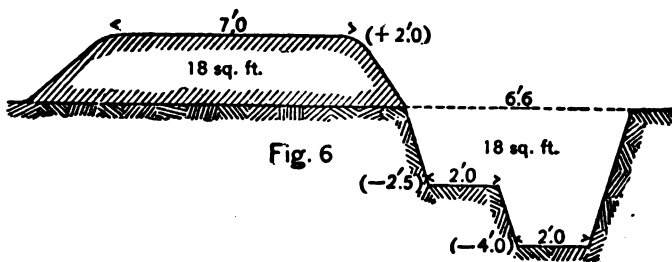
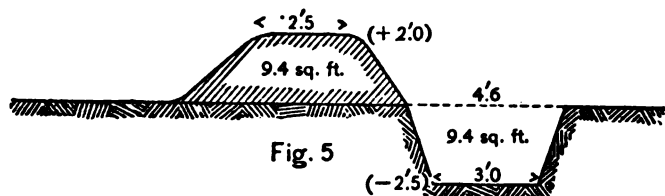
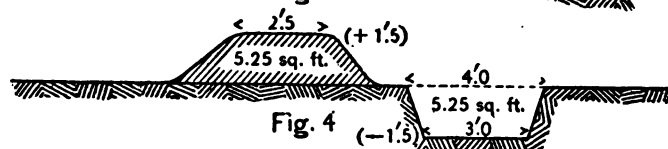
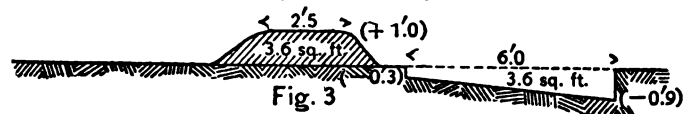
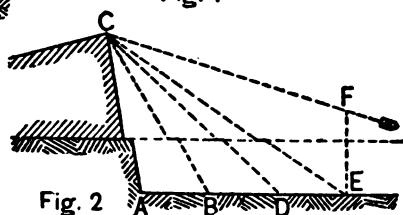
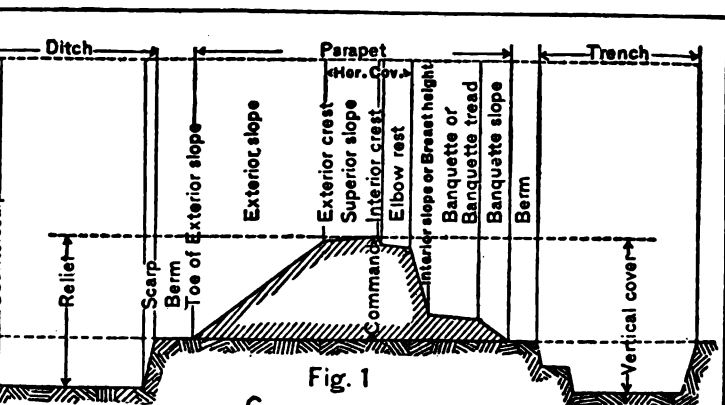
The superior slope should have an inclination such that fire over and parallel to it will sweep the ground in front. One-sixth has been adopted as standard.

The exterior slope and the sides of trench and ditch should be as steep as the material of which they consist will stand. The banquette slope, if long, should be cut into steps to facilitate movement over it.

The quantity of trench excavation and of embankment should be nearly equal to minimize labor. This applies only to small parapets in which all the excavation is in a trench. For heavy parapets, labor is saved by making the trench supply the inner part and taking the outer from a ditch.

The command should usually be kept as low as possible, for better concealment. For the same reason all sharp angles and hard lines should be avoided.

The thickness of ordinary earth required to resist penetration at usual battle ranges is 3 ft. for rifle fire, 4 to 6 ft. for field guns, and 15 to 20 ft. for siege guns. It should be remembered that any protection is better than none. Mere concealment from view by a screen wholly inadequate to resist penetration will, for rifle fire especially, greatly reduce the casualties, since the enemy's fire will be less rapid and less accurate if he can not see his target.



Figs. 2 to 10 show profiles of horizontal cover from the skirmisher's trench to a redoubt to resist artillery.

9. Profiles to Resist Rifle Fire. The skirmisher's trench, Fig. 3, gives cover to a man lying down. The height of parapet should not exceed 1 ft. A trench of this profile, $2\frac{1}{2}$ ft. front, can be constructed in soft ground in 20 minutes or less. If under fire, the trench can be constructed by a man lying down. He can mask himself from view in 10 or 12 minutes and can complete the trench in 40 to 45 minutes. A good method of working is to dig a trench 18 ins. wide back to the knees; roll into it and dig 12 ins. wide alongside of it and down to the feet; then roll into the second cut and extend the first one back.

For troops in the main line of resistance the kneeling trench, Fig. 4, is the simplest. The width at bottom is not less than $2\frac{1}{2}$ ft.—preferably 3 ft.—and the relief is 3 ft., the proper height for firing over in the kneeling position. This trench can be constructed in soft ground in 40 to 50 minutes.

The standing trench, Fig. 5, has a bottom width of 3 to $3\frac{1}{2}$ ft. and relief of $4\frac{1}{2}$ ft. This is proper firing height for men of average stature. Short men may gouge out the superior slope a little or throw some earth under their feet. The standing trench can be excavated in soft ground in 2 to $2\frac{1}{2}$ hours. The kneeling trench can be converted into the standing in about $1\frac{1}{2}$ hours.

The standing trench does not give complete cover to men standing erect in it, and the next stage of development is a passageway executed in the rear of the trench not less than 6 ft. below the interior crest. This forms the complete trench, Fig. 6, which can be constructed in soft ground in 4 to $4\frac{1}{2}$ hours, placing all the material in the parapet. The height remaining the same, this extra material all goes to increased thickness, which, if rifle fire only is considered, becomes greater than is necessary. In this case some labor and time may be saved by wasting the excavation from the complete trench in the rear.

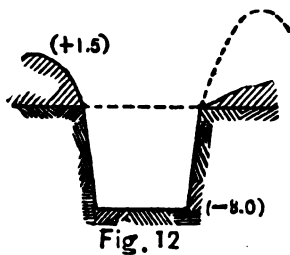
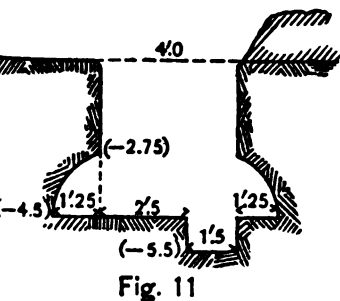
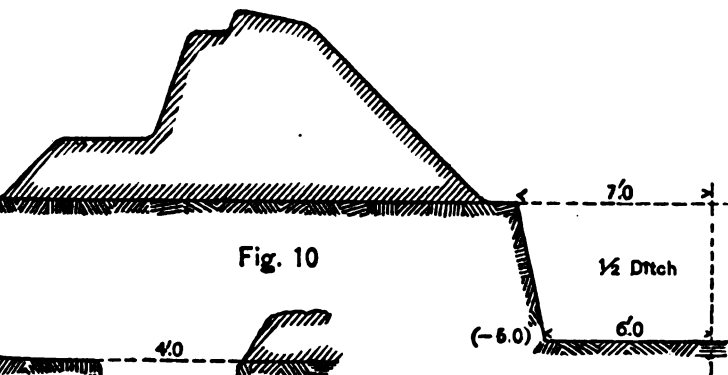
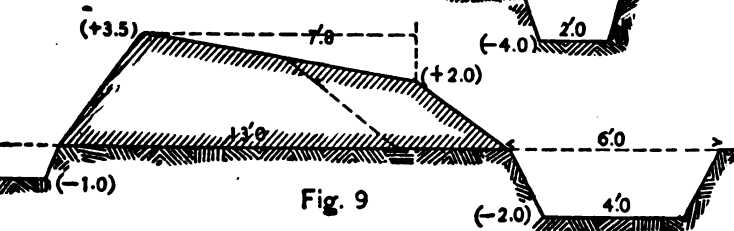
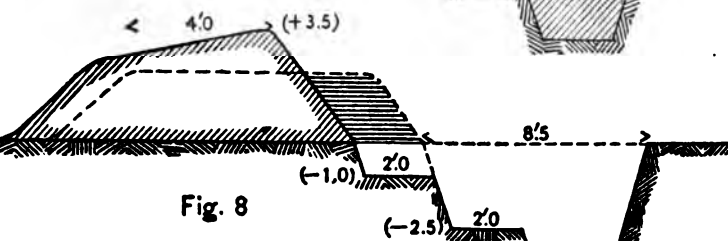
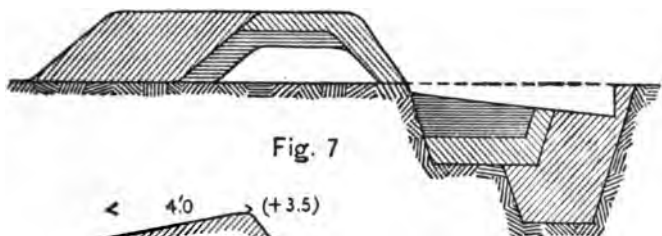
Fig. 7 shows the foregoing profiles superposed. Corresponding areas of embankment and excavation are similarly shaded. It is seen that work may proceed progressively from the first to the last, converting each into the next in order without handling any of the material twice.

10. Profiles to Resist Field Guns. The angle of fall of field artillery projectiles at 3,400 yds. range is 11° . The angle of dispersion of shrapnel is 14° , which makes the maximum angle of fall of the bullets 18° or 1 on 3. Bursting charges of high explosives will in the future greatly increase this angle, probably to a degree which will require continuous overhead cover.

A profile to resist shrapnel only is shown in Fig. 8. The thickness is 4 ft. and the relief such that a shrapnel fragment grazing the interior crest with an angle of fall of 1 on 3 will clear the heads of men kneeling or sitting in the trench. This profile may be formed by enlarging the trench and parapet of Fig. 6. It can be executed in soft soil in 4 to $4\frac{1}{2}$ hours. The small area shown in broken shading must be handled a second time.

If liable to be exposed to a prolonged attack of field guns a parapet should be proof against their shells. This requires 9 ft. of ordinary earth, and a suitable profile is shown in Fig. 9. The additional earth is taken from a ditch, and with working parties in ditch and trench this profile can also be executed in 4 to $4\frac{1}{2}$ hours.

11. Special Profiles. The advantages of the normal profiles above described are that they produce a given cover with the least expenditure of time and labor, and that the first protection secured can be utilized as partial cover while enlarging and strengthening it. The disadvantages are that the effective cover is restricted to a narrow zone immediately in rear of the parapet, and that in wet ground or wet weather it is difficult to keep the trench reasonably dry. More complete concealment than is afforded by the normal profile is sometimes very desirable.



The normal profile may be modified in various ways to meet local conditions. The cover may be all in embankment and earth may be taken from a ditch or borrowed at a distance, Fig. 10. In this form the command is equal to the relief and the protection extends to a greater distance in rear. It may be used when the conditions of the site call for more command or the character of the soil precludes a trench. A trench is not feasible in very wet soil, while a ditch, though more difficult to dig, is better when done for mud or water in the bottom.

The cover may be all in excavation, Figs. 11 and 12. This form was used by the Boers, and by the Spanish in front of Santiago. The undercutting was peculiar to the Boer trench. This form may be made completely invisible. It is practicable only when the natural surface has sufficient command and when the ground to be swept is also a general concave; when the soil is stiff but workable, porous and dry to a considerable depth. If there are folds of ground, bushes, woods, or other means of concealing it, the excavated earth may be scattered on the ground; if not, it must be carried away, or thrown into irregular mounds on the rear side, concealed by making them resemble the foreground.

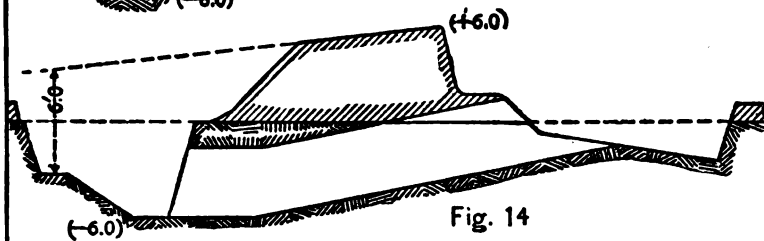
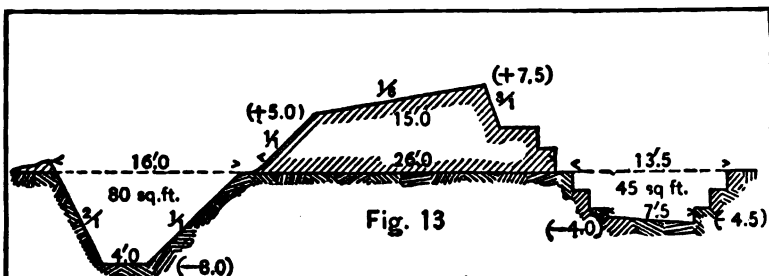
In an inclosed or partially inclosed work for a stubborn defense of the ground, the parapet must be heavy enough to resist siege guns, the relief must be considerable to resist assault, and men on any part of the parade must be screened from view. A profile shown in Fig. 13 results. By preparing the counterscarp as a firing crest a double tier of infantry fire is obtained. Good communication, but easily interrupted, must be provided from the ditch through the parapet to enable the front line to retreat when too hard pressed, Fig. 14.

If the presence of water or hard material makes only shallow excavation practicable, the trench and ditch must be widened. The parapet must be higher by the difference between normal and actual depth of trench, so that more material must be handled and it must be moved farther.

For example, assume a parapet 6 ft. high with a sectional area of 60 sq. ft., to have a vertical cover of 10 ft. This might be dug from a trench 4 ft. deep and 15 ft. wide, or from a trench 10 ft. wide and a ditch 5 ft. wide by 4 ft. deep. In soil which can be dug to 2 ft. deep only, the parapet would have to be 8 ft. high to give 10 ft. vertical cover, and its area for the same horizontal cover would be 95 sq. ft., which would require excavating 2 ft. deep and $47\frac{1}{2}$ ft. wide. The quantity of earth to be handled is greater by more than half and it must be carried, on an average, more than twice the distance.

12. Trenches are classified as firing, communicating, and cover trenches. The latter are used to shelter troops exposed to fire and not in action, as supports and reserves. They differ from firing trenches mainly in requiring no command. Communicating trenches connect firing and cover trenches and offer protected passage between them. Concealment from view is the principal requisite, as the enemy can not afford to sustain a fire on such trenches and the exposure in passing through them is to chance shots only. The important point in cover trenches is safety; it is very bad to have men hit in these trenches. They will be built with overhead cover, when necessary, to secure this condition.

Trenches are sometimes classified also as offensive and defensive, the former adapted to give exit over the parapet for the forward movement, and the latter not so adapted. Skirmisher's and kneeling trenches are offensive; standing and complete trenches are defensive, unless steps are made to facilitate mounting the parapet. Cover trenches will usually be of the same character as the firing trench. If exposed to artillery fire, cover trenches should be roofed if possible. Fig. 15 shows a plan of firing trench, cover trench, and communicating trenches, developed as a result of experience in South Africa. Fig. 16 is a section of a communicating trench. If the enemy's fire is all from one side, but one bank is needed, and all earth should be thrown on the exposed side.



Firing Trench

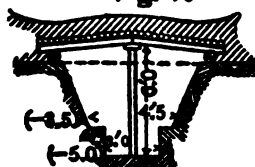
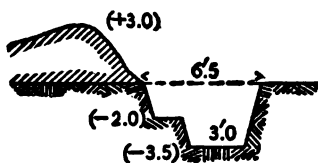
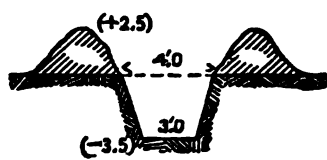
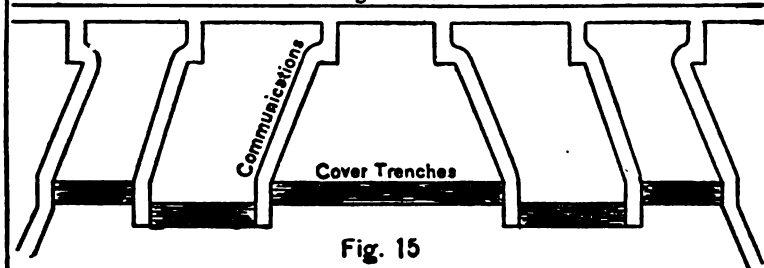


Fig. 17 is a section of an open cover trench and Fig. 18 of a closed one. This section may also be used for communicating trenches. Fig. 19 indicates an arrangement suitable when the digging is easy and the ground permits the cover trench to be dug close in rear of the firing trench. Fig. 20 shows a disposition to permit the use of a natural depression as a cover trench. Fig. 21 shows a typical form of cover for reserves or supports on a reverse slope.

13. Head cover is the term applied to any horizontal cover which may be provided above the plane of fire. It is obtained by notching or loopholing the top of the parapet so that the bottoms of the notches or loopholes are in the desired plane of fire. The extra height of parapet may be 12 to 18 ins. and the loopholes may be 3 to $3\frac{1}{2}$ ft. center to center.

Head cover is of limited utility. It increases the visibility of the parapet and restricts the field of fire. At close range the loopholes serve as aiming points to steady the enemy's fire and may do more harm than good at longer ranges. This is especially the case if the enemy can see any light through the loophole. He waits for the light to be obscured, when he fires, knowing there is a man's head behind the loophole. A background must be provided or a removable screen arranged so that there will be no difference in the appearance of the loophole whether a man is looking through it or not. Head cover is advantageous only when the conditions of the foreground are such that the enemy can not get close up.

Notches and loopholes, Figs. 22-24, are alike in all respects, except that the latter have a roof or top and the former have not. The bottom, also called floor or sole, is a part of the original superior slope. The sides, sometimes called cheeks, are vertical or nearly so. The plan depends upon local conditions. There is always a narrow part, called the throat, which is just large enough to take the rifle and permit sighting. From the throat the sides diverge at an angle, called the splay, which depends upon the field of fire necessary.

The position of the throat may vary. If on the outside, it is less conspicuous but more easily obstructed by injury to the parapet and more difficult to use, since in changing aim laterally the man must move around a pivot in the plane of the throat. If the material of which the loophole is constructed presents hard surfaces, the throat should be outside, notwithstanding the disadvantages of that position, or else the sides must be stepped as in Fig. 24. In some cases it may be best to adopt a compromise position and put the throat in the middle. Fig. 24. Figs. 25 to 28 show details and dimensions of a loophole of sand bags.

A serviceable form of loophole consists of a pyramidal box of plank with a steel plate spiked across the small end and pierced for fire. Fig. 29 shows a section of such a construction. It is commonly known as the hopper loophole. The plate should be $\frac{3}{8}$ in. thick if of special steel; or $\frac{1}{2}$ in., if ordinary metal. Fig. 30 shows the opening used by the Japanese in Manchuria and Fig. 31 that used by the Russians.

The construction of a notch requires only the introduction of some available rigid material to form the sides; by adding a cover the notch becomes a loophole. Various methods of supporting earth will be described under "Revetments." Where the fire involves a wide lateral and small vertical angle, loopholes may take the form of a long slit. Such a form will result from laying logs or fascines lengthwise on the parapet, supported at intervals by sods or other material, Fig. 33, or small poles covered with earth may be used, Fig. 32.

14. **Overhead Cover.** This usually consists of a raised platform of some kind covered with earth. It is frequently combined with horizontal cover in a single structure, which protects the top and exposed side. The supporting platform will almost always be of wood and may vary from brushwood or light poles to heavy timbers and plank. It is better, especially with brush or poles.

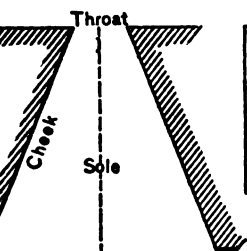


Fig. 22

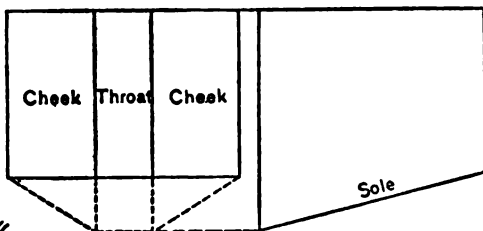


Fig. 23

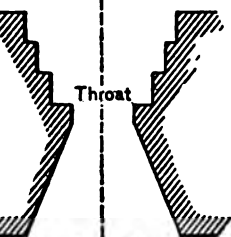


Fig. 24

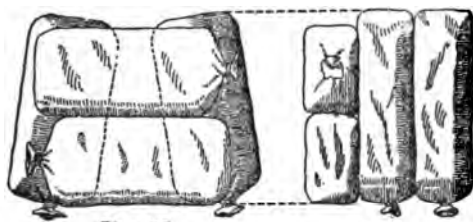


Fig. 25

Fig. 26

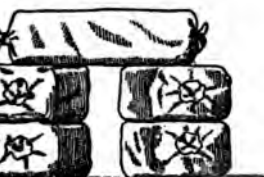


Fig. 27

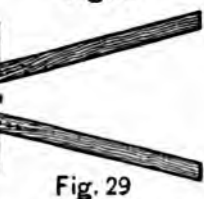


Fig. 29

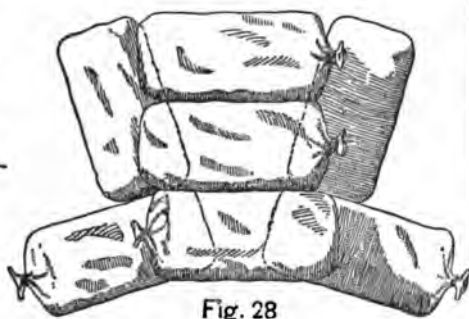


Fig. 28

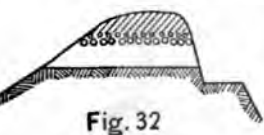


Fig. 32

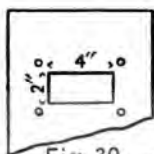


Fig. 30



Fig. 31

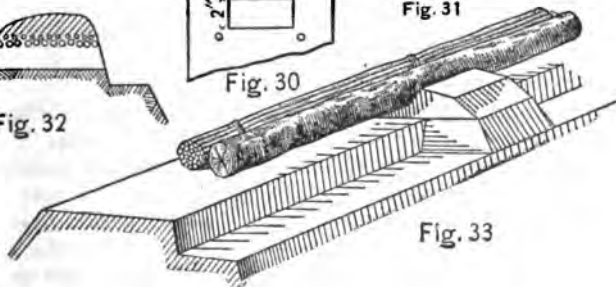


Fig. 33

to place a layer of sods, grass down, or straw, or grain sacks over before putting on the earth, to prevent the latter from sifting through.

The thickness of overhead cover depends upon the class of fire protection is desired, and is sometimes limited by the vertical space since it must afford headroom beneath, and generally should not be less than the nearest natural or artificial horizontal cover. For splinter proof cover of earth 6 to 8 ins. thick on a support of brush or poles strong enough to hold it up will suffice if the structure is horizontal. If the front is higher than the rear, less thickness is necessary; if the rear is higher than the front, more is required. For bombproofs a minimum thickness of 6 ins. of timber or 12 ins. of earth is necessary against field and siege guns, or 12 ins. of timber or 24 ins. of earth against the howitzers and mortars of a heavy siege train.

In determining the area of overhead cover to be provided, allow 100 sq. ft. per man for occupancy while on duty only, or 12 sq. ft. per man for occupancy not of long duration. For long occupation 18 to 20 sq. ft. per man should be provided.

Figs. 34 to 43 show a variety of the most usual types of overhead cover.

In a work of high command, especially if the earth is scarce and timber plentiful, it may be found that the construction of overhead cover will involve less time and labor than the corresponding work of embankment. In such cases bombproofs should be introduced at suitable points, regardless of the number of men to be sheltered.

15. Trace. In field fortification the term trace usually designates the horizontal projection of the interior crest. If the interior crest were to be a straight line (Reconnaissance), and the traverse plotted on paper or on a map, the line would be the trace. As a general rule the trace of a parapet will follow the line of best natural cover or those which determine the strongest natural cover. In practice, it usually happens that the troops are located with a view to the full advantage of the features of natural strength, and the fortification is thrown up where they are to give them additional protection.

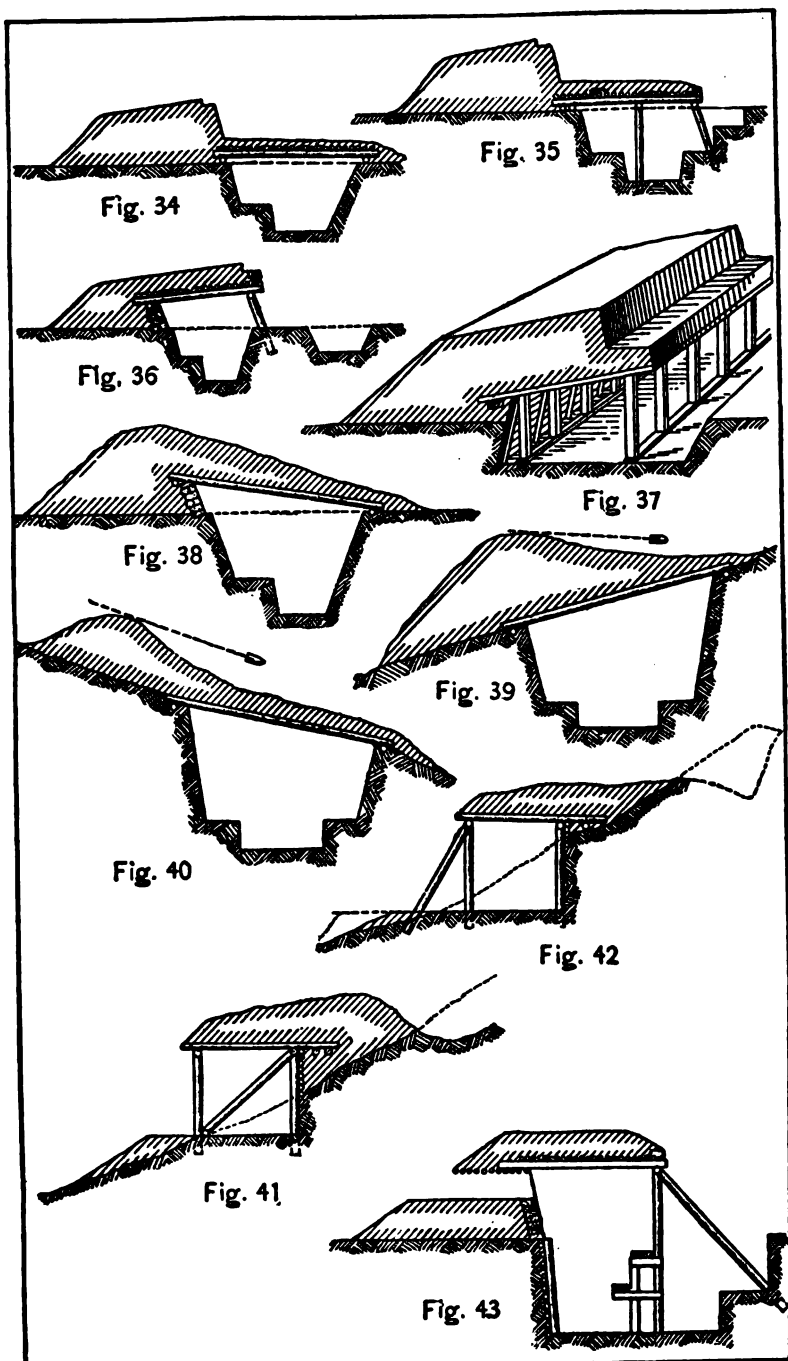
The interior crest should be horizontal, and hence the crest should follow a contour. Generally, a broken line will approach the crest closely enough and will be easier to lay out and construct. If the crest is not straight, the trace should curve also. Angles must be rounded off to make them less conspicuous, and at the beginning and end of a trench the crest should gradually rise and the parapet fall to nothing for better concealment.

The particular contour to be chosen depends upon local conditions. A section or profile of a ridge perpendicular to the general direction of the front is called the topographic crest. The summit of the ridge is called the topographic crest. The crest corresponding to the point M is the one from which all the ground in front is seen and reached by fire and is called the military crest. The sky line is the line in position. From the point G the sky line is at D. From E the sky line is at F.

In locating a line of trench, it is important—

- (a) To avoid a sky line;
- (b) To occupy the military crest or a line in advance of it, and
- (c) To preserve communication under cover with the rear.

If the ridge is steep and is intersected by ravines or covered by a line of trees through which men could move under cover, a position near the crest, as G, Fig. 44, might be better, as a plunging fire, besides being more difficult to deliver, is not so effective as a fire parallel to the crest. The crest line would not be the main line of resistance and would not as a rule be forced. A reserve line should be constructed on the military crest for the purpose of withdrawing the men from the front line under cover when it can no longer be held.



16. Kinds of Trace. Fieldworks are classified by the form of their trace into open, half-closed and closed works. An open work is one affording cover on the side of the enemy's approach only, with no preparation to resist flank or rear, attack. It may consist of a line or of lines disposed in a geometrical figure. A line of trench, like a line of men, depends upon adjacent parts of the line to protect its flanks. Ends of a line retired, as in Fig. 45, give a fire in front of adjacent trenches for flanking support.

Lines of strong profile have a dead space in the ditch or close in front of the parapet which, if the work is to stand assault, must be swept by flank fire. Adjacent works may be made to bear on this ground, or a line may be made self-flanking by giving it the trace shown in Fig. 46. The long lines may be 200 to 300 yds. long or even longer. The short lines should not be less than 12 yds. long and their crests should be held lower than the rest. Lines are always in the class of open works.

The dead space may be avoided by adopting a form of profile called the triangular, shown in Fig. 47. The disadvantages of this profile are the additional labor of construction, the diminished thickness of the upper part of the parapet, and the comparatively slight obstacle to escalade presented by the flatter slope. A flanking fire will usually be preferred to the triangular profile.

17. A redan consists of two lines called faces, *ab* and *ac*, Fig. 48, which make an angle of about 60° . This angle is called the salient; its bisecting line *ad* the capital, and the line *bc* the gorge. The redan is mainly used to secure a flanking fire along a line of parapet or a cross fire on important ground.

The exterior angle at *a* between the faces prolonged is dead space which must be denied to the enemy by obstacles or covered by fire from adjacent works, or the angle may be truncated, as shown by the full line in Fig. 48. Such a disposition is a *pan coupé*. The *pan coupé*, if short, can deliver but a small volume of fire. The truncation may be made by a broken reëntrant line, as shown dotted in the Fig. This form is called a priest cap. A redan is usually open, but may be made a half-closed work by placing obstacles across the gorge.

18. A lunette, Fig. 49, consists of four lines, two of them, *ab* and *ac*, called faces, and the other two, *bd* and *ce*, called flanks. The angles at *b* and *c* are called shoulder angles. The salient, capital, and gorge are as in the redan. The salient angle is at least 120° , which gives an effective fire on every part of the foreground and a good flanking fire as well.

The lunette is the simplest trace adapted for use in an isolated work. It may be open or half closed. In a half-closed work, either redan or lunette, the gorge defense may consist of obstacles or of a low trench, or of the two combined. In any case, a road must be left through it for communication. This road may be closed by a gate or removable barricade, or may be swept by fire from a short trench inside the gorge.

A gorge trench should have a double parapet, the front one serving as a *parados* to protect men in the trench from shots coming from the main line and also as a firing line to command the interior of the lunette in case the enemy gets in over the front. The gorge profile, Fig. 50, is a type.

19. Redoubts are works entirely inclosed by defensible parapets, though the term fort is usually applied to such a work when it has unusual strength, either by reason of its trace or its armament. In the former case a word descriptive of the trace is often added, as star fort, Fig. 51; bastioned fort, Fig. 52.

The inclosed form and the restricted and usually crowded interior space, make redoubts excellent targets for artillery, and they can not be used in situations exposed to such fire unless they can be so arranged that they can not be recognized as redoubts from the enemy's artillery positions. A favorable site is one which commands the ground around it to effective rifle range and is not visible from artillery ranges.

In preparing a defensive position, if sites meeting the foregoing conditions can be found on which redoubts can be built to flank the adjacent trenches, they should by all means be built. Redoubts in good position in rear of a line form valuable supporting points. They also find important application for isolated posts on lines of communication or in other territory when the enemy can not operate in considerable force, and will probably not have artillery. Here invisibility is less necessary, the first requisite being security for the garrison. There must, however, be no higher ground within short range, and hence, in rolling country, such works will usually be placed on hills or ridges. As they are usually to be occupied for some time, care must be taken that a supply of water is available and proper disposition of refuse provided for.

20. The trace of a redoubt will depend upon the size of the garrison to be accommodated, the configuration of the ground, and the probable direction of attack.

The garrison should always consist of one or more units of command. No work should be designed for less than a company. If a larger force than one company is needed, then two companies, and so on. It is quite usual to indicate the size of a redoubt by its garrison, as a one, two or four company redoubt. The garrison assumed, the work should be large enough to give a yard of parapet for not more than two men. The length of parapet is determined first, as the siting of a small work may differ from that of a larger one on the same ground.

The adaptation to the ground consists mainly in the determination of a closed contour having the desired length. Such a contour, generalized by taking out small kinks, will usually be the best location for the parapet.

Men 5 to 10 yds. apart may stand on the contour and hold a tracing tape at the height of the interior crest. By looking over the tape all along, it will be seen whether each part of the parapet will command the ground in front of it. If not, the crest must be advanced or raised at that point until it does. If the command is greater than necessary, the crest may be lowered or retired. Note also whether the longest faces are on the sides of easiest approach. If not, the trace must be modified to produce that result. If possible, the tape should be viewed from a short distance all around the outside, and if it makes any sharp angles on the sky line, they should be softened.

As to details of trace, straight lines are to be preferred to curves as being easier to lay out and construct and giving a better guide to direction of fire. If curves must be introduced, they should have at least 20 yds. radius. All faces should be long enough to give effective volume of fire. Ten yds. will usually be a minimum. A quadrilateral with truncated corners is a good type. If two adjacent faces intersect at an angle of 30° or less, truncation is not necessary. The longest face should bear on the ground from which the strongest attack is to be expected and the entrance will usually be on the opposite side, though if attack from any direction is especially difficult, the entrance should be on that face.

21. Profile. So far as regards the effectiveness of its fire, the command of a redoubt need not be greater than that of a trench on the same ground. A high command will better screen the interior space and offer greater resistance to assault, but will increase the visibility of the work and the labor of building it. The horizontal cover need not, as a rule, be as thick as the adjacent trenches, as the latter will certainly be exposed to deliberate artillery fire and the redoubt, as a rule, will have to resist unaimed and scattering artillery fire only. A necessary feature is a trench deep and wide enough to give complete shelter and free communication.

22. Interior Arrangements. The most important thing is the protection of

protection from flank and reverse fire. When invisibility is not essential, a trench of 6 or 7 ft. is the easiest method of giving interior protection. Exposed overhead cover will be necessary. It need not ordinarily be heavy. A layer of earth on brushwood stiff enough to support it will usually suffice. Long-range fire may be expected from the front only, the overhead cover developed along the front edge of the trench of the front face, in excavation perpendicular to the trench on the flanks, and along the edge of the trench behind the parapet in the gorge.

In the case of possible all-round long-range fire, short galleries should be run out to the rear of all trenches. This development of covered trenches may continue, if necessary, until the entire interior of the redoubt is converted into an underground camp. The parapet trenches and the shelters in them must be well covered, the former by blocks of earth with oblique or crooked passages cut through them, and the latter by splinter-proof partitions of brush and earth.

Figure 50 shows a typical plan, with sections, of a redoubt on level ground, the command of 7 ft. is permissible. (See par. 22a, p. 1248.)

General Considerations. The proper use of shelter trenches for the protection of firing lines is a matter of utmost importance to success. It may be regarded as a principle, established by experience, that a line of men can not remain stationary under fire without cover, natural or artificial. This is true in every phase of action, whether advancing, retreating, or standing on the defense.

Cover at all times is desirable; on the move it may be dispensed with, but it is never absent. In some cases the cover will be partly natural and partly artificial, the former, partial natural cover artificially improved. In a majority of cases, however, conditions of fire efficiency and concealment will require a line to be placed where it could not possibly live without artificial cover. Another principle which may be accepted is, that on the offensive the line must determine the general position of the cover and not the cover the position of the line. The position of the line at any moment of a battle depends on tactical conditions and the progress and incidents of the fight. To prepare trenches in advance, except for defensive occupation, is to attempt to predict the future.

It follows that all troops not in a defensive attitude must prepare their own cover after occupying a line or after they are halted. The importance is paramount of having available for instant use on every firing line the appliances and training to enable the men to get sufficient cover in the shortest possible time. This involves not alone the training of the men to use the tools provided, but also the knowledge and skill of their own officers to locate the trenches to the best advantage. There is no time to wait for instructions or advice from the outside.

The line itself will, as a rule, determine the general position of the cover, and conditions will exercise a great influence on the detailed dispositions of the line. An inferior unit may be advanced or retired to get better command of its field of fire or to find easier digging. It must not be advanced enough to interfere with the fire of adjacent troops on its flanks, nor be retired enough to allow them to interfere with its own fire. Trenches must not be continuous and should not be longer than suffices to contain the men of the firing line. Men should not be crowded together, neither should they be isolated. The best disposition is in self-sustaining groups, advantageously distributed. A trench should be long enough at least to take a company or half-company lengths are, on the whole, the best. A continuous line should be avoided.

In studying the command of the ground from a given line the eye should be directed at the adopted height of parapet, or if the line is adopted, then the necessary height of parapet must be determined in the same way. What

can be seen 1 ft. from the ground will often be very different from what can be seen at 5 ft. When possible, proposed lines of trenches should be examined from the ground over which the enemy must approach, as suggested for redoubts, Par. 20.

It will seldom happen that the entire field of fire to the limit of effective range can be completely swept from any position that can be selected. A position should be sought which reduces the dead spaces to a minimum in number and extent, and, if possible, advanced or auxiliary trenches should be located to sweep them. If the ground is open to 1,000 yards or more, the long or mid range is more important than the short range, for an effective fire on the enemy while he is advancing from 1,200 yds. to 200 yds. range will almost certainly put him out, or, if by any chance he arrives at 200 yds. in condition to keep on, little can be gained by holding him under fire from 200 yds. in, and a retirement is in order. In both cases, the disadvantage of dead space in the close foreground is more apparent than real and the main trenches should not sacrifice command of more distant ground within effective range in order to sweep the foreground. Such dead ground must be commanded at night or in thick weather by trenches detached or in flanking relation.

On the contrary, if an enemy can approach under cover to mid range or less, there will scarcely be time to stop him by fire alone and obstacles are desirable at close range, which must be commanded by fire. The trenches, in such cases, must be advanced to cover the close foreground, and if necessary, another line in a different position established to sweep the more distant ground.

In a rear-guard position, the object is to force the enemy to deploy and to delay him to a certain extent, and then retreat to another position before his advance to close range and before his fire becomes annoying. The command of the foreground is of no consequence, while a safe withdrawal is all-important, and the front slope of a ridge should be avoided. The forward edge of a plateau will do, or, if the plateau is long enough, the rear edge may be occupied. If there is timber on the plateau, its front edge should be the location of the line.

When concealment of the general position is not possible, as in case of a detached post guarding a well-defined and known objective, deception must take its place. The trenches actually occupied must be so arranged as to afford concealment of the individual man, and dummy trenches, purposely made easily visible, may be arranged to draw the enemy's fire. Dummy trenches should have head cover, not only to make them more conspicuous but also to make it more difficult to discover whether they are occupied or not. They are better above and behind the occupied trenches, if the lay of the ground permits. The enemy will observe that fire comes from the direction of the dummies and will conclude that it comes from them. Fire directed on the dummies will pass over the heads of the defenders, a condition preferable to shots falling short, which would be the result of dummies in front of occupied trenches.

When an organization is designated to a particular part of a general line the duty devolves upon its commander to determine what is to be done in strengthening his position and get the work started without delay. He will direct what clearing is to be done or accidents utilized, and where and how the trenches are to be dug. All the working force available should be divided between preparation of the field of fire, working progressively forward, and the construction of cover, working generally from the center of the position toward the ends, and giving first attention to points where

the least work will secure the most and best cover. If work is interrupted by an attack, that which has been done will be of full use.

24. Revetments. A revetment is a covering or facing placed upon an earth slope to enable it to stand at an inclination greater than its natural inclination. Steep interior slopes are easier to fire over, give better cover, and increase the horizontal space available. Some revetments also increase tenacity of slopes and diminish the injury from fire. Revetments are applied to the interior slopes or breast heights of parapets for all of the above reasons and to traverses for all except the first.

The upper parts of revetments which may be struck by shots which have penetrated the cover of earth must not be made of materials of large units or which splinter when struck. The construction of the upper part of a revetment is often referred to as crowning.

25. Sand-bag Revetments. A sand bag is 33 ins. long and 44 ins. wide. In use it is loosely filled with earth or sand, requiring about $\frac{1}{2}$ cub. ft. of earth, and having been placed in position is flattened with a shovel to roughly rectangular form, in which it fills a space about 20 x 13 x 5 ins. The bags weigh about 62 lbs. per 100, and when filled about 65 lbs. each.

A sand-bag revetment is constructed by laying the filled bags as stretchers and headers, or as headers alone. The top row should always be headers. The tied ends of headers and the seams of stretchers should be in the parapet. Sand bags give no splinters and are conveniently used for the entire parapet when necessary. As they are more readily transported than corresponding quantities of any other revetting material, they are of great importance in field fortification. Their perishability is a disadvantage, though in many soils a surface revetted with bags will stand after the bags have lost their strength through decay. Sand bags are so valuable for crowning and repairs, however, that the stock on hand should not be exhausted in original construction if anything else can be had.

Fig. 53 indicates the appearance of a sand-bag revetment as seen from the front and from the end.

Rate of Working. A squad of 6 men, 2 shovels, 1 pick, 1 bag holder, and 2 tiers should, in fairly loose soil, fill 150 bags an hour.

Supposing the bags to be filled from the ditch or trench, with 10 additional men, 6 to carry and 4 to lay, or a squad of 16 men all told, 150 bags per hour can be taken care of, making 75 sq. ft. of revetment.

26. Sod Revetment. A convenient size to cut sods is 18 x 9 x 4 $\frac{1}{2}$ ins. If tough, they may be cut larger, but the length should be twice the breadth. They are laid, grass down, in courses, alternately all headers and all stretchers, the latter double, with broken joints. A bed should be prepared at the proper inclination to receive the bottom course and give it the right pitch. The top course is laid grass up and all headers. If the sods show a tendency to slip, they may be pinned together with wooden pickets.

Sod revetments will not stand quite so steep as sand bags in the same soil. It is usual to allow a 3 to 1 slope for sods. The revetment should be built steeper if the soil is such that it will stand. Fig. 54 shows an elevation and section of a sod revetment.

Four sods, 18 x 9 x 4 ins., laid, make a sq. ft. of revetment, but as there is some wastage, 450 or more sods must be cut for each 100 sq. ft. of surface to be revetted. If the grass is long, it should be mowed before cutting sods.

One man should cut 30 sods per hour, or place the same number. A sod plow will cut as fast as 50 men.

If carrying is done by hand, multiply the number of sods to be moved

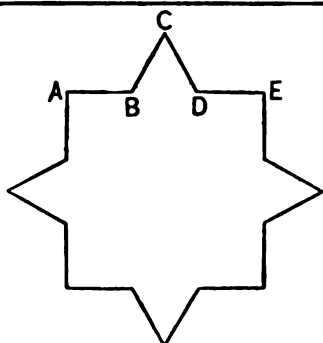


Fig. 51

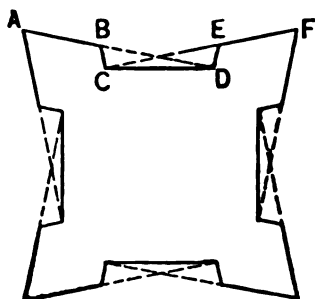


Fig. 52

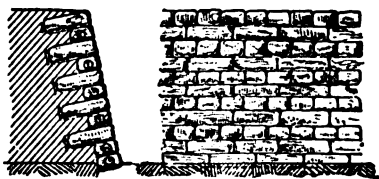


Fig. 53

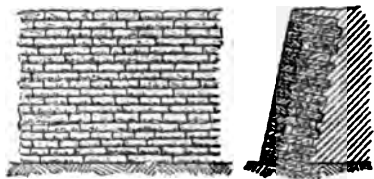


Fig. 54

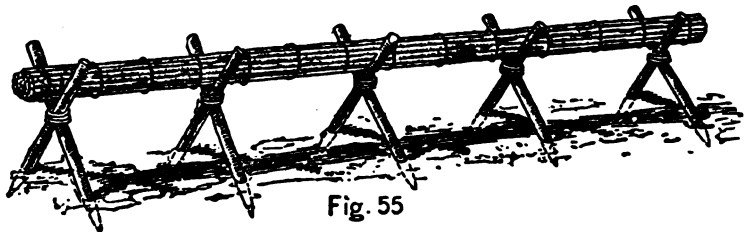


Fig. 55

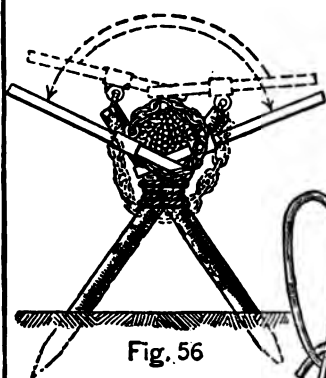


Fig. 56



Fig. 59



Fig. 57

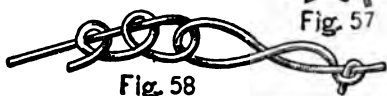


Fig. 58

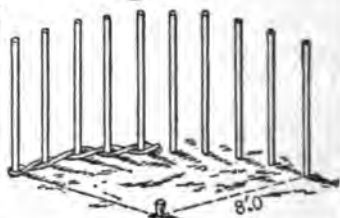


Fig. 60

by the average length of carry in yds., and divide the product by the number of carriers. They should work in pairs, carrying 8 between them. If wagons are available, estimate as though moving making 72 sods to the cu. yd. Unloaders will be required, as the sods be dumped, say one man for 300 sods per hour. If ordinary sodding be done, for concealment or to prevent rain wash, use the same ratios ing, hauling, and laying, allowing 8 sods to the sq. yd. laid, or 9 cut.

Brush Work. Brush is used in many forms in revetting. Any kind, but the best is willow, birch, ash, hickory, or hazel. For weaving it be live, and is most pliable when not in leaf. Split bamboo of dimensions, reeds, or similar vegetation, may be considered as a form sh in all revetment constructions.

h for weaving should not be more than an inch in diameter at the That to be used straight may be of larger size. In cutting, brush be assorted in sizes for the various uses and made up in bundles o 60 lbs., the butts in one direction. The range of weights is given vey a general idea of the size of bundles. The determining condition each bundle shall make a gabion, which will soon be determined ork begins. Poles of $2\frac{1}{2}$ in. diam. at the butt or larger are not bundled, piled together. They are used for posts, binders, grillage, and similar es.

amount of labor required to cut brush will vary with its character, or hard or soft, crooked or straight, thick or thin. A rough average e taken at 6 bundles per man per hour. The men work in pairs, one and one sorting, piling, and tying.

carrying by hand, multiply the number of bundles by the carry in and divide by 2,200 for the number of men required. If transporta- by teams, assume 35 bundles to equal 1 yd. and figure as for earth. A fascine is a cylindrical bundle of brush, closely bound. The usual is 18 ft. and the diam. 9 ins. when compressed. Lengths of 9 and 6 ich are sometimes used, are most conveniently obtained by sawing dard fascine into 2 or 3 pieces. The weight of a fascine of partially ed material will average 140 lbs.

ines are made in a cradle which consists of five trestles. A trestle e of two sticks about $6\frac{1}{2}$ ft. long and 3 ins. in diam., driven into the l and lashed at the intersection as shown in Fig. 55. In making a plant the end trestles 16 ft. apart and parallel. Stréck a line from the other over the intersection, place the others 4 ft. apart and lash so that each intersection comes fairly to the line.

ould a fascine, straight pieces of brush, 1 or 2 ins. at the butt, are , the butts projecting at the end 1 ft. beyond the trestle. Leaves should pped and unruly branches cut off, or partially cut through, so that ill lie close. The larger straighter brush should be laid on the out- butts alternating in direction, and smaller stuff in the center. The l object is to so dispose the brush as to make the fascine of uniform strength, and stiffness from end to end.

n the cradle is nearly filled, the fascine is compressed or choked by scine choker, Fig. 56, which consists of 2 bars 4 ft. long, joined ins. from the ends by a chain 4 ft. long. The chain is marked at 14 ch way from the middle by inserting a ring or special link. To use, en standing on opposite sides pass the chain under the brush, place ort ends of the handles on top and pass the bars, short end first, to each other. They then bear down on the long ends until the

marks on the chain come together. Chokers may be improvised from sticks and rope or wire.

Binding will be done with a double turn of wire or tarred rope. It should be done in 12 places, 18 ins. apart, the end binders 3 ins. outside the end trestles. To bind a fascine will require 66 ft. of wire.

Improvised binders may be made from rods of live brush; hickory or hazel is the best. Place the butt under the foot and twist the rod to partially separate the fibers and make it flexible. A rod so prepared is called a withe. To use a withe, make a half turn and twist at the smaller end, Fig. 57; pass the withe around the brush and the large end through the eye. Draw taut and double the large end back, taking 2 half-hitches over its own standing part, Fig. 58.

When the fascine is choked and bound, saw the ends off square, 9 ins. outside the end binders. After a cradle is made, 4 men can make 1 fascine per hour, with wire binding. Withes require 1 man more.

A fascine revetment is made by placing the fascines as shown in Fig. 59. The use of headers and anchors is absolutely necessary in loose soils only, but they greatly strengthen the revetment in any case. A fascine revetment must always be crowned with sods or bags.

29. In all brush weaving the following terms have been adopted and are convenient to use:

Randing. Weaving a single rod in and out between pickets.

Slewing. Weaving two or more rods together in the same way.

Pairing. Carrying two rods together, crossing each other in and out at each picket.

Wattling. A general term applied to the woven part of brush construction.

30. A hurdle is a basket work made of brushwood. If made in pieces, the usual size is 2 ft. 9 ins. by 6 ft., though the width may be varied so that it will cover the desired height of slope.

A hurdle is made by describing on the ground an arc of a circle of 8 ft. radius and on the arc driving 10 pickets, 8 ins. apart, covering 6 ft. out to out, Fig. 60. Brush is then woven in and out and well compacted. The concave side of a hurdle should be placed next the earth. It warps less than if made flat.

In weaving the hurdle, begin randing at the middle space at the bottom. Reaching the end, twist the rod as described for a withe, but at one point only, bend it around the end picket and work back. Start a second rod before the first one is quite out, slewing the two for a short distance. Hammer the wattling down snug on the pickets with a block of wood and continue until the top is reached. It improves the hurdle to finish the edges with two selected rods paired, Fig. 61. A pairing may be introduced in the middle, if desired, to give the hurdle extra endurance if it is to be used as a pavement or floor. If the hurdle is not to be used at once, or if it is to be transported, it must be sewed. The sewing is done with wire, twine, or withes at each end and in the middle, with stitches about 6 ins. long, as shown in Fig. 61. About 40 ft. of wire is required to sew one hurdle. No. 14 is about the right size, and a coil of 100 lbs. will sew 40 hurdles. Three men should make a hurdle in 2 hours. 2 wattling and the third preparing the rods.

31. **Continuous Hurdle.** If conditions permit the revetment to be built in place, the hurdle is made continuous for considerable lengths. The pickets may be larger; they are driven farther apart, 12 or 18 ins., and the brush may be heavier. The construction is more rapid. The pickets are driven with a little more slant than is intended and must be anchored to the parapet.

of poles with wire attached at intervals of 2 or 3 pickets will answer. Wires should be made fast to the pickets after the wattling is done. This will interfere with the weaving if fastened sooner. Two men should be able to make 4 yds. of continuous hurdle of ordinary height in one hour.

Brush Revetment. Pickets may be set as above described and the brush laid inside of them without weaving, being held in place by bringing the brush up with it. In this case the anchors must be fastened before the weaving begins. The wires are not much in the way in this operation.

Gabion Making. A gabion is a cylindrical basket with open ends, made of brush woven on pickets or stakes as described for hurdles. The usual size is 2 ft. outside diam. and 2 ft. 9 ins. height of wattling. On account of the sharp curvature somewhat better brush is required for gabions than will do for hurdles.

The gabion form, Fig. 62, is of wood, 21 ins. diam., with equidistant notches around the circumference, equal in number to the number of pickets to be used, usually 8 to 14, less if the brush is large and stiff, more if it is small and pliable. The notches should be of such depth that the pickets will fit tight to 1 in. outside the circle. The pickets should be $1\frac{1}{4}$ to $1\frac{3}{4}$ ins. long, 3 ft. 6 ins. long and sharpened, half at the small and half at the large end.

To make a gabion, the form is placed on the ground, level or nearly so, and the pickets are driven vertically in the notches, large and small ends alternately. The form is then raised a foot and held by placing a log or board around outside the pickets, tightened with a rack stick, Fig. 63. The log is randed or slewed from the form up. The form is then dropped and the gabion inverted and the wattling completed. If the brush is uniform, and pliable, pairing will make a better wattling than randing. For immediate use, the gabion must be sewed as described for hurdles, the same quantity of wire being required.

A gabion, when wattled and sewed, is completed by cutting off the tops of the pickets 1 in. from the web, the bottom 3 ins., the latter sharpened by cutting, and driving a carrying picket through the middle of its length a little on side of the axis. See that the middle of this picket is smooth. Two men should make a gabion in an hour.

Gabions may be made without the forms, but the work is slower and not so good. The circle is struck on the ground and the pickets driven at the proper points. The weaving is done from the ground up and the entire work of one man is required to keep the pickets in proper position.

If brush is scarce, gabions may be made with 6 ins. of wattling at each end, the middle left open. In filling, the open part may be lined with straw, brush cuttings, or grain sacks, to keep the earth from running out.

Gabion Revetment. The use of gabions in revetments is illustrated in Fig. 65. If more than two tiers are used, the separating fascines should be anchored back. Gabion revetments should be crowned with sods or bags. The advantages of the gabion revetment are very great. It can be put in place without extra labor and faster and with less exposure than any other method. It is self-supporting and gives cover from view and partial cover from fire quicker than any other form.

Several forms of gabions of other material than brush have been used, wire, iron and iron and paper hoops are some of them. The iron splinters are heavy, and has not given satisfaction. If any special materials are used the method of using them will, in view of the foregoing explanation, be obvious.

Timber or Pole Revetment. Poles too large for use in any other way

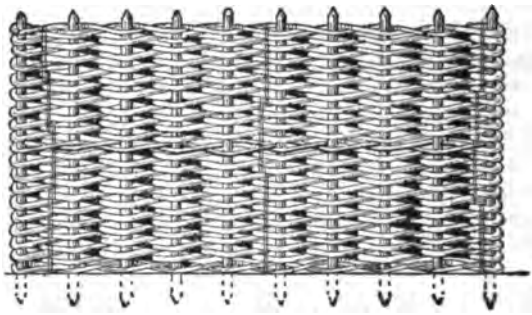


Fig. 61



Fig. 62



Fig. 63

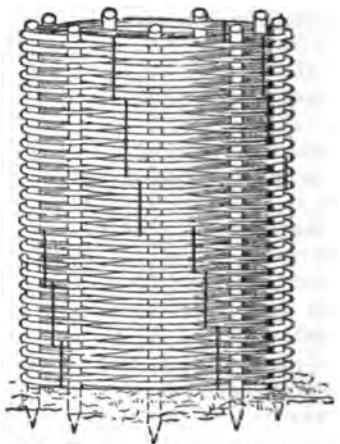


Fig. 64

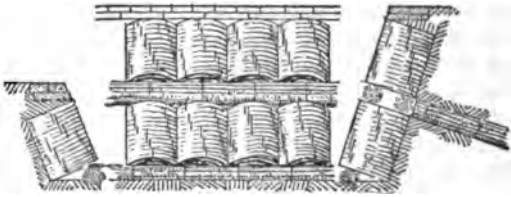


Fig. 65

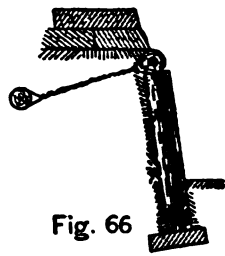


Fig. 66

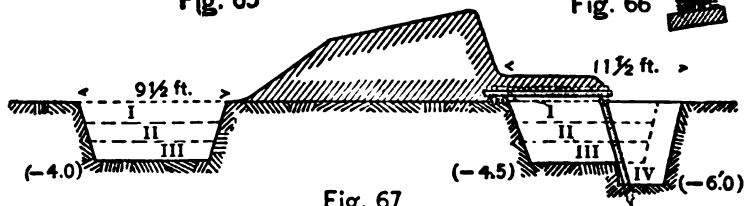


Fig. 67

be cut to length and stood on end to form a revetment. The lower should be in a small trench and have a waling piece in front of them. must also be a waling piece or cap at or near the top, anchored back. 6 shows this form.

Miscellaneous Revetments. Any receptacles for earth which will make a compact pile, as boxes, baskets, oil or other cans, may be used for revetment. Barrels may be used for gabions. Canvas stretched behind is well thought of in a foreign service. If the soil will make adobe, sun-dried bricks, an excellent revetment may be made of them, but it will not stand wet weather.

Execution of Fieldworks. Tracing is the operation of marking on the ground the lines which determine the horizontal limits of cutting and embankment. Profiling is the operation of indicating the actual positions of such lines and slopes as are necessary to determine the proper sectional dimensions of trench, ditch, and parapet.

Tracing and profiling are not independent operations. The trace depends upon the profile and the profile upon the trace. They will be considered separately under one title. For shelter trenches the profile is standardized, and the proper parapet results from the excavation of the necessary trench. The trace may be roughly determined as circumstances permit. The alignment of a line of skirmishers will do, if nothing better is possible. Heavy fortifications will not often be built under fire, but if they are, the same rules must be followed. For such works, executed deliberately, the following plan may be followed:

The first step is to mark on the ground the projection of the interior crest, sometimes called the firing crest. It may be marked continuously by running a line or by scratching the surface with a pick, or at intervals of 5 feet by small pegs set to a line or ranged in.

The second step is to determine the command or height of the interior crest above the natural ground at as many points as the variation of the ground may make necessary. The thickness of the parapet having been determined, the area of the parapet section and its ruling dimensions result.

The third step is to complete the profile by determining the depth and width of trench and of the ditch if there is to be one.

The fourth step is to mark on the ground, parallel to the interior crest at proper distances from it, the edges of ditch and trench and the exterior crest. This marking is best done with pegs at 5 ft. interval or such other distance as may be allotted for each man's task.

The fifth step is to indicate the actual position of interior and exterior crest by setting up stakes of sufficient height to mark on each the height of the crest line.

The third of the foregoing steps is the only one which presents any difficulty. Table I gives areas of parapet sections for certain heights or commands, s , h , and thickness of parapet, t , on the supposition that the ground is level, the exterior slope and the interior or breast height slopes, each 1 on 1, and the superior slope 1 on 6. The assumed breast height slope gives a surplus of earth, increasing with the height. For low parapets it is material; for high ones it supplies earth for a banquette. If the site is to the front, increase the area by the percentage for the corresponding slope at the right of the table. If the slope is to the rear, decrease the area by the same percentages. Having the area of the parapet, the dimensions of the trench, or of the trench and ditch together, must be taken as to give at least an equal area, and preferably, not much more. If $h + s$ is not more than 8 ft., the entire parapet can be built from a

trench at a single cast. If $h + s$ is greater than 8 ft. and 16 ft., the entire parapet can be built from a trench and cast. If $h + s$ is greater than 16 ft., some of the material ported or rehandled, no matter where it is obtained, though any case will be less if both trench and ditch are dug than if is relied upon. Time also is saved by working from both because the labor is reduced, but principally because more employed simultaneously.

38. Working parties should be made up, so far as possible, in organizations. A battalion should be ordered to send one, two, or a regiment, one or two battalions; and a brigade, one or two.

The party is divided into two or more reliefs, and here a system of keeping organizations intact applies. If a regiment is to be in reliefs, each should consist of an entire battalion. This should be so even if it makes reliefs of somewhat unequal strength. The number of privates should be $\frac{1}{2}$ more than the number of men that are employed simultaneously.

Reliefs are regulated by work rather than by time. The work to be done by each relief must be plainly indicated and the noncommissioned officers of each organization are responsible to do the quantity of work assigned to them. As soon as any organization has completed its work, it should be dismissed.

39. To place a relief on the work, the organizations approach the tools in column of files, rifles slung, pass between the tools, shovels on the right and picks on the left. Engineer passes pile hand tools to the men as they pass, each man taking a shovel in his right hand and a pick in his left. The corporal or squad leader goes himself alongside the rear file of his squad and one of the files and the other a shovel.

Proceeding in suitable formation to one flank of the line to be worked, if in column of files, the head of the column parallel to a line in rear of the rear cutting line, the column forms in line at 10 ft. intervals, the corporal and the rear file of each squad taking post in rear of the squad. The interval is most conveniently maintained by having the men extend the arms horizontally as they pass. Each organization is assigned to a particular part of the work to do to it and deploys independently of the rest. If the line of work should be furnished to direct the head of each column to its place, its deployment is to begin. At night guides must always be placed.

As the men are posted, each lays his shovel 5 ft. behind him, parallel to it, and drives his pick into the ground on the line of his task. Rifles and equipment are removed and placed to the rear, butts of guns to the front. The corporal or squad leader and the rear file of the squad take their places in rear of their respective organizations and their equipments in the line with the rest. The corporal acts as foreman of the squad during the work and number 8 is put in when necessary to expedite the work of the squad in the place of a man who is obliged to fall out for any cause.

40. Tasks. The capacity of the average untrained man in digging does not much exceed 80 cu. ft. for easy soil; 60 cu. ft. for medium soil, and 40 cu. ft. for hard soil. He will do $\frac{3}{8}$ of this in the first two hours, and the other $\frac{3}{8}$ in another two hours, making an hourly average of $\frac{3}{16}$ of the task for the first, and $\frac{3}{16}$ for the second hours. In addition to the fact that he works but a little of

in the second 2 hours, four hours' work will leave him unfit for fighting or marching, while after two hours' work he should be able to do either. The quantity of work assigned to each relief should be that which can probably be done in 2 hours, and the relief is required to finish it and no more, whether it takes less or more time. For the first work, the soil is apt to be loose and the lift is less, so that a slightly greater task should be given to the first relief than to the second. Assuming men at 5 ft. intervals and neglecting fractions, the number of hours' work required to throw up a parapet is the section of the parapet in sq. ft. divided by 5 for easy, 4 for medium, and $2\frac{1}{2}$ for hard soil.

Determination of Task. The length over which each man works is settled when the intervals are assigned for the deployment. The individual task is the width and depth of excavation, which, carried over this length, will make the volume corresponding to 2 hours' fair average work. When either width or depth is determined, or assumed, the other results.

The task of the relief is defined when the width and depth of cut are stated or shown on a profile. As a rule, the lines dividing tasks should be horizontal or nearly so.

41. Double Gangs. When men are plenty, tools scarce, or time presses, a task may be completed in about $\frac{2}{3}$ of the ordinary time by detailing two men at each set of tools. In this case the organizations march to the tools in columns of twos, the right file taking shovels and the left file picks. The two gangs change off at frequent intervals and the men work as rapidly as possible.

42. Changing Reliefs. Each man of the first relief, as he completes his task, cleans the tools and lays them down as at first. The relief is then moved to the rear, the men resume their arms and equipments, and are formed in column and march off. As soon as they are out of the cut the succeeding relief may enter at one end and form line to the flank, each man taking his place at the first set of tools he comes to.

43. Example. Let it be required to design and construct 100 ft. of the front parapet of an inclosed work to resist siege guns at long range, sited on ground sloping 1 on 12 to the front, soil easy, materials procurable for reveting and cover, and 9 hours' time available.

Command. Determine by trial the least height above the ground along the crest at which the foreground can be seen and swept by fire, Par. 20. This is the command or height of parapet. Assume it for this case at 6 ft.

Thickness and Relief of Parapet. As the severest fire is that of siege guns at long range, the minimum thickness for such guns will answer. Assume it at 10 ft. The long-range fire will have a high angle of fall, which calls for good interior relief or vertical cover and ample overhead cover.

The area of parapet for 6-ft. height, 10-ft. thickness, is, from Table I, 78 sq. ft. Add for 1 on 12 slope 8%, giving 85.1 sq. ft., or, for convenience, 85 sq. ft. This divided by 5, the factor for easy soil, gives 17 hours' work from one side; but as $h + s = 16$ ft., the work should be done from both sides, and $8\frac{1}{2}$ hours are required for a single relief, or a trifle under 6 hours for double reliefs. The time limit of 9 hours permits a single relief.

Overhead Cover. One hundred feet of parapet will be defended by 65 men, for whom 12 sq. ft. per man of overhead cover should be provided, or 7.8 sq. ft. per linear ft. of crest. This being too much, assume 6 sq. ft. per ft. of crest, giving cover for 50 men. This gives 6 ft. as the width of the cover. Cover for the remaining 15 men must be provided in rear of the trench. The cover along the parapet may be on the front edge of the ditch. As there will be a banquette $1\frac{1}{2}$ ft. above ground level, this may

be continued to the rear to form the overhead cover. Allowing $1\frac{1}{2}$ ft. for thickness of earth and brush and $4\frac{1}{2}$ ft. headroom, the floor of the shelter will be at (-4.5) ft. and the bottom of the trench may be at (-6) ft., giving 12 ft. total vertical cover. The area of the profile under the cover will be $4\frac{1}{2} \times 6 = 27$ sq. ft. The part of the trench in rear of the cover should be 3 ft. wide at the bottom, or say 4 ft. wide at mid-depth. At 6 ft. depth its area will be 24 sq. ft., which, added to the 27 ft. deduced above, gives 51 sq. ft. total trench area, leaving 34 sq. ft. for the ditch, which may be assumed at $9\frac{1}{2}$ ft. top width and 4 ft. deep. The profile which results from these assumptions and deductions is shown in Fig. 67.

Four reliefs should be provided. Thirty per cent. of the digging may be assigned to the first relief, 25 per cent. each to the second and third, and 20 per cent. to the fourth, which will work in the trench only, and will have to build the overhead cover and rehandle its earth. Lines which apportion the tasks as indicated are shown on the profile. The first relief in the trench would be ordered to dig $9\frac{1}{2}$ ft. wide on top and $1\frac{1}{2}$ ft. deep. The first in the ditch $1\frac{1}{3}$ ft. deep, etc.

The revetment will be of gabions. If they have not been made beforehand they and the fascines should be on the ground within 3 hrs. and the brush and poles for splinter proofs should be on the ground within 5 hrs. after work begins. Fifty gabions and 6 fascines are required. Assume that they are made 600 yds. from the work and carried by hand. To make and deliver 50 of them in 3 hrs. would require 3 men to cut brush, 50 men to make, and $17 \times 600 \div 2,200 = 5$ men to carry, a total gabion party of 58 men. To make and deliver the 6 fascines in 3 hrs. will require 2 men to cut brush, 8 men to make, using 2 cradles, and 5 men to carry, a total of 13 men for the fascine party, or $58 + 13 = 71$ for the brush. The same party can cut and carry the brush for the overhead cover between the third and fifth hours. A company would likely be assigned to this work.

The total force required to construct the parapet in less than 9 hrs. will be—

| | |
|--|---------|
| Excavation and embankment, 4 reliefs of 40 men each..... | 160 men |
| Revetment and cover, 1 relief of | 71 men |

| | |
|-------------|---------|
| Total | 231 men |
|-------------|---------|

44. Traverses. The protected area in rear of a parapet as determined for a shot grazing and perpendicular to the crest, is reduced for a grazing shot with the same angle of fall coming at an angle to the crest. If a straight shot will clear a man's head at a certain distance back, oblique shots with the same angle of fall will clear a man at 90% of that distance for an angle of 26° with the perpendicular; 85% for 32° , and 80% for 37° . At 37° the distance is decreasing at the rate of 1% for each deg. For enfilade and reverse fire the parapet gives no cover at all.

To secure sufficient protection against very oblique, enfilade, or reverse fire, masks must be introduced to intercept such shots before they fall below the plane of desired protection. Such masks are called traverses. To those which are designed to intercept reverse fire, and which are mainly parallel to the parapet which they shelter, the name *parados* is given. The word *traverse* usually indicates a mask making an angle with the parapet which it protects and joined to it. Traverses may be of any available horizontal or overhead cover, but are usually topped with earth. They are revetted to make them take as little space along the parapet as possible, except that between guns there is sometimes room for earthen traverses with sloping sides. As the

can not be reached by fire, it need only form a support for the often a good place to provide magazine or shelter space.

Between Traverses. The effective distance is the interval between of one traverse and the adjacent face of the next. If the crests of traverses are at the same elevation as the crest of the parapet, a distance of 0.43 of the width of protected area, for direct fire gives 90% of that width; 0.52, 85%, and 0.6, 80%.

Traverses of the traverses are raised above the crest of the parapet, the distance between traverses may be increased by the excess height multiplied by the assumed angle of fall, without reducing the width of the protection, Fig. 71. Fig. 72 shows a plan and side elevation of a raised traverse with reference to its connection with the parapet. The full lines show the position when the crest of the traverse ends at the interior crest, and the dotted lines indicate the arrangement when the crest of the traverse is beyond the interior crest. Care must be taken that raised traverses make the position conspicuous. Traverses must be at least as long as the width of protection they are to give, and should be somewhat longer. **of Traverses.** The cross section of a traverse should be as nearly rectangular as possible. The vertical sides give the maximum thickness with minimum space, and the flat top gives a crest on each face and increases the protection by half the thickness, Fig. 69. If exposed on one side only the arrangement in Fig. 70 is suitable.

A traverse may be used as a firing parapet by providing a banquette or parapet of proper height.

of Traverses. A trench may be traversed by making an offset to the trench as shown in Fig. 73, and throwing up a bank of earth on the block side of the trench. Fig. 74 shows a form of double traversing. The long high traverses give protection to men not firing, and the short traverses give increased protection to the more exposed space near the interior crest. For high traverses the object should be to get a support up to the height where exposure is less with the least time and labor. If the structure can be made of planks much the better. An elevated platform of planks, supporting a layer of earth, revetted with sods or sand bags, will make a good traverse. If sods are the only material available, the entire traverse will be revetted, and Fig. 69. Below the plane of fire, any revetment may be used; above, the revetment which have been described for crowning a parapet revetment may be employed.

Stockades. A stockade is an improvised bullet-proof wall or screen, adapted to defense by rifle fire. As compared with a parapet, the advantages of a stockade are that it combines obstacle and parapet, gives a large and ample interior space, and the labor of construction increases very little with the height. The disadvantages are the uncertainty of protection of suitable material, the labor of construction, which is greater than for a parapet, except for considerable heights, and that most forms of stockades afford no cover, and the best of them only temporary cover, and are very costly.

Construction. The simplest form consists of a closed barricade of timbers and reinforced by earth, Fig. 76. The inner embankment forms the parapet. The outer one fills the dead angle at the foot of the wall and affords protection against artillery fire. It makes a stockade easier to construct if the slope is steep and the tops of the timbers properly prepared by driving spikes or stringing barbed wire, the effect in that direction is greatly increased.

A row of timbers affords too little protection unless they are squared

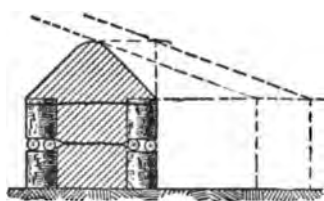


Fig. 68

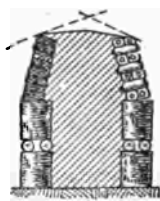


Fig. 69

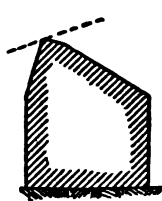


Fig. 70

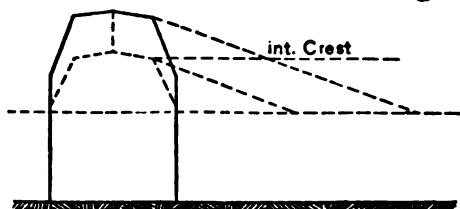


Fig. 71



Fig. 73

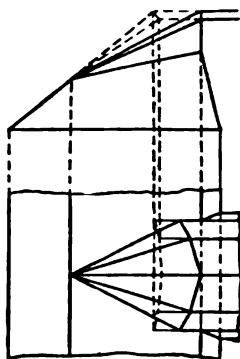


Fig. 72

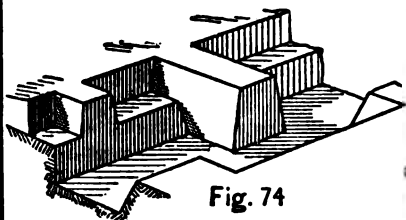


Fig. 74

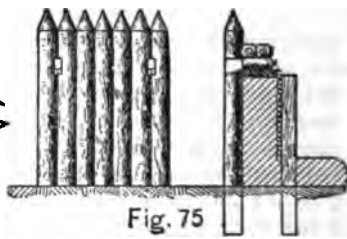


Fig. 75

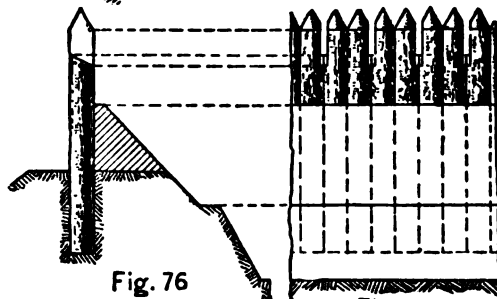


Fig. 76



Fig. 77



Fig. 81

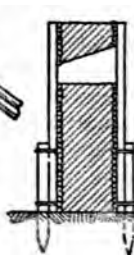


Fig. 78



Fig. 79



Fig. 80

at pains taken to keep close joints. A double row, Fig. 79, or if the logs good size and workable, an arrangement of half timbers, Fig. 80, gives some cover with much less labor. Loopholes may be formed as indicated. They must be high enough so that the enemy can not fire through when he comes to close quarters. Six feet above the ground is considered high enough.

A single row of timbers may be used as the front of two thin walls, the space between to be filled with earth or broken stone, Fig. 75, or both may be alike, and of brush, plank, fascines, or sheet iron, Fig. 78. The filling should be 2 ft. thick; stone filling 6 to 16 ins. In all such constructions the two walls must be tied together at frequent intervals to resist the pressure of the filling. Wire is a very convenient material for such use. If T rails are available, an excellent stockade may be made as shown in Fig. 81.

A blockhouse is a room or small building with bullet-proof walls, fire-proof and fireproof roof, loopholed for infantry, often for machine guns, and sometimes for light quick-firing guns. The walls may take any form described for stockades, or may be of masonry. The roof will usually be of tin or sheet iron. If exposed to plunging fire, the roof may take the form of light overhead cover, and to promote the comfort of the men during long occupancy an ordinary roof may be placed over the front or it may be covered with canvas, or thatched, or made to turn water in a practicable manner. Figs. 82 to 85 and 89 show types of blockhouses. In Fig. 85 the house provides 2 tiers of fire.

Extensive use was made of blockhouses by the British in South Africa. At important points, were of masonry, presenting no unusual features. The greater number were of double skins of corrugated iron, filled in with broken stone. The first built were about 10 x 15 ft. in plan, the skins on separate frames or supports 2 ft. apart. Then an octagonal form was introduced with both skins on the same frame, leaving but a narrow space between them. A difficulty experienced with this form was that a striking opposite a timber of the frame would penetrate the entire structure, as it would encounter no stone. A construction permitting stone to be placed behind each timber in the path of a shot passing through it was introduced, but was complicated and difficult. The final and most satisfactory design was circular in plan. A corrugated-iron drum 13½ ft. in diam. and 11 ins. high was set on level ground and a parapet of stone, 3 ft. at bottom and 2 ft. at top, was built around it on the outside. On this was placed a shield consisting of an inner drum of corrugated iron 13 ft. in diam. and an outer one 16 ft. in diam., each 2 ft. 3 ins. high, and at uniform distance by spacing blocks at the top.

Loopholes, 12 in number, of sheet iron of the double-hopper type, with 6 ins. high by 3 ins. wide, were placed in the shield, the bottoms resting 6 ins. from the floor. The space between the skins of the shield was filled with closely packed broken stone. It was found necessary to provide a lining of stone under the loopholes to replace settlement. An octagonal cap rested on top of the shield and was bolted to the spacing blocks, its sides extended to complete a square on which a pitch roof was placed. A canvas roof, supported by a pole, like a conical tent was used in some cases.

A small opening on one side, large enough for a man to crawl through, was provided by an iron door under the outer drum of the shield. There was also a movable barrier of the same construction as the shield, which stood across the opening in the drum of the parapet.



Fig. 82



Fig. 83

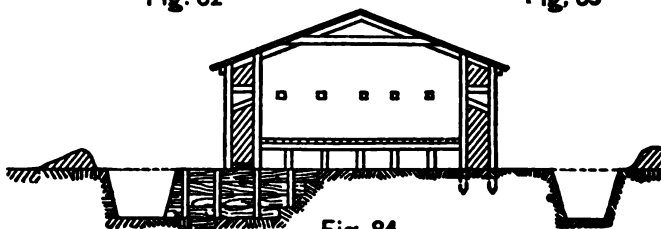


Fig. 84

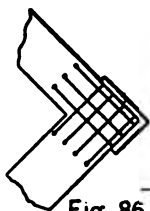


Fig. 86

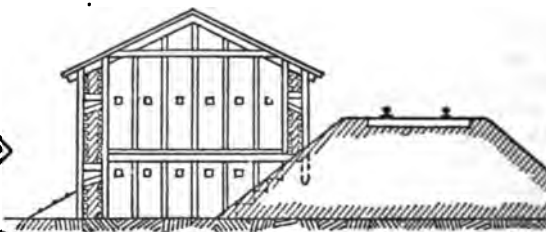


Fig. 85

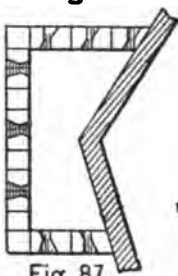


Fig. 87



Fig. 88

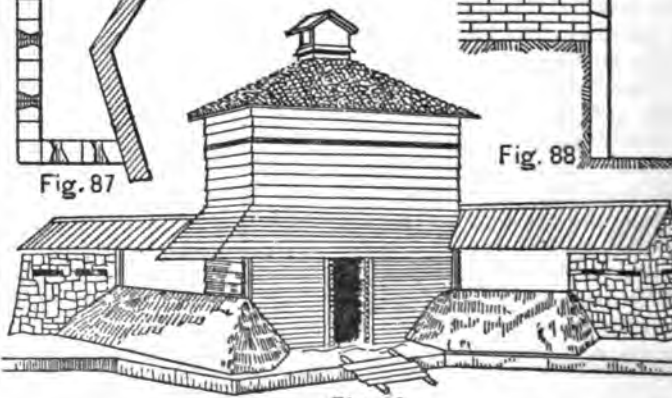


Fig. 89

trench $4\frac{1}{2}$ ft. deep was dug 2 to 5 yds. outside the blockhouse and a tangle of logs was constructed outside the trench. Such blockhouses are sometimes built at the rate of 6 a day by a party of 30 men. Nearly all of these were erected, most of them in a single month.

Flanking Defenses. Dead angles in front of a defensive structure may be covered longitudinally or parallel to the firing crest to prevent their being used as a rallying place by the assailants. Such fire is usually directed along the crest from one of the flanks and is called flanking fire. The structures for this purpose are called flank defenses.

A *bonaparte* or *tambour* is a small, low, stockaded inclosure or blockhouse used to fire along a dead angle. If it can be placed at the intersection of dead angles, it may sweep both. At the foot of a wall a stockade open to the top may be used, if its floor must be at ground level, which will be the case on rock or marsh, though a weatherproof cover will generally be used, Fig. 87. If the floor can be sunk below the ground level, a bullet-proof roof is necessary, Fig. 88. In a ditch, the structure should be sunk so that the roof will be below ground level and the top should be of overhead height. It must not extend entirely across the ditch, or if it does, or nearly so, it must be obstructed so that it can not be used as an approach.

There must be communication through and under the parapet or wall, so that the garrison in the *tambour* can escape into the interior at the last.

A ditch may also be flanked by a counterscarp gallery, which is a bomb-chamber formed behind or outside of the counterscarp at the salient of the ditch, Fig. 86. The side toward the ditch is stockaded and loopholed along the ditch. The entrance must be on the ditch side and protected from fire. The garrison of a counterscarp gallery will usually have communication with the interior of the work.

Obstacles are designed to protect the works from surprise and to break up the momentum of attack by breaking up the enemy's formation and exposing him under the accurate fire of the defense. They should be invisible from the direction of approach, should be difficult to destroy, and should have no screen or cover to the enemy.

Obstacles may be in front of or on the line of defense. In the former case they should be 50 to 100 yds. in front of the firing crest. If on the line they are in the ditch, if there is one, or are employed to close intervals between the flanks or enfiladed by adjacent works.

An *abatis* consists of trees lying parallel to each other with the branches pointing in the general direction of approach and interlaced. All leaves and twigs should be removed and the stiff ends of branches pointed.

If the *abatis* is on open ground is most conveniently made of branches about 15 ft. long. The branches are staked or tied down and the butts anchored by driving them with earth. Barbed wire may be interlaced among the branches. Five rows are placed, the branches of one extending over the trunks of the others, one in front, so as to make the *abatis* 5 ft. high and as wide as the ditch. It is better to place the *abatis* in a natural depression or a ditch, for concealment and protection from fire. If exposed to artillery, an *abatis* should be protected either as above or else by raising a glacis in front of it. Fig. 90 shows a typical form of *abatis*. An *abatis* formed by felling trees in front of the enemy, leaving the butt hanging to the stump, the branches prepared as before, is called a *slashing*, Fig. 91. It gives too much cover, and can be well flanked.

A palisade is a man-tight fence of posts. Round poles 4 to 6 ins. in diameter at the large end are best. If the sticks run 5 to 8 ins., they may be used. If defended from the rear, palisades give some shelter from fire and

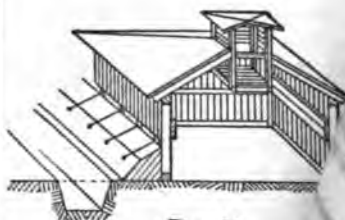


Fig. 82

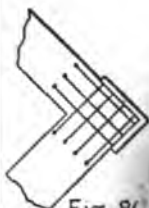


Fig. 83



Fig. 97



Fig. 99



Fig.

gs should be made as large as possible without letting men through. d from the flank, they may be closer, say 3 to 4 ins. apart. The l be pointed. A strand or two of barbed wire run along the top and each post is a valuable addition.

ng is best made up in panels of 6 or 8 ft. length, connected by a ee, preferably of plank, otherwise of split stuff. If the tops are wales should be used, both underground. If the tops are connected one will do.

s should be planned to incline slightly to the front. As little earth disturbed in digging as possible, and one side of the trench should n the desired plane of the palisade. If stones can be had to fit he posts and the top of the trench, they will increase the stiffness ucture and save time in ramming, or a small log may be laid in along the outside of the posts. Figs. 92 and 93 show the construc- placing of palisades.

aise is a palisade horizontal, or nearly so, projecting from the scarp rscarp. A modern and better form consists of supports at 3 or 4 l, connected by barbed wire, forming a horizontal wire fence, Fig. 94. veaux de frise are obstacles of the form shown in Fig. 95. They y made in sections of manageable length chained together at the ey are most useful in closing roads or other narrow passages, as e quickly opened for friendly troops. The lances may be of iron wood and rectangular instead of round; the axial beam may be composite. Figs. 96 and 97 show methods of constructing cheveaux ith dimension stuff.

ormidable obstacle against cavalry consists of railroad ties planted ls of 10 ft. with the tops $4\frac{1}{2}$ ft. above the ground, and connected of rails spiked securely to each, Fig. 98. The rail ends should be by fish plates and bolted, with the ends of the bolts riveted down ds.

and 100 show forms of heavy obstacles employed in Manchuria by ans and Japanese, respectively. The former is composed of timber ade in rear and carried out at night. The latter appears to have ted in place.

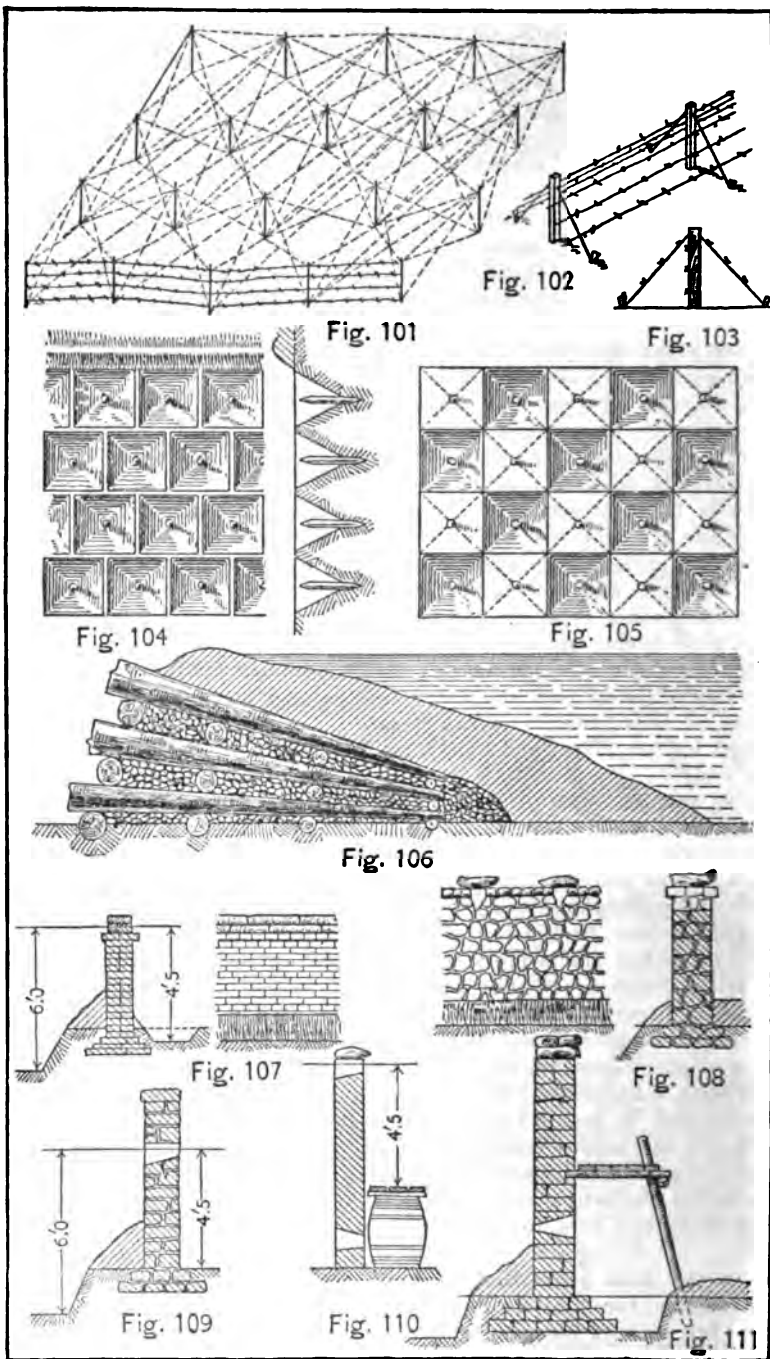
ire entanglement is composed of stakes driven in the ground and by wire, barbed is the best, passing horizontally or diagonally, or e stakes are roughly in rectangular or quincunx order, but slight ies, both of position and height, should be introduced.

high entanglement the stakes average 4 ft. from the ground, and g is horizontal and diagonal, Fig. 101.

y wire entanglement has stakes averaging 18 ins. above the ground ire is horizontal only. This form is especially effective if concealed rass. In both kinds the wires should be wound around the stakes ed and passed loosely from one stake to the next. When two or es cross they should be tied together. Barbed wire is more diffi- ing but better when done. The most practicable form results from f barbed wire for the horizontal strands and smooth wire for the

the most generally useful of all obstacles because of the rapidity action, the difficulty of removal, the comparatively slight injury from ire, and its independence of local material supplies.

nd Materials. One man can make 10 sq. yds. of low and 3 sq. yds. ntanglement per hour. The low form requires 10 ft. of wire per d the high 30 ft. No. 14 is a suitable size. The smooth wire runs



58.9 ft. to the lb. A 100-lb. coil will make 600 sq. yds. of low or 200 sq. yds. of high entanglement. If barbed wire is used, the weight will be about $2\frac{1}{2}$ times as much.

56. Wire Fence. An ordinary barbed-wire fence is a considerable obstacle if well swept by fire. It becomes more formidable if a ditch is dug on one or both sides to obstruct the passage of wheels after the fence has been cut. The fence is much more difficult to get through if provided with an apron on one or both sides, inclined at an angle of about 45° , as indicated in Figs. 102 and 103. This form was much used in South Africa for connecting lines between blockhouses. When used in this way the lines of fence may be 300 to 600 yds. long, in plan like a worm fence, with the blockhouses at the reëntrant angles. Fixed rests for rifles, giving them the proper aim to enfilade the fence, were prepared at the blockhouses for use at night.

Such a fence may be arranged in many ways to give an automatic alarm either mechanically or electrically. The mechanical forms mostly depend on one or more single wires which are smooth, and are tightly stretched through staples on the posts which hold them loosely, permitting them to slip when cut and drop a counterweight at the blockhouse, which in falling explodes a cap or pulls the trigger of a rifle.

57. Military pits or trous de loup are excavations in the shape of an inverted cone or pyramid, with a pointed stake in the bottom. They should not be so deep as to afford cover to the skirmisher. Two and one-half feet or less is a suitable depth. Fig. 104 shows a plan and section of such pits.

They are usually dug in 3 or 5 rows and the earth thrown to the front to form a glacis. The rear row is dug first and then the next in front, and so on, so that no earth is cast over the finished pits.

An excellent arrangement is to dig the pits in a checkerboard plan, leaving alternate squares and placing a stake in each of them to form a wire entanglement, Fig. 105. One man can make 5 pits on a 2-hour relief.

58. Miscellaneous Barricades. Anything rigid in form and movable may be used to give cover from view and fire and to obstruct the advance of an assailant. Boxes, bales and sacks of goods, furniture, books, etc., have been so used. The principles above stated for other obstacles should be followed, so far as the character of the materials will permit. The rest ingenuity must supply. Such devices are usually called barricades and are useful in blocking the streets of towns and cities.

59. Inundations. Backing up the water of a stream so that it overflows a considerable area forms a good obstacle even though of fordable depth. If shallow, the difficulty of fording may be increased by irregular holes or ditches dug before the water comes up or by driving stakes or making entanglements. Fords have frequently been obstructed by ordinary harrows laid on the bottom with the teeth up.

The unusual natural conditions necessary to a successful inundation and the extent and character of the work required to construct the dams make this defense of exceptional use. It may be attempted with advantage when the drainage of a considerable flat area passes through a restricted opening, as a natural gorge, a culvert, or a bridge.

Open cribs filled with stones, or tighter ones filled with gravel or earth (see Bridges, 71), may form the basis of the obstruction to the flow of water. The usual method of tightening cracks or spaces between cribs is by throwing in earth or alternate layers of straw, hay, grass, earth, or sacks of clay. Unless the flow is enough to allow considerable leakage, the operation will not be practicable with field resources. A continuous construction, shown in section in Fig. 106, is frequently employed. The ends of the dam must

be carried well into the earth to prevent the water from cutting around them.

When the local conditions permit water to be run into the ditch of a parapet it should always be done.

60. Accidental cover includes accidents of the terrain not of natural origin, which can be used to advantage as cover from view and fire. Such are walls and other inclosures, buildings, cuttings, embankments, etc.

All these require preparation to better subserve their purpose. The application of the foregoing principles to such conditions is sufficiently indicated by the illustrations. The preparation has mainly to do with the defensive adaptation of the cover by providing for fire from it.

Fig. 107 shows the preparation of a wall less than 4 ft. high, for a single tier of fire. Fig. 108, the same for a wall 6 ft. high. Fig. 109, the same for a wall 7 ft. high. Fig. 110, a wall 9 ft. high for two tiers of fire, one standing and one lying. Fig. 111, the same for one tier standing and one kneeling.

Fig. 112 shows the treatment of a hedge which screens the parapet from view, holds the exterior slope at a steep pitch, and forms an excellent head cover.

Fig. 113 shows the best method of preparing a low embankment and Fig. 114 a high one.

Fig. 115 shows three methods of treating a railroad cut; one by a tier of fire on the lower side, another by a tier of fire on the upper side, and the third by a firing crest on the track. Retreat from the first and advance from the second are obstructed by the cut itself. Both may be used, the fire of the rear line covering the retreat of the front one. Care must be taken that the rear line can not shoot into the forward one.

61. Buildings if exposed to artillery are untenable, but against rifle fire are made defensible by barricading all windows and doors, except one for ingress and egress on the most sheltered side, and providing loopholes.

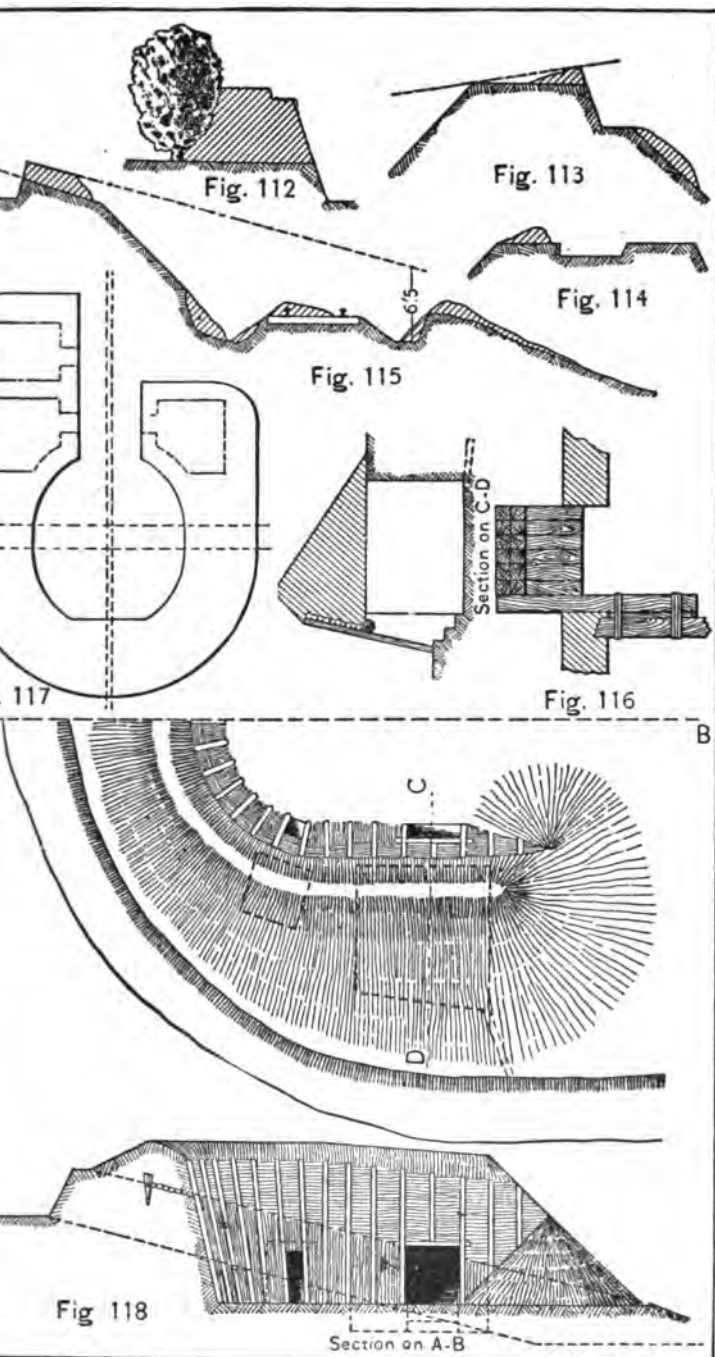
Barricades for doors and windows may be solid materials, such as timber, iron, brick, stone, of stockade construction, Par. 45, or of hollow articles of any kind which will form receptacles to retain earth or other bullet-proof filling. Articles of furniture, trunks, baskets, and barrels may be mentioned (see also Revetments). Bags are useful here as everywhere.

A house of stone or brick will give some protection from fire. A wooden house gives protection from view only, unless time suffices to stockade the walls. Care must be taken not to exclude too much light. Openings in partitions should be enlarged and additional ones made to give the freest possible communication. Hatches should be cut through the floors and roof to give free escape of smoke and gases.

Loopholing is done as already explained, Par. 13. The loopholes should not, as a rule, be less than 4 ft. apart in the same tier. They should be arranged to concentrate fire in front of doors or accessible windows. Doors should be further strengthened by barricades across the spaces into which they open.

If bay windows or other projections are available, they may be utilized for flanking fire. The loopholes for them may well be near the ground, so that a tier for other fire can be placed above them.

As soon as the barricades and necessary banquettes are finished all other combustible material should be removed and a supply of earth and water for fire fighting should be placed at convenient points. Stores and ammunition are also brought in and disposed of in suitable places. A space as



secure as possible from fire should be set apart and prepared as a hospital; and latrines must also be arranged for.

The defensive preparation will depend much on whether the house is to stand an actual assault, or only to afford an advantageous cover for fire upon the enemy while approaching. This should be determined and announced when the order to occupy the house is given. If the building is to be held to the last, a good flanking defense must be arranged and the interior walls must be loopholed and arrangements made to quickly barricade interior openings, so that a fighting retreat may be made from room to room.

In addition to tambours and caponieres, par. 47, flanking by vertical fire may be accomplished, as shown in Fig. 116. Such a construction is called a machicoulis gallery. Fire from such a gallery is not very effective and will usually not be worth the trouble of preparing for it. Hand grenades, small enough to be pushed through the loopholes, will be equally effective.

62. While the defensive preparation of the building is in progress the adjacent ground must be cleared of all obstructions to fire and such obstacles as are possible constructed. Good obstacles make flank defense much less necessary, except for houses to be held as long as possible regardless of losses.

63. Groups of buildings, such as villages, may be made the cover for a very stubborn defense. A number of them, sufficient to accommodate the desired garrison, of most substantial construction and so situated as to flank each other, are selected and treated as above described. The rest must be torn down or burned to clear the ground.

64. **General Considerations.** The foregoing paragraphs involve the general supposition that the best is attainable. In actual service this will not often be the case. War does not usually permit sandpapering and polishing. The main thing is to get some substantial result and get it quickly. The military engineer, considering projects for field fortification, must reckon with four imperative limitations—lack of time, lack of men, lack of tools, and lack of materials. Each of these tends to defeat his object of doing the very best thing and compels him to work out a scheme which goes as far in that direction as his limitations permit. The best is to be kept in view always to steady the aim even if it can not be reached.

The first move should be to take account of stock by finding out what time is allowed, what force is available, what tools are on hand, and what materials can be procured. The relative quantities and numbers hereinbefore given are to be considered as minima. Every effort should be made to get at least that number, and by all means get more if possible, especially of men. The more men the easier the work of each and the better condition all will be in when the work is finished. Manual labor for soldiers in the field is a necessary evil at best and should always be minimized.

Knowing from the time, force, tools, and materials to be had what can be done in the aggregate, lay out a scheme within the limits, following such of the preceding principles as are fundamental and slighting as much as may be necessary those which are secondary only. An incomplete or emergency scheme leaves some risk uncovered. Decide which is the least probable risk and economize time and labor in that direction.

65. **Sieges.** The attack by regular approaches of a strongly fortified place involves mainly the principles and devices previously discussed, but their employment is under conditions so different from those resulting from the contact of two mobile forces as to require separate treatment. What follows is not a complete presentation of the subject of sieges, but only of

features as are concerned with engineering duties on the side of the
 differences referred to are principally:
 of heavier caliber will be encountered.
 the terrain being well known to the defense, all fire will be more
 late.
 high-angle fire will be extensively employed, and angles of fall 30° and
 er must be expected.
 the trench work must be executed under close fire and must gain ground
 front. A variation either way from its proper direction will lose ground
 se expose the trench to enfilade, so that accurate tracing is of great
 tance.
 the same time these conditions of sieges are more alike in different times
 places than those of operations with mobile forces, and the best ways of
 some things can be stated for sieges with more confidence than in
 case of ordinary fieldworks.
 The first step toward the reduction of a fortress is to cut off communi-
 of the occupants with the outside world. This is done by a rapid
 ment of a relatively small force followed by reinforcements sufficient
 old a line entirely around the place and beyond the range of its artil-
 say 2½ to 3 miles from its main lines of defense. This line is called
 line of investment, and the belt of territory immediately outside of it
 ied by the investing force is called the zone of investment. Whether
 line must be occupied continuously will depend upon its nature. As
 must be actually occupied or commanded as could be used by the
 yed for exit or entrance. The line of investment is divided into sec-
 preferably so chosen that a unit of command can be assigned to

 Troops assigned to a section of the zone of investment begin at once
 connoiter it and put it in the best possible state of defense. Artificial
 incidental features are prepared and strengthened, intrenchments thrown
 here required, communications made and improved through and be-
 sections, and telegraph and telephone lines established around the
 and to headquarters. Every means must be utilized to gain knowledge
 the ground inside the zone. The time which must elapse before the
 material can be brought up will permit a great deal of such work to
 ne.
 The real attack or systematic approach is pushed inward from a few
 only of the zone of investment, usually one or two. The side on
 these approaches are to be made will be determined by the follow-
 nditions:
 The best communication with the base.
 The best terrain for battery positions and approaches under natural

 The most favorable ground for construction and operation of siege
 ys.
 The easiest digging.
 The most important consequences of success.
 first condition will usually be controlling, unless one of the others
 ibitory. If the zone of investment is favorable and ample siege rail-
 quipment is available, the attack may be conducted from points some-
 removed from the main terminus of the supply line.
 The main defensive line of an important fortress will consist of a series
 ched forts. To breach such a line one fort at least, more often two,

must be taken, and during the operation the fire of the one on each side must be kept down. If two forts are to be reduced, the siege will consist of artillery work against four and trench work against the middle two of these.

When the front of attack is decided, the main engineer park is located, out of reach of the defenders' artillery, convenient to the front selected and to the main supply line, and connected with the latter by good communications. Here is assembled all the siege material pertaining to engineering operations as fast as it arrives, to be sorted and arranged in convenient shape for selection and forwarding to the front as required.

Sites for the main siege batteries are next selected, at moderately long range from the forts, 2,500 to 4,000 yds., and for intermediate parks near them to contain materials for the construction, repair, and supply of the batteries. These sites are connected by a belt railroad immediately in their rear, and the belt line is connected with the main park at one or more places.

70. The complete investing force must be heavily reinforced, ordinarily about doubled, before siege operations on any considerable scale are undertaken. The additional force will be concentrated along the front of attack, mainly toward its center. This and the investing force along the front of operations are sometimes called siege troops, and the remainder of the investing force distinguished as investing troops. The siege force should consist of infantry, engineers, and artillery in the proportion approximate of 83%, 5%, and 12%, respectively, with the proper contingent of the Signal and Hospital Corps, and supernumerary engineer and ordnance officers. The total attacking force will range from $2\frac{1}{2}$ to 4 times the strength of the garrison.

71. The siege artillery will probably be disposed in batteries of 4 pieces or less, dispersed as much as concentration of fire will permit, and sited when possible on the reverse slopes of ridges or hills, or behind timber, and will employ indirect fire almost exclusively.

Though batteries are invisible, the high-angle fire of the defense will reach them, as the enemy's artillery will systematically search all reverse slopes within range, and the effect of shells must be localized by artificial cover. An emplacement for each gun will be best. A light parapet across the front and on the sides will answer. A 4 to 1 slope is the most convenient inclination of ground. Fig. 118 shows a typical emplacement for such a slope. Ample bombproof cover for men and reserve ammunition should be provided, preferably on the flanks. Fig. 117 shows half plans of two types used by the Japanese.

On level ground the platforms may be laid on the natural surface, the guns surrounded by a splinter-proof wall, as Fig. 78, in which case rooms of sufficient size may be walled off between the guns to form service magazines. The floors of the magazines may be depressed sufficiently to permit a weatherproof roof to be thrown over the ammunition, below the crest of the wall. The drainage of the roof must be intercepted before it runs into the pit.

72. **First Parallel.** When the siege batteries have brought the artillery fire of the defense under control the first attempt to gain ground to the front is made by opening a trench generally parallel to the line of investment and, if possible, within 1,200 yds. of the enemy's main line. During the day the outposts are advanced to or beyond the proposed line, to permit it to be reconnoitered and its bearings noted. At night the attack is pushed

strongly and the enemy driven in as far as possible for the greater of the working parties.

Tracing. As soon as it is dark enough for concealment the tracing is begun. Each party consists of one engineer officer, one noncommissioned officer, and a private for each 50 yds. of line to be traced. The outfit consists of tracing tape, pegs, mallets, and measuring rods. The tracing tape is of white cotton, 50 yds. long, $\frac{3}{4}$ in. wide, and marked at 5-ft. intervals by weaving or printing. It is provided with a loop at each end to be fastened to a stake or to another tape. The officer must provide himself with a compass and means of reading it by artificial light (Reconnaissance). There should be a tracing party for each 800 yds. of line, at least, and it will be better, as the time spent in tracing is lost for digging. It will be most advantageous if the tracing can be put through during the twilight, when it is still light enough to see the ground and read the compass, but too dark for the defenders to see the parties. The parties are paraded, ordered up, and moved up as close as possible before dark.

The officer, provided with a description of his initial point and the bearing of the course of the line from it, proceeds to it, his party following in file. Having identified the initial point, the officer stations a sapper facing him in the direction of the line, and taking the end of his tape, he runs along the line to be traced, followed by the remainder of the party. When the tape is nearly run out the sapper checks it, and, as the end is reached, sets a stake between his heels and puts the loop of the tape over it. The officer stations the second sapper at the front end of the first tape, facing him in the direction of the line, and proceeds as before. When the second tape is run out the second sapper sets his peg and puts the loop of both tapes over it. The operation is continued until all the tapes are down. The officer returns to the rendezvous of the working party and conducts the tracing of the line. Each sapper lies down at his peg, facing the initial point, and upon the arrival of the working party assists in the extension along the line.

If the fire of the defense is not sufficiently under control, it will be necessary to have the outposts begin the first parallel by digging pits, or trenches, of such lengths, which can afterwards be extended to a connection.

Approaches or zigzag trenches must be traced and dug on the same line as the first parallel, connecting it with cover in the rear. There should be at least three such approaches—at right, left, and center.

A typical trace of such an approach is shown in Fig. 119. The branches of the approach, AB, BC, etc., must have a direction such that when prolonged they pass outside of the extreme point on the corresponding flank from which the defense can bring fire to bear. A leg will usually be not more than 100 ft. long.

The tracing of approaches for simultaneous digging differs in detail but not in principle from that of the parallel already described. It is more difficult because the line is broken, and greater accuracy is required. Each tracing party consists of an extra man for each angle. The tape is run continuously, and, at each angle is passed, the extra marker stationed there cuts the tape 9 ft. from the angle on the back course, makes the long end fast to a peg at the angle and stretches the short end in prolongation of the forward course, Fig. 120, to mark the direction of a return carried across the end of the back course to protect it from enfilade. The return may be from 10 to 20 yds. long. The approach may be prolonged from this short end of tape without further tracing. The approaches so traced are dug simultaneously over their entire length the same as the parallel.

74. The digging of approaches under fire differs from ordinary trench work in that it is done progressively from one end and with the men reasonably protected from fire while doing it. Tracing is dispensed with. Approaches are usually called saps, the operation of digging them sapping, and the skilled men sappers. The end at which digging is in progress is called the saphead.

So long as the legs can be given the direction described in Par. 73, cover is needed on the end and one side only. This form is called single sap. A single sap gaining ground to the left is called a left-handed, and to the right a right-handed, sap. The shovelers work right-handed in a left-handed sap, and the reverse.

When the saphead is very close to the enemy's line, such direction can not be given, and cover is required on the end and both sides. This form is called double sap.

Single Sap. A party of one noncommissioned officer and 8 sappers in two reliefs works at the saphead. The two leading sappers, Nos. 1 and 2, excavate a trench $4\frac{1}{2}$ ft. deep and just wide enough to work in, throwing the earth to the front or exposed side. They are protected in front, or on the end of the trench, by a pile of half-filled sand bags, 50 or 60 in number, piled so as to make a parapet 2 ft. high. The sand bags should be smeared with mud so as to show the color of the soil. No. 1, kneeling or crouching, undercuts the end breast a few inches and brings down the earth. He steps back and No. 2 takes his place and shovels the loose earth out. No. 1 returns, throws forward as many sand bags as may be necessary to gain ground, using a fork or rolling them over with his hands. He then undercuts again and the operation is repeated. Nos. 3 and 4 widen the trench 2 ft. and raise the parapet, also forming a berm 12 to 13 ins. wide.

The rate of advance of a sap is only 2 to 4 ft. an hour. When half a yard has been gained, Nos. 1 and 2 exchange places and when a yard is gained the other relief comes in. At each change of reliefs the men who were Nos. 3 and 4 on the last tour take 1 and 2. Casualties are made up from the waiting relief. Generally, unless reduced to less than 4 men, the detachment must work without reënforcement until the regular change of trench reliefs.

A working party of infantry, 25 ft. in rear of the sappers, widens the trench to 10 ft. Fig. 121 shows a plan and sections of a single sap, and Fig. 121 gives a perspective view of a left-handed single sap in progress.

Double Sap. Two parties work parallel to each other, Nos. 1 and 2 leaving a 4-ft. tongue between them, which is taken out by Nos. 3 and 4. No widening party is required. Fig. 122 shows a plan and sections of a double sap.

To prevent enfilade the direction of the trench is changed at right angles as soon as the plunging fire becomes too annoying. After going 25 to 30 ft. laterally, the trench turns again to the front, and after having advanced sufficiently to form a traverse, turns again to the right until it reaches the original line, when it resumes the main direction. Fig. 124 shows the plan of such a sap. It is called a traversed sap.

75. Second Parallel. The first infantry position established, a second one well advanced is the next objective. It is called the second parallel and should be 500 or 600 yds. from the enemy's works, or about midway in front of the first parallel. It will envelop only the work selected for attack and will thus be shorter than the first. The second parallel, and the approaches to it from the first, may be established in a night, like the first parallel and its approaches, though this will be the exception. With an

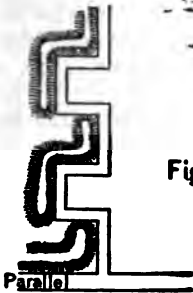
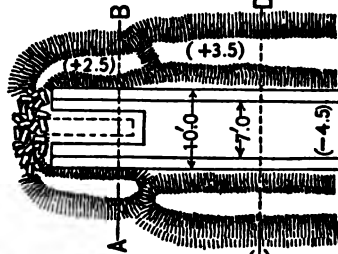
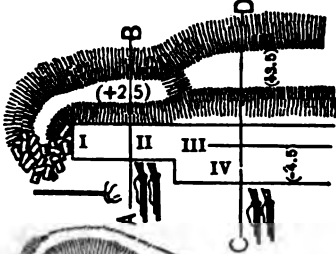
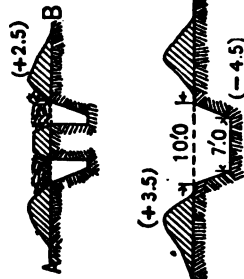
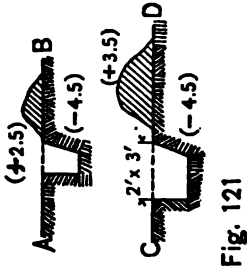
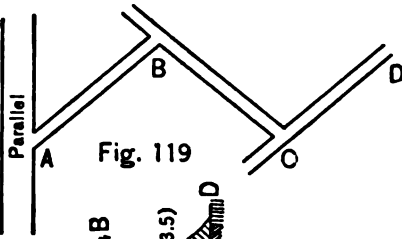


Fig. 124

alert defense the advance from first to second parallel must be by sap. When the heads of the saps are abreast of each other and on the desired line they may be turned toward each other and run to a connection, forming the second parallel, though, if possible, the work should be expedited by extending parties for simultaneous work.

76. Third Parallel. This will be about half way from the second parallel to the enemy's works and will in most cases be the position of assault, though sometimes 4th and even 5th parallels have been found necessary. At this close range attention is necessary to guard the sapheads, which can be done by machine guns and rifle fire from the second parallel. As the saps advance the returns may be lengthened and turned so as to form demi-parallels. This will enable a stronger guarding force to be kept under shelter and well advanced to repulse sorties or to take the offensive if opportunity offers.

77. The foregoing description of siege works embodies principles but not complete practice; the latter is greatly affected by accidents of ground. Fig. 125 is a general view of the trenches actually constructed by the Japanese in the attack on Fort Kuropatkin. Especially interesting is the traversing of the ravine or gully on the left, which then became a good approach. Such ravines were characteristic of the terrain around Port Arthur, and much work of this kind was done by the besiegers. Sometimes the traverses were only planks laid across from bank to bank with sand bags on top, allowing passage under them. The distances between the traverses and the height of the sand-bag protection were so regulated that a shot grazing one could not pass under the next.

MINING.

78. Military mining will be here considered to include only the operations incident to forming communications or chambers completely underground; to placing in such chambers charges of explosives and to firing such charges.

Other uses of explosives in engineering operations are more commonly classed as blasting and will be considered under demolitions. Blasting also includes the use of explosives in forming the underground spaces in the process of mining.

Underground communications are classed according to their directions as galleries, which are horizontal or nearly so, and shafts, which are vertical or nearly so.

Galleries are classed according to their size as great or grand galleries, which are 6 ft. high by 7 ft. wide; common galleries, 6 ft. by 3½ ft.; half galleries, 4½ ft. by 3 ft.; branches, 3½ ft. by 2½ ft., and small branches, 2½ ft. by 2 ft. When the formation of the ground permits, earth augers may be used, forming bores or drill holes.

Shafts may be drill holes or wells, or may range in size from the smallest in which a man can work, say 3 by 3 ft., to any size which may be required, seldom more than 6 by 10 ft.

The dimensions of galleries and shafts are determined by the use to be made of them, their length, and the minimum space in which men can work. If troops or guns are to be passed through galleries they must be made large enough for that purpose. Grand and common galleries will usually meet these requirements. Galleries used only to reach the proper point to place the explosives are made of the size which is most rapidly driven and can be sufficiently ventilated. This is usually the half gallery in which men can work without too much constraint, through which the excavated earth can be transported by efficient methods, and in which reasonable ventilation can be maintained by simple means.

inches or small branches may be used when near the objective points. They are rapidly driven for short distances, 20 ft. or so, but when longer distances are required, difficulties of digging, earth disposal, and ventilation become too great. If the soil permits the use of augers, bores will usually be employed for the purpose.

The quantity of explosive placed at any point is called a charge. The chamber prepared for the reception of the charge is called the mine chamber or simply the chamber.

The primary requisites of subterranean excavations are accuracy of location, prevention of caving, ventilation, drainage, and lighting.

The restricted space usually requires not only that men shall work in confined positions, but also that special tools be provided of smaller size than those used for open earth work. A special tool called the push pick, shown in Fig. 126, is very convenient in soft earth. Picks and shovels for underground work are similar in form to standard tools, but are smaller, and have shorter handles.

Accuracy of direction may be secured in sufficient degree by refined application of methods described in Reconnaissance. The principal characteristic of underground surveying is the absence of daylight. All targets must be luminous, and readings of instruments may be made by artificial light. As a rule, the less light there is in the gallery, other than the target and reading lights, the better.

The best target is a light of medium strength behind a narrow slit, and is easily improvised. A convenient form is shown in Fig. 127. The slit is V-shaped in form and adjustable by rotating the two sides about their hinges, so that the maximum width can be adjusted to the intercept of the target at various distances, as shown in Figs. 128 and 129. A sheet of white paper or cloth behind the light will enable the observer to work much more easily.

In large galleries a transit may be used, and in smaller ones a plane table and magnetic compass. The box compass can not be sighted and read with sufficient accuracy for this work. Compass courses can not be relied upon, as the needle is subject to abnormal fluctuation when used underground. Any change of direction the back azimuth and azimuth must be carefully read and the angle between them used to determine the change. The box used for reading a compass should be nonmagnetic and nonelectric. If not so, must be held in exactly the same position during both readings. A ranging device may be improvised as shown in Fig. 127. The edges of the box should be straight and parallel to each other and to the line of sight.

The box resting on a smooth board or paper nearly level is pointed at back and forward targets in succession, a pencil being drawn along one edge in each position. The angle between the pencil lines is measured with a protractor.

The slope of an inclined gallery is maintained by the use of a field level. Various forms may be improvised by the use of a level tube or plumb line. A convenient form is shown in Fig. 130. The two pieces having been pivoted together, as shown, are given a series of suitable angles of inclination, and in setting a small hole is bored through both pieces, forming two series of holes, as indicated. To reproduce any setting spread the pieces until the corresponding holes fall together and put a closely fitting pin through both. The longer piece is placed on the inclined line of the gallery, usually on two consecutive frames, for which its length is adapted. On the shorter piece may be placed an ordinary carpenter's or other level, or a level tube may be set in the piece itself if convenient.

The greatest accuracy need not be maintained during the construction of galleries, though carelessness must be avoided. When the immediate vicinity of the chamber or other objective point is reached the entire line must be checked as accurately as possible, and the length and direction of the branch or drill hole necessary to reach the objective point must be determined. The digging having been substantially completed, the galleries may be kept clear of men to facilitate work when this final survey is made.

81. The first step in any mining operation will be to locate the objective point with respect to the point of departure by the best practicable measurements above the ground, preferably intersections with a transit from a carefully measured base. This position should be plotted on a good map. If no obstructions are suspected, a straight line from the point of departure to the objective should be adopted for the gallery, and its length and azimuth determined. A profile of the ground along the line of the gallery permits determination of the proper slope or slopes.

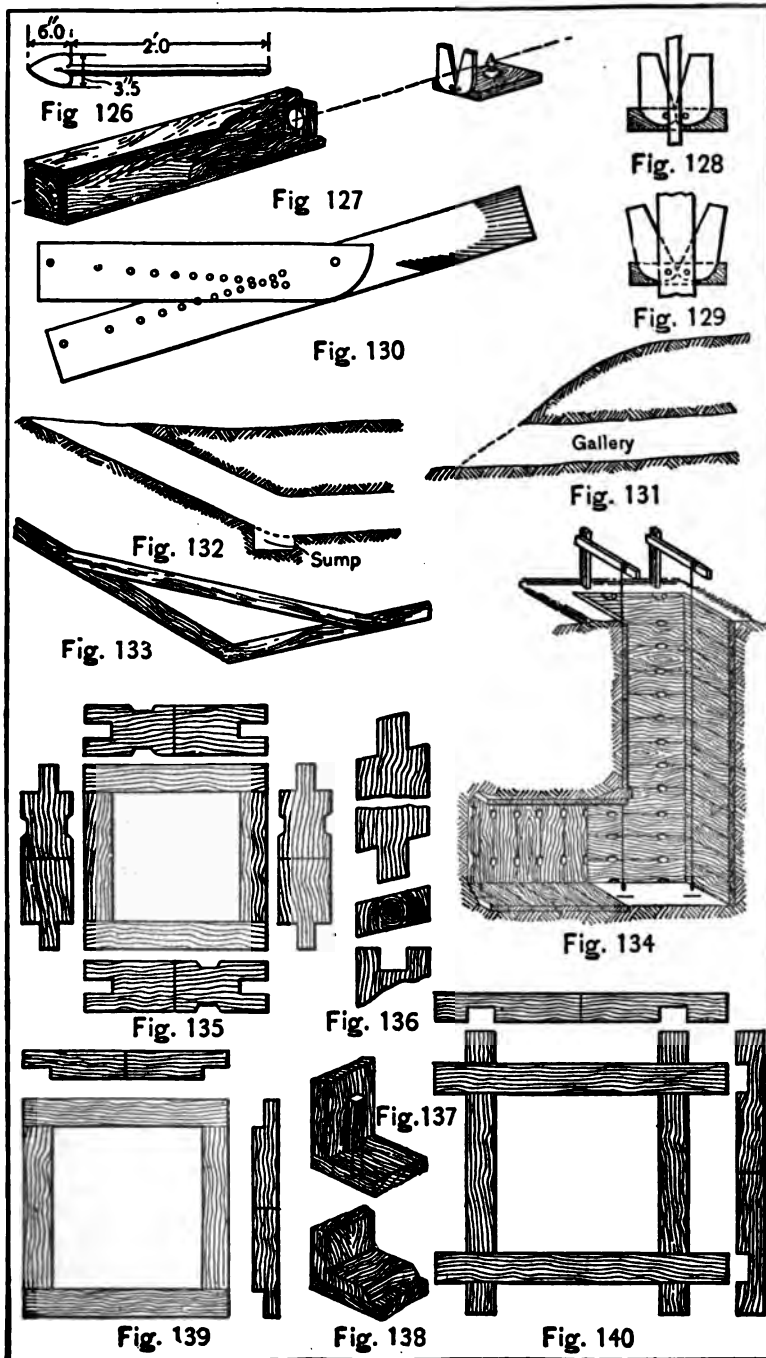
The transfer of the azimuth underground will depend on whether the gallery starts from a shaft, Fig. 134, from a reverse slope, Fig. 131, or, if not very deep, from a level with a descending branch, Fig. 132. In the second and third cases, which will be the rule in military mining, the azimuth may be established in the gallery by a transit or compass used in the ordinary way. In the case of a shaft, which will be the exception, the azimuth must be established across the top or mouth and transferred to the bottom by means of plumb lines, Fig. 134. The plumb lines should be fine wires, the bobs true and heavy, suspended in water if necessary to steady them, and the marking should be done by scratches on the heads of nails or tacks. During construction the alignment may be kept by a line stretched along the gallery and the elevations by the field level.

Changes of direction, if necessary, are most conveniently measured in the gallery by means of a bevel made above ground to the proper angle, Fig. 133. In checking, the angles should be determined by a careful geometrical construction in the gallery, or measured with an instrument.

In case an unexpected deviation is necessary, as to avoid an obstacle, it may be made to suit the conditions found and afterward measured and plotted on the chart. The necessary change to be made after the obstacle is passed, in order to direct the gallery again on the objective, will be determined from the chart and the proper bevel made and sent into the gallery with instructions to make that change to right or left at a stated distance from the last angle.

82. Gradients are determined by the field level. Points at which changes of slopes are to be made must be determined from the chart and the necessary data sent in, showing the point where the change is to be made and designating both old and new slopes. In checking, gradients should be determined with clinometer or transit, sighting from one horizontal angle to the next, if it can be done, otherwise taking as few sights as possible.

83. Prevention of caving is accomplished by linings. In very firm soil it is sometimes practicable to drive small shafts and galleries short distances without lining them; but if they are to stand for any length of time there is always danger of their caving in, and especially so if the neighboring soil is shaken by the explosion of projectiles or mines. When it is considered safe to use them, unlined shafts should be elliptical in plan, and the roofs of the galleries should be pointed arches. As a rule, however, both shafts and galleries should be lined. Those which are permanent in their character, as the main galleries of the countermines of a permanent work, are lined with masonry. Galleries constructed during a siege are lined with



wood. Wooden linings are of two general types, known as cases, and frames and sheeting.

Cases, Fig. 135, are of plank, 6 to 9 ins. wide and not less than $1\frac{1}{2}$ ins. thick, as a rule. They are formed as shown in the figure. The two pieces with tenons are called stanchions and are placed vertically. The top is called a cap sill and the bottom a ground sill.

In grand galleries the tenons at the top of the stanchions are usually shorter than the thickness of the cap sill, and those at the bottom, as well as the mortises in the ground sill, are omitted. The stanchions are kept from collapsing by blocks nailed to the ground sills. These blocks are 2 ins. thick and wide enough (about 9 ins.) to guide the wheels of a gun carriage and prevent the hub striking the stanchions, Fig. 138.

In cases for smaller galleries also the tenons are sometimes omitted at the bottom of the stanchions, the mortises in the ground sills cut an inch or two deeper, and the stanchions kept from collapsing by keys driven in the mortises, Fig. 137.

Frames and Sheetting. Frames are made of scantling, as shown in Figs. 139 and 140 for shafts, and 141 for galleries. Pieces of the latter are named as for cases. Sheetting is of plank, sawed to the desired length and beveled at one end. Sheetting should ordinarily be 1 ft. longer than the distances c. to c. between frames. Frame distance is generally 4 ft. and the length of sheetting 5 ft. Round stuff may be used for frames and also for sheetting, though the latter is not easy. The middle of each cap and ground sill, both in frames and cases, is marked by a saw cut or otherwise.

For galleries of moderate size, in good soil, lining with cases is more rapid and gives a smooth interior. Cases require uniform and fairly good lumber, which may not be obtainable. Frames and sheetting can be used for all sizes of galleries and in all soils and can be improvised from materials at hand.

The cases of branches and small branches are sometimes made very strong, with a view to resist rupture by the explosion of neighboring mines. Four-inch planks, or even thicker, have been used in certain circumstances.

84. The following table gives the dimensions, in inches, usually adopted for the pieces of cases, frames, and sheetting, for galleries of different sizes:

| | Cases. | | | Frames and sheetting. | | | |
|----------------------|---------------------|---------------------|---------------------|-----------------------|------------|-----------|---------------------|
| | Ground sill. | Stanchion. | Cap sill. | Ground sill. | Stanchion. | Cap sill. | Sheetting. |
| | Inches. | Inches. | Inches. | Inches. | Inches. | Inches. | Inches. |
| Great galleries..... | 3 | 4 | 5 | 6 x 4 | 6 x 6 | 6 x 9 | 2 |
| Common galleries.... | 2 | 2 | 2 | 6 x 3 | 6 x 6 | 6 x 8 | $1\frac{1}{2}$ |
| Half galleries..... | 2 | 2 | 2 | 5 x 3 | 5 x 5 | 5 x 7 | $1\frac{1}{2}$ |
| Branches..... | $1\frac{1}{2}$ or 2 | $1\frac{1}{2}$ or 2 | $1\frac{1}{2}$ or 2 | 4 x 3 | 4 x 4 | 4 x 5 | 1 or $1\frac{1}{2}$ |
| Small branches..... | 1 to 2 | 1 to 2 | 1 to 2 | 3 x 3 | 3 x 3 | 3 x 4 | 1 |

85. In sinking a shaft with frames and sheetting, the size and position having been fixed, the top frame, distinguished from the others by projections at each end of each piece, Fig. 140, is laid down and staked in place, with the scores on the end pieces accurately in the desired azimuth. The excavation of the shaft is then begun, making it enough larger than the top frame to take the sheetting all around. Usually the first interval can be dug without driving the sheetting. It is undercut so that at the level of the second frame it will be larger in each direction than at the top by twice the thickness of the sheetting. Gage rods cut to the length and width of

the excavation and plainly marked at the middle points should be provided. The inconvenience of working under the top frame may be avoided by marking the sides carefully and digging the first interval before setting the top frame.

When the shaft is deep enough the second frame is put in place and nailed together; the notches in the ends of the side pieces turned upward and those of the end pieces downward. The top and second frame are connected by nailing to them four battens of proper length (two on each side), Fig. 142, which suspend the second from the top frame at the established interval. The second frame is placed vertically below the top frame by using the plumb line and the scores in the frames.

The sheeting is inserted outside the top frame, beveled end first, bevel outside, and pushed down until its top is flush with the top frame. The lower end of the sheeting is held out from the lower frame by suitable wedges, and the excavation of the second interval is commenced.

In ordinary soil the sides of the shaft will now require support. Sheeting is therefore introduced and pushed down as the excavation proceeds, Fig. 143; the wedges previously placed being driven down as the sheeting is inserted.

If the pressure of the earth becomes great enough to spring the sheeting planks inward, an auxiliary frame is introduced. This is a frame similar to the shaft frames, but from 4 to 6 ins. larger in outside dimensions, Fig. 143a. The sheeting rests directly against the outside of this frame, and is thus held out far enough to allow the third frame to be placed and the wedges to be inserted as before. The auxiliary frame is then removed and used in the next interval.

Successive frames are placed in the same manner, Fig. 142, until the one directly over the gallery is reached. Care is taken to place this frame at exactly the right height, and the shaft is then continued to the required depth. A frame is placed at the bottom with its top at the level of the floor of the gallery, and the sheeting is allowed to rest directly against the outside of this frame. When the soil will allow it, the sheeting is omitted wholly or in part over the portion of the shaft which is to form the gallery entrance.

86. Precautions. In sinking shafts especial care must be taken to make the excavation no larger than is required for placing the lining, since if a vacant space is left outside the lining the sides of the shaft may give way through its entire height and fall against the lining with a blow which will crush it in. This has often been the cause of fatal accidents both in shafts and galleries.

87. Partly lined shafts, i.e., those in which the sheeting planks are separated from each other by greater or less intervals, should only be used for small depths and when they are expected to stand for a very short time. They are a constant menace to the miners, owing to the danger of their caving in, and in a much greater degree to the probability of stones, etc., falling from the unprotected parts and seriously injuring or killing the men at the bottom.

88. Driving a Gallery With Frames and Sheeting. If from a shaft, the direction of the gallery has already been marked by the scores on the shaft frames; but it must be verified by plumb lines, and two small pickets driven on the line of its axis, which is located exactly by small nails, one driven in the head of each picket.

Two gage rods are prepared, giving the extreme height and breadth of the excavation, i.e., the height of the frame plus two thicknesses of top

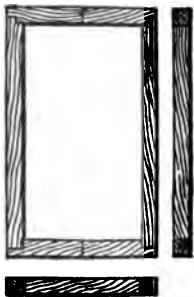


Fig. 141

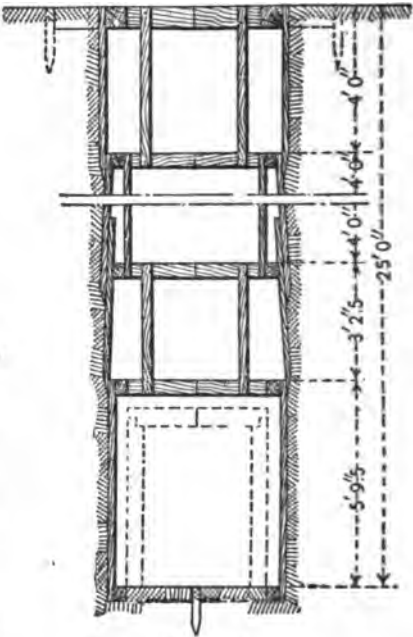


Fig. 142

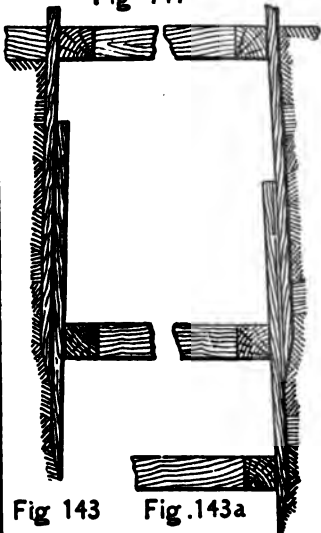


Fig. 143

Fig. 143a



Fig. 145

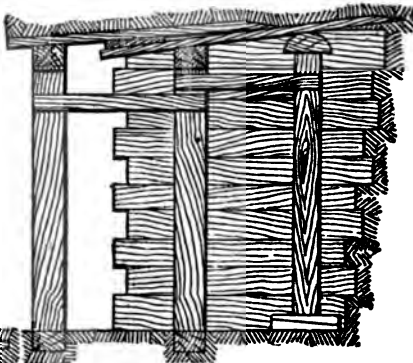


Fig. 144

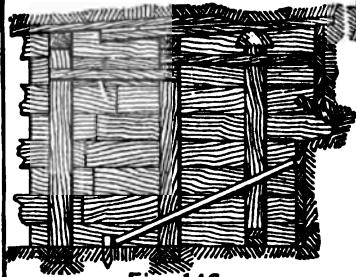


Fig. 146

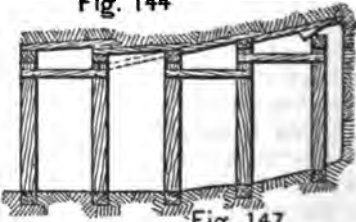


Fig. 147

sheeting, and the breadth of the frame plus four thicknesses of side sheeting. The middle of each gage rod is also plainly marked.

A gallery frame is set up against the side of the shaft, Fig. 142, its ground sill flush with the bottom frame of the shaft; or its stanchions may rest upon the shaft frame as a ground sill. This frame is carefully located and fastened in position with battens and braces. If the shaft sheeting on that side has been omitted, which can usually be done, the top gallery sheeting is started on top of the cap sill and driven until held in place by the earth. It is given the proper upward pitch by a scantling laid across the outer ends and held down by fastening to or under the shaft frame. The side sheeting is started in the same way against the outer faces of the stanchions and given an outward slant by bracing the outer ends slightly away from the sides of the shaft. Earth is now excavated and the sheeting advanced all around, keeping the front ends in solid earth far enough to hold them steady.

In this way the gallery is advanced one gallery interval, usually about 4 ft., when a second frame is placed. Its position is verified by the score marks; for direction, by a line; for grade, by a spirit, mason's, or field level, and for verticality, by a plumb line. It is then secured in place by nailing battens to it and the preceding frame. Wedges are inserted between the frame and the sheeting and the gallery is continued by the same methods. When the sheeting is advanced only by hard driving, the frames are slightly inclined to the rear at first and are afterwards driven forward until vertical.

89. If, while advancing the sheeting, the pressure upon it becomes so great as to spring it, a false frame, Fig. 144, must be used.

This consists of a cap sill, ground sill, and two stanchions, connected by mortises and tenons. The stanchions have tenons and the sills mortises at each end. The cap sill is usually rounded on top and, for facility in setting up and removing, its mortises are longer than the width of the tenons. The latter are held in place by wedges when the frame is in position, Fig. 145. The false frame is usually made of the same height as the common frames and, when side sheeting is used, wider by twice the thickness of this sheeting. When side sheeting is not used, its outside width may be equal to the clear width of the gallery.

In using the frame, Fig. 144, the ground sill is first placed accurately in position at a half interval in advance, the stanchions are set up, and the cap sill placed upon them and wedged. The whole frame is then raised about 2 inches by folding wedges placed under each end of the ground sill, and is secured by battens. The sheeting will now rest directly upon the cap sill and stanchions and have enough inclination to clear the next frame by its own thickness, as is required. The next frame is then set up, the wedges driven under the sheeting, and the false frame removed, which is easily done, owing to its construction.

If the gallery is not started from a shaft, a steep working face must be obtained and the first frame set up and braced, in correct position with respect to the center line marked on the ground. The subsequent operations are as above described, except that means must be provided to hold the rear ends of sheeting to give them the necessary upward and outward slant, or else a false frame used.

If it has been necessary in sinking the shaft to drive the sheeting on the side from which the gallery is to be broken out, the gallery frame is set as before and the sheeting behind it driven down until it barely engages the bottom edge of the cap sill of the gallery frame. The top gallery sheeting is then inserted and partly driven as before. The shaft sheeting outside

the gallery stanchions is then cut away and the side gallery sheeting started. The middle plank of the shaft sheeting is prized down with a bar engaged under the cap sill until free at the top, when it is pulled outward and removed. Excavation proceeds through the gap thus made, and as the other planks come free they are removed. If the earth runs too free at any stage of the operation it can be checked by short horizontal stop plank, placed against or inside the sheeting or inside the gallery frame after all sheeting has been removed.

90. To continue the gallery in such soil a shield, Fig. 146, may be used to prevent the earth in front and above from caving into the gallery. When the excavation at top of gallery has advanced as far as it is safe to go without causing the caving to extend beyond the top sheeting, a piece of plank a foot wide and in length equal to the width of the gallery is placed directly under the top sheeting and against the face of the excavation and is held in place by braces at its ends secured to the gallery lining. The earth is excavated until a second plank of the shield can be placed in the same way as before under the first one. This is continued until the entire face is covered. The top and side sheeting are then driven forward and the top plank of the shield is removed and replaced in advance, after which each plank is removed and replaced in succession, as above described.

91. **Partly Lined Galleries.** In very firm soil side sheeting may be omitted entirely, and in that less firm the side planks need not be in contact. When the side sheeting is omitted the width of excavation may be reduced to the clear width of the gallery and the stanchions be let into the side wall flush with its surface. In this case the ground sills are frequently omitted, the stanchions resting upon wooden blocks, stones, or directly upon the earth.

To save material, the planks of the top sheeting are sometimes more or less separated also. This can only be recommended when rapid and temporary work is required with limited materials, and in these cases the earth between the planks should be supported by packing of sticks, brush, etc.

92. **Inclined Galleries.** If the gallery, instead of being horizontal, is ascending, Fig. 147, or descending, Fig. 148, the proper slope is obtained by the use of a field level or a mason's level properly marked or set for the slope.

Position of Frames. In driving descending galleries better progress will be made and less material used if the frames are set at right angles to the axis of the gallery, Fig. 148, and this is the usual custom. In driving ascending galleries this is impracticable and the frames are set vertically, Fig. 147. In all other respects inclined galleries are driven in the same manner as horizontal ones.

93. **Change of Slope.** To pass from a horizontal to an ascending gallery, Fig. 147, it is only necessary to give the top sheeting the proper angle by holding down its back end with a piece of scantling placed across the gallery for that purpose; and, to give the side sheeting the proper inclination, cutting trenches in the bottom of the gallery for the lower pieces, if necessary.

In passing from a horizontal to a descending gallery, Fig. 148, the roof may be carried forward horizontally, and the floor given the desired pitch by increasing the height of the consecutive frames, until enough headroom is obtained to allow the top sheeting for the descending gallery to be inserted at the proper height and in the new direction. The frame at this point is made with a cap sill (upon which the sheeting rests directly), and a second crosspiece below it, serving as a cap sill for the descending gallery. From this point forward the frames may be set perpendicular to the axis of the gallery, as previously stated.

If the descending gallery is very steep and the horizontal pressure of the

soil great, it may be necessary to strengthen the stanchions of the last two or three vertical frames by crosspieces near their upper ends.

94. In changing direction horizontally with frames and sheeting, if the soil will stand for a distance of one frame interval, or even less, it is only necessary to place one or more frames at an angle until the necessary change is secured. The sheeting on the outside is placed by running the forward end past the frame and then inserting the rear end behind the last bay of sheeting.

If the sides require constant support, the outer one may be continued in the old direction until the wedge left is thick enough to permit the sheeting to be driven in the new direction. A short bay may be put in to reduce the amount of work to be done, Fig. 151. Frames with extra-long caps and sills are required and the last one used is given an extra stanchion on the outside to take the sheeting in the new direction.

For abrupt changes of direction in large galleries it is customary to drive in the original direction entirely past the turning point and then break out a gallery in the new direction. A gallery starting out from the side of another is called a return, and is rectangular or oblique, according to the angle made by its axis with that of the original gallery, which is called the gallery of departure.

That the return may be broken out, the interval between the frames of the gallery of departure at this point must be such as to admit between the stanchions a frame and the side sheeting of the return, Fig. 155. This part of the gallery of departure is called a landing and its floor is made horizontal.

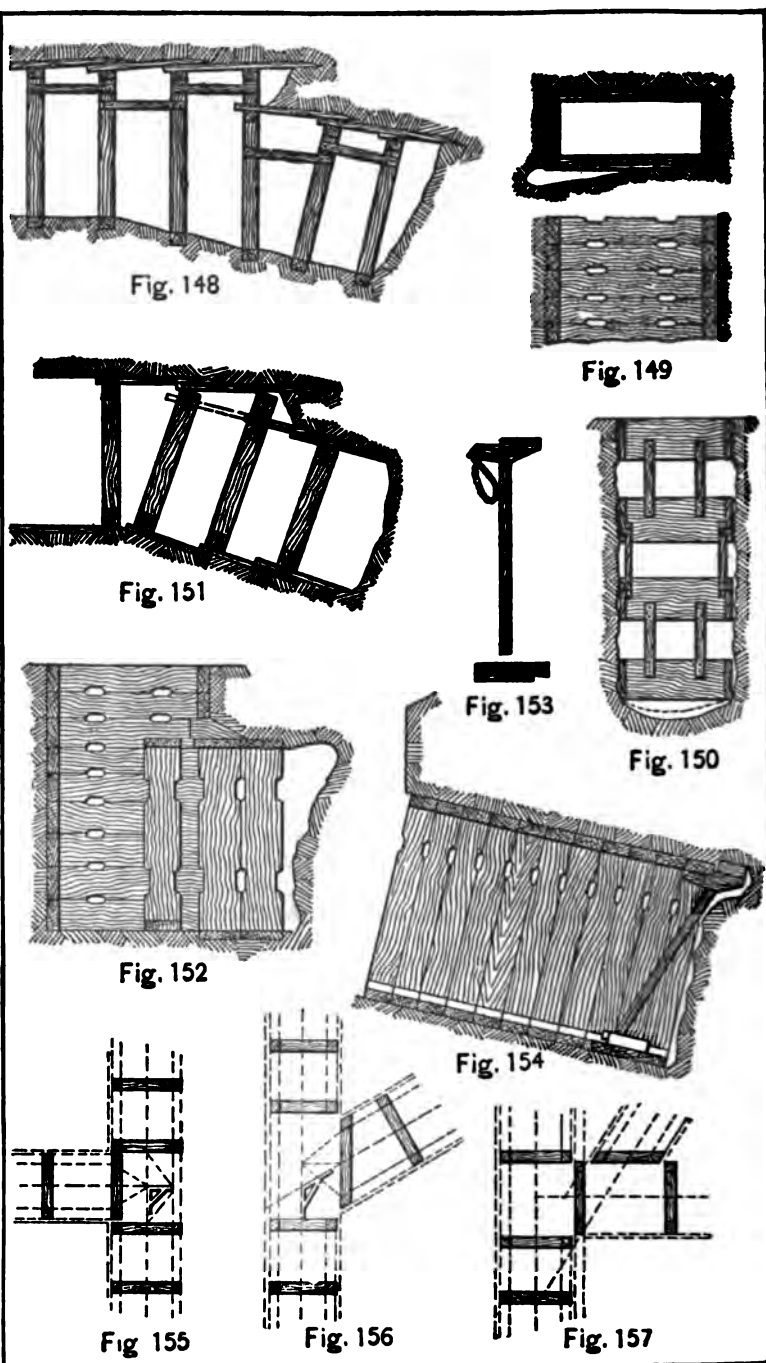
If the return is oblique, Fig. 156, its width measured along the gallery of departure will be determined by an oblique section, and may be so great that the strength of the lining of the gallery of departure will not allow the necessary length of landing. In this case a short rectangular return is first broken out from the side of the gallery of departure, and the new gallery is broken out from the side of this return, Fig. 157. The latter method diminishes the length of the landing when the change of direction is less than 45° .

The floor of a return is started at the level of the floor of its landing. In firm soils which will stand for a short time without support the first frame may be set up entirely outside the gallery of departure, Figs. 156 and 157, and may be of the same height in clear as this gallery. When the soil is bad, however, and side sheeting is required in the gallery of departure, the first frame of the return must be set up against this sheeting in the interval between the stanchions of the landing, Fig. 155. This makes the clear height of the return at this frame less than that of the gallery of departure by a little more than the thickness of the sheeting. When the first frame of the return is set against the sheeting of the gallery of departure it may be pulled or cut away to permit excavation, beginning in either case with the top plank.

The first frame of an oblique return should be so set that the sides of the stanchions will be parallel to the side walls of the return, thus giving a good bearing to the side sheeting.

In very bad soil the first few frames of a return must be firmly braced, to resist the backward thrust of the earth, by battens connecting them together and by struts across the gallery of departure. The latter are removed when the return is sufficiently advanced.

95. In sinking a shaft with cases, Fig. 149, a case of the required size is put together and accurately placed upon the site of the shaft, whose dimensions are marked upon the ground outside it. The case is then removed and the earth excavated to the depth of the case, which is placed in the excavation with its top flush with the surface of the ground. Its position is carefully verified and it is secured in position by packing earth around it. The excavation is



then continued for the depth of another case, which is put in place as follows:

One end piece is placed in position, the tenons of the two sides are inserted in the mortises at its ends, and the side pieces are pushed back into position; a pocket-shaped excavation is made with a push pick beyond the end of one of the side pieces and running back 3 or 4 ins. into the side wall; the remaining end piece is inserted in this cavity far enough to allow the mortise at its other end to slip over its corresponding tenon; it is then drawn back and the tenons at both ends fitted into their mortises. The notches cut in the sides of the pieces allow them to be easily handled.

The next case is placed in the same way, care being taken not to excavate two consecutive pockets at the same corner. It is well to fill up these pockets by stuffing in sods from below before placing the next case.

When the sides of the case are tenoned at one end only and secured by wedges at the other they are easily placed in position without cutting out behind them.

Upon reaching the level of the top of the gallery, the pieces on the gallery side of the shaft are omitted if the ground is firm, but if it needs support these pieces are put in place and secured by cleats or braces, but the tenons are not inserted in the mortises. In firm soil the cases may be placed at intervals, Fig. 150.

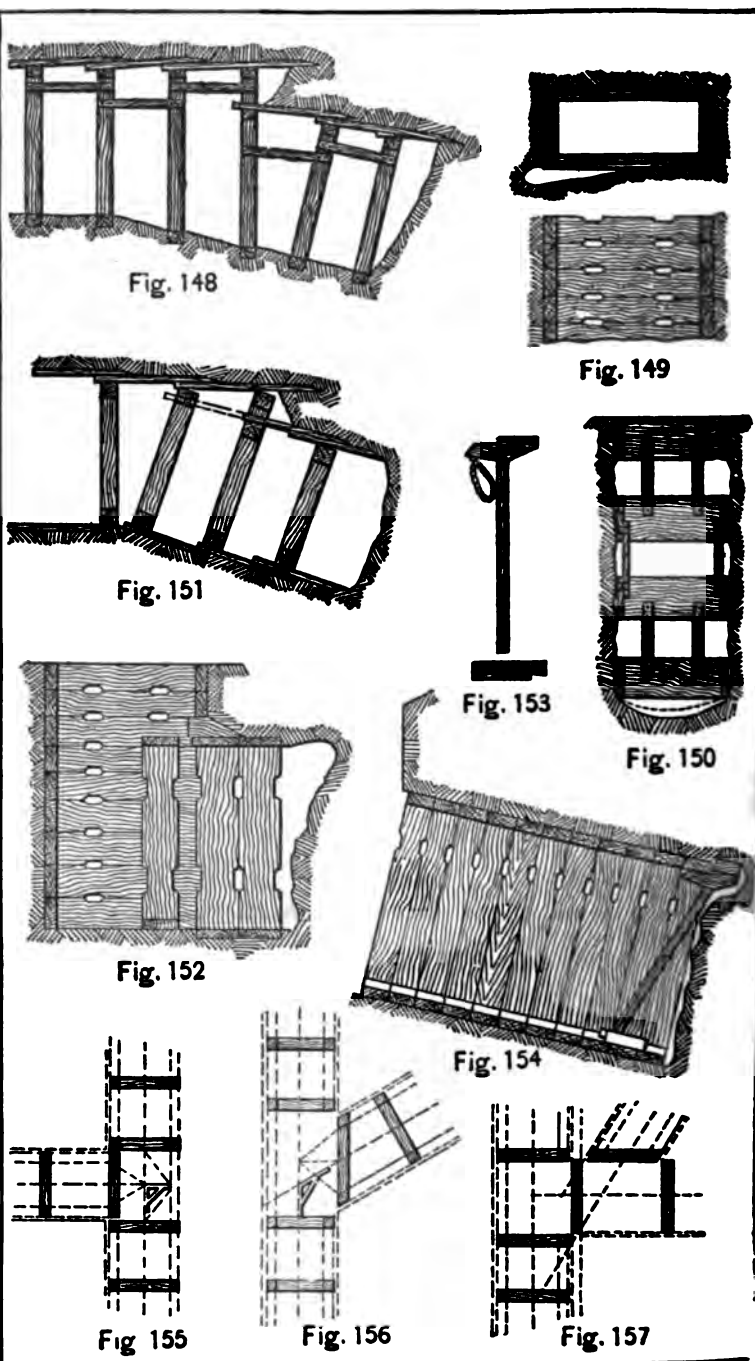
96. Driving a Gallery With Cases. This is practicable only when the soil is somewhat firm. In breaking out from a shaft, a frame is first placed inside the shaft to support the ends of the shaft cases resting against the pieces which are to be removed. The latter pieces are then taken out and grooves are cut in the earth for the ground sill, stanchions, and cap sill of the gallery, and these are put in place in a manner entirely analogous to that described for sinking a shaft. This case is set flush with the inside of the shaft and supports the side pieces, whose tenons rest upon its stanchions. The projecting earth is then cut away and grooves are cut for the next case, which is placed in position and the excavation continued as before, Fig. 152.

If the gallery is not started from a shaft, a vertical face is obtained and the cases are placed as above described.

When the earth shows a tendency to cave, which it frequently will in great galleries, the cap sill must be put in position and supported while the miner excavates the grooves for the ground sill and stanchions, for which purpose two crutches are used. A crutch, Fig. 153, consists of an upright piece of timber carrying a cross-piece, whose length is equal to the width of two cases. The upright piece rests upon the ground sill of the cases already placed and is raised to the proper height by wedges. The part of the crosspiece which projects in advance is made 2 ins. higher than the rear part, to support the cap sill somewhat above its final level, so as to allow the tenons of the stanchions to be easily inserted. The rear part of the crosspiece is attached to the upright by an iron rod or short chain. The use of the crutch is illustrated in Fig. 154. When the case is set and adjusted to position the crutches are taken down by removing the wedges, and are replaced under the next cap sill.

In very firm soil shafts and galleries are frequently driven with cases not in juxtaposition, but separated by greater or less intervals. Pieces of planks (which may be parts of cases) placed vertically and resting against the sides and ends of the cases in shafts, or horizontally and resting upon the cap sills in galleries and somewhat separated from each other, may be used to support the earth between the cases. The same remarks apply to this construction as to the similar one sometimes used when mining with frames and sheeting.

97. Change of Direction in Galleries Lined With Cases. Slight changes in direction in a horizontal plane can be easily and gradually made by setting each



Ventilation. A gallery can not be driven more than 60 ft. without artificial ventilation. The only possible way of ventilating a gallery with a single opening is to force fresh air into the working breast, which may be done through a duct of wood or metal, or through a canvas or other hose. A fan or blower, worked by hand or power, is among the essential items of a gallery outfit. For excavations of moderate extent, a portable forge will serve as a convenient ventilating device. If a gallery passes under surface cover, a hole made through the roof and breaking the surface under protection of the cover may be used to promote ventilation.

In a system of galleries, having two or more outlets, air may be exhausted from one and drawn in through the other. Screens or doors may be arranged to compel the desired distribution of fresh air. Vacuum operation will never be as satisfactory as plenum. If there is considerable difference of level, as in a steep or rapidly ascending gallery, a fire built at or near the upper outlet will create a current throughout.

In urgent cases a man may enter and even work in a gallery which can not be ventilated, by providing him with a mask covering the nose and mouth and supplying fresh air through a hose or from a reservoir of compressed air carried with him.

Drainage. Much water is not likely to be encountered in military mining, but what there is must be taken care of, or it will collect at the lowest point and flood the mine. If water shows itself or is suspected, dead-level lines must be avoided, and all slopes should fall toward a point or points where the water can be disposed of. If the mine has a level outlet, nothing is required except to so regulate the slopes that all water will run to the mouth. If the mine is entered by a shaft, a pit or sump must be formed at the bottom of which water can collect and from which it can be raised to the surface by pumping or bailing. A slope of 1% will usually suffice for drainage if the floor of the gallery is sloped laterally and a fairly smooth gutter formed along one side.

If an interior low point can not be avoided, a sump must be made there where the water carried out in buckets or forced out with a pump. For low lifts, a hand pump, or, for less, a very efficient form of hand pump for drainage purposes is shown in Fig. 159. A very good pump may be made as shown in Fig. 160. The materials required are wood, leather, cotton cord, rivets, tacks, and nails. The pump will lift several feet without difficulty in addition to the usual suction. It requires copious priming unless the sucker can be made to reach the water at the lowest point of its stroke. It is usually worked with a spring handle. See Fig. 161.

The mine chamber should be nearly cubical or a cylinder with length equal to diameter. If it is to stand for some time before loading, or if large size, its sides and top must be supported by a lining. The chamber should frequently no more than so much of the end of a gallery, branch, or drill hole as is necessary to contain the charge.

Figs. 164 and 165 show typical forms of earth augers; the former used by turning and the latter by turning. Each must be withdrawn when full, to break up the earth.

Explosive. A satisfactory explosive for the purposes of military engineering must be—

Stable as to its constitution and characteristics for a long period.

Unaffected by ordinary variations of temperature and moisture.

Insensitive to shocks of handling, transportation, projectiles, and neighboring explosions.

Not too difficult of detonation.

(5) Quick enough to give good results when not confined and slow enough to give good results when confined.

(6) Convenient in form and consistency for packing and loading and for making up charges of different weights.

The third and fourth of the above requirements are antagonistic and must be compromised.

These conditions point to a high explosive of medium strength, of granular or plastic consistency, put up in waterproof cylindrical cartridges of standard size and length. A number of explosives meeting these requirements fairly well are on the market. No one of them is so distinctly superior as to warrant its adoption to the exclusion of the rest, and the one most easily procured at the time and place of need will probably be used.

Dynamites consist of a granular base, usually called dope in the trade, partly saturated with nitroglycerin. Dynamites are classed according to the percentage by weight of the nitroglycerin contained, as 75% dynamite, 60% dynamite, and so on. The grades No. 1, No. 2, and No. 3, often used, refer to 75, 50, and 25% dynamites, respectively. The dope may be an inert substance having no function except as a vehicle for the glycerin, or it may be, and usually is, a combustible substance contributing to the chemical reaction and improving the strength and character of the explosion. Dopes of this kind are usually nitrates of sodium or potassium. All American dynamites are of this class.

At extremes of temperature, high or low, an exudation of free nitroglycerin is likely to occur, making the dynamite extremely sensitive and dangerous. This danger increases with the degree of saturation. Dynamites higher than 60% will probably not be suitable for military purposes on this account. The tendency to exudation is greater when cartridges stand on end, and care should be taken to keep them on the side in storage and transportation. Dynamite freezes in moderately cold weather, and if no exudation has taken place becomes comparatively free from danger of explosion by concussion and is considered perfectly safe to handle. It is very difficult to explode when frozen, has less strength, and is not considered fit to use in that condition. In the frozen state dynamite is easily exploded by heat, and the operation of thawing, if carelessly conducted, is one of great danger, a large majority of accidents with dynamite occurring from this cause. It should never be taken near a fire or very hot metal, but should be thawed in a mild, diffused heat, acting for considerable time. The cartridge must never be placed on end to thaw out. Packing in fresh manure or inclosing in a chamber with cans of hot water, is the safest method of thawing dynamite. Plenty of time must be given. A cartridge soft on the outside may be frozen in the middle. None of the dynamites are fit for use as a military explosive in a cold climate.

Dynamite is a substance of the consistency of brown sugar. It should not be greasy to the touch, nor should there be any oily appearance of the packages. It is apt to cause a severe headache when touched with the hand. It is usually packed in paraffined paper cartridges, an inch or more in diameter and of varying lengths. A very common size is $1\frac{1}{4}$ ins. diam. by 8 ins. long, containing about $\frac{1}{10}$ of a pound.

Gelatins. These compounds are formed by the action of nitroglycerin on gun cotton. They are unstable and become supersensitive and highly dangerous when frozen.

Picric Powders. These consist of pure picric acid, or that acid combined with a nonmetallic base. They are nonsensitive to shock, unaffected by heat

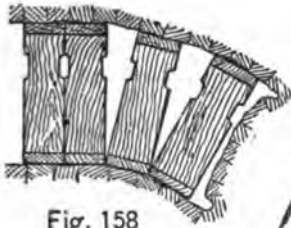


Fig. 158

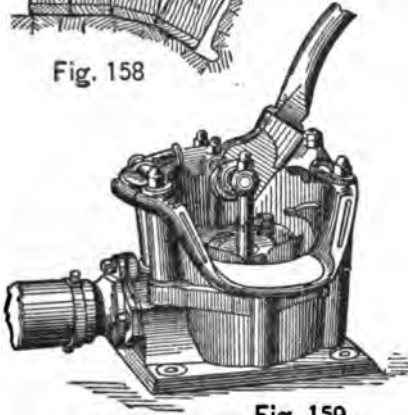


Fig. 159

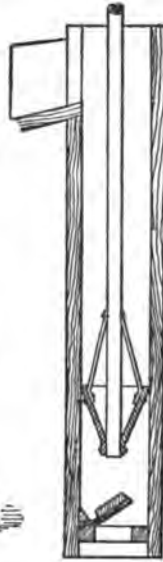


Fig. 160

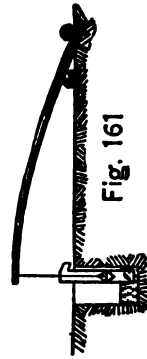


Fig. 161



Fig. 167a

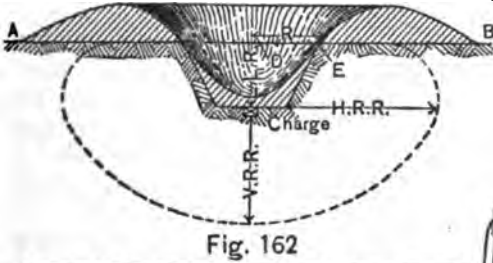


Fig. 162

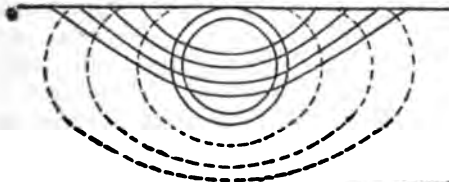


Fig. 163



Fig. 165



Fig. 164

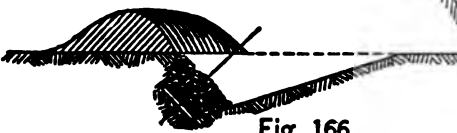


Fig. 166

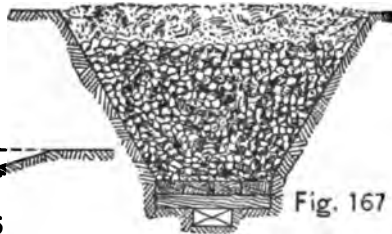


Fig. 167

and cold, and in some forms by water, can be produced in a granular form or fused into solid shapes. Their characteristic color is a yellowish, sulphur tinge, and if pulverized they have a strong tendency to escape from their packages and discolor everything around them, men included. Nevertheless, the most successful military explosives thus far introduced belong in this class; for example, the French melinite, the English lyddite, the Austrian ecrasite, the Japanese shimose, and others.

Combinations of picric acid with metallic bases, especially lead, iron, and potassium, or with oxides or nitrates of these metals, are dangerously sensitive. Premature explosions have resulted from handling iron shells loaded with picric acid. A special neutral coating is now used to prevent contact of the acid and the metal. Litharge is very apt to produce an explosion if it comes in contact with picric acid. Red or white lead must not be used in or around any receptacles of picric acid.

Jovite, an American powder of this class, seems to come as near meeting all military requirements as any explosive now known. It is unaffected by heat, cold, concussion, or water. The gases of explosion are less deleterious than those of dynamite and produce no headaches. A recent authority on explosives says:

"Jovite has been tested by the ablest explosive experts and has never proved unsafe or unreliable. It would seem to fulfill all the requirements of an ideal explosive."

Jovite may be had of strengths equal to 20, 40, and 60% dynamite.

Gun cotton has been extensively used in military operations and has some advantages. It is not considerably used commercially, and would probably have to be manufactured when wanted. When dry it is apt to deteriorate from the presence of free nitric acid, which it is very difficult to completely remove in manufacture. When wet, gun cotton is perfectly safe, but can be fired only by a primer of dry gun cotton or other high explosive. Attention is required to keep the wet stock saturated, and the additional weight of water has to be transported. The dry cotton must be kept perfectly dry and separate from the wet. It is difficult to fuse gun cotton unless holes are left in the cartridge to receive the cap.

Ammonal, an explosive recently introduced, is a mixture of ammonium nitrate and powdered metallic aluminum. It is one of the most powerful explosives known, and has, in a high degree, many of the most important requisites for military use. If produced commercially, and further experience with it does not develop objections now unknown, it promises to be one of the most satisfactory powders which can be found. In priming ammonal especial care is necessary to see that the paraffin coating of the cap is intact.

A class known as Sprengle explosives consists of separate constituents, each nonexplosive, which are combined at the moment of use. The most common is rack-a-rock, which consists of chlorate of potash, a dry crystalline substance, and nitrobenzol, a liquid. The chlorate is in linen tubes, which are dipped into the liquid when ready to be loaded. This explosive has been extensively used for military purposes in the Philippines and has given good satisfaction. The dipping requires but a few seconds, after which the excess liquid is allowed to drain back into the containing vessel, about 15 minutes being required for this part of the operation. The cartridges may be had of any length and diameter desired.

103. The following is a list of well-known commercial powders suitable, with the conditions and restrictions heretofore given, for use in military mining:

| Dynamites. | Per cent. | Dynamites. | Per cent. |
|----------------------------|-----------|------------------------|-----------|
| Ætna powders, No. 1..... | 65 | Atlas powders, B..... | 50 |
| Ætna powders, No. 2XX..... | 50 | Atlas powders, C+..... | 45 |
| Ætna powders, No. 2..... | 40 | Atlas powders, C..... | 40 |
| Atlas powders, A..... | 75 | Dualin..... | 40 |
| Atlas powders, B+..... | 60 | Forcite, No. 1..... | 70 |

| Dynamites. | Per cent. | Miscellaneous. | Per cent. |
|--------------------------|-----------|------------------|-----------|
| Forcite, No. 2..... | 50 | Jovite..... | 60 |
| Giant powder, No. 1..... | 75 | Jovite..... | 40 |
| Giant powder, No. 2..... | 40 | Rack-a-rock..... | 40 |
| Hecla, IXX..... | 75 | | |
| Hercules, IXX..... | 75 | | |
| Rendrock..... | 40 | | |

104. Care and Handling of High Explosives. Such powders as have been described as suitable for use in military engineering operations are, when in sound condition, less liable to accidental explosion than gunpowder. It is the more disastrous result of a premature explosion, rather than the greater probability of its occurrence, that has caused high explosives to be regarded as especially dangerous. The following precautions should always be taken:

Gun cotton should be kept saturated with 30 per cent of its weight of water. If not hermetically sealed, the packages should be examined once a month or oftener and resaturated. The cotton required for primers must be stored dry and kept free from moisture. The cakes may be dipped in melted paraffin. The dry cotton must be kept well apart from any other explosives and from caps. If dry primers are not at hand, wet cakes must be dried at a temperature not exceeding 120° F.

All other powders should be stored in a cool, dry, shaded, and well ventilated space. The main supply must be well removed from the working points.

Avoid any unnecessary accumulation of powder at any other place than the magazine provided for it, and especially do not allow any powder to be stored near where caps are stored or where primers are made up.

Keep fire away from the powder, and the powder away from the fire.

Do not use hard-metal tools in manipulating cartridges. Copper is the only metal that should be used. Wood is better.

Keep cartridges free from sand or other gritty substance.

Do not bend, strike, or heat a cap or primer. See that the paraffin coating of every cap is free from cracks or holes. The copper must be completely protected from contact with powder. Redip if necessary, keeping the paraffin in a water bath and only warm enough to flow freely.

Be careful not to allow a pull to come on the wires or fuses attached to a cap.

The exploder should not be connected to the leads, nor a fuse lighted until everything is ready for firing, warning has been given, and time allowed for everyone to get to a safe distance. As a rule, the exploder should be used or the fuse lighted under the personal supervision of the responsible officer.

105. Firing Devices. The powders which will be used are all of the class which can be fired by detonation only. The detonating compound in general use is fulminate of mercury, and all methods of firing involve the explosion of a small quantity of fulminate inclosed in a cap or fuse and placed in the charge. The fulminate is easily ignited and very violent, which qualities have determined its use. It is unstable, corrosive, spoiled by moisture, and highly sensitive to shock and friction. Except strength, it possesses no characteristic

which does not tend to unfit it for military purposes. It is used as a matter of necessity.

Caps and fuses must be carefully handled, must not be assembled in considerable quantities, and must be kept away from the explosive.

106. Bickford or safety fuse is used to ignite the fulminate when electricity is not available. It consists of a powder thread wrapped with a waterproof tape, a double wrapping or double tape preferred. This fuse may be used in wet holes, but for under-water use it should have a continuous rubber coating.

Time fuse burns at an average rate of 3 ft. per minute, but the rate is not regular, and when time is important the rate of burning should be tested.

Instantaneous fuse burns at a rate of 120 ft. per second. The taping of this fuse is in a different color from the time fuse and it is also covered with a netting of coarse thread, making it easily distinguishable by sight and touch, so that there can be no excuse for mistaking one fuse for the other, day or night.

When it is necessary to splice different pieces of fuse of either kind, the ends to be joined should be cut obliquely, as indicated in Fig. 168. Care must be taken that the powder at the end of the cut does not fall out. The cut ends are placed carefully in juxtaposition, and before closing a few grains of powder should be dropped in and compressed between them. The splice is completed by wrapping with rubber tape if available, otherwise with any material at hand which will keep the ends in contact in their proper position. It is obvious that this splice must be completely protected from strain.

When a line of fuse is to be branched into two, the same principles are followed, the double splice being connected, as indicated in Fig. 169, and the same precautions taken in making up.

107. For firing by electricity a magneto-electric machine is used, the one most commonly employed being a Laflin & Rand Exploder, No. 3. Its exterior appearance is shown in Fig. 170. The handle A is raised to its full height and depressed as forcibly as can be done with the hand. By a rack and pinion it gives rotation to an armature revolving in a magnetic field. At the end of the stroke, when the armature has its maximum velocity of rotation, the handle closes a contact which shunts the current through the leads connected at the binding points b b. The case is 13 by 8 by 5½ ins. and the weight 18 lbs. Its rated capacity is 12 fuses, but not more than 6 should usually be connected. The lead wires should be insulated, though it is not absolutely necessary, as fuses have been fired through naked lead wires in fresh water. If short of insulated wire, put all that there is into one of the leads and make the other entirely of bare wire. The wire should be of copper, not less than 18 gauge for a distance of 500 ft. For firings through a greater distance, especially if more than one fuse is in the circuit, the leads should be larger or should be doubled for part of the way.

108. Caps or detonators are of two forms, adapted for firing with powder fuse, Fig. 171, or by electricity, Fig. 172. In both forms the fulminate, usually mixed in proportion of 10 parts to 1 by weight with nitrate or chlorate of potassium to reduce its corrosive action, is contained in a copper capsule. In the first form it is held in place by a wad of shellac, collodion, or paper, and the end is left open for the insertion of the fuse. The latter is cut off square, care being taken that the powder at the end does not sift out, and the cut end is inserted in the cap and pressed down snugly on the fulminate. A twisting motion which might scrape the fulminate must be avoided. The case is then crimped around the fuse with a special tool, and the cap is ready for use.

In the electrical cap, which is commonly called a fuse, the fulminate is held in place by a block of sulphur, or sometimes of wood, which fills the end

of the case and also holds in place the terminals and the bridge of fine platinum wire which is embedded in the fulminate, the heating of which by the current causes the ignition. The lead wires are 30 ins. to several feet in length, as may be ordered. In quarrying, wires are usually made long enough to come out of the drill hole so that no joints are to be made in the hole. In the ordinary form of cap the case is then crimped around the fuse with a special tool, and the cap is ready for use; in the "Daniels Safety Waterproof Blasting Cap" the upper end of the cap is expanded to a diameter $\frac{1}{8}$ in. greater than the lower, and a rubber sleeve is inserted therein. The expanded portion is slotted, and after the fuse has been inserted into the cap a special slip ring or sleeve is slipped down onto the cap comprising the rubber sleeve and making the joint water-tight. Caps and fuses are usually rated as follows:

| | Weight of charge in grams. | Weight of charge in grains. |
|--------------------|-------------------------------|--------------------------------|
| No. 3 or 3 X | 0.54 | 8.33 |
| No. 4 or 4 X | 0.65 | 10.03 |
| No. 5 or 5 X | 0.80 | 12.34 |
| No. 6 or 6 X | 1.00 | 15.43 |
| No. 7 or 7 X | 1.50 | 23.15 |
| No. 8 or 8 X | 2.00 | 30.86 |

The strength of the cap makes a difference in the force of the explosion. This is greater for low-grade powders. For 40% dynamite, explosion by a 5 X cap is 15% stronger than by a 3 X. For 60% dynamite, the difference is only 6%. The same result follows from a loss of strength in the same cap. A 5 X cap may by deterioration become of the same strength as a 3 X and will then produce an explosion so much the less effective. It is very important to prevent deterioration of caps and also to know whether they have deteriorated or not. Caps stored in a damp place deteriorate rapidly. With less than 0.25% of moisture the caps will not explode dynamite, though they may still explode themselves. To secure the maximum effect from high explosives, nothing less than a No. 6 cap or fuse should be used.

Caps may be tested by exploding them in a confined space and noting the report and the effect on the shell. A cap in full strength will tear the copper shell into minute pieces, while a deteriorated cap will tear it into larger pieces.

109. Simultaneous Ignitions. When a total blast is divided into a number of charges, it is important that all should go at the same instant. This will not be easy with time fuse, and that method will not be used unless absolutely necessary. If it is used, certain precautions must be observed to avoid total failure. The fuse must be so laid that the total length from the firing point to each charge will be the same. It will be better to use time fuse to a common point near the charge, and instantaneous fuse from there on. Figs. 173 and 174 show typical arrangements. The fuse need not be in straight lines, but must be laid out so that sparks from the burning end can not reach any part in front of it. Though not absolutely necessary with instantaneous fuse, it is well worth while to make different lines as nearly equal in length as possible.

In simultaneous ignitions by electricity, the fuses are connected in series; that is to say, they are all placed in the same circuit, Fig. 175. A lead from the firing apparatus is connected to one wire of a fuse on one flank. The other wire of this fuse is connected to a wire of the next fuse, and so on, until the last fuse is reached, the second wire of which is connected back by a lead to the firing point.

Figs. 178 and 179 show methods of jointing wires; the former, for temporary use, as a lead to a fuse wire; the latter, for more permanent use. The ends of

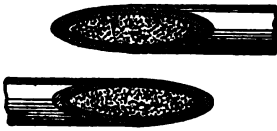


Fig. 168



Fig. 169

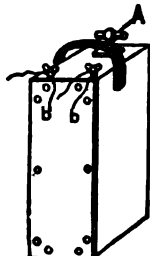


Fig. 170



Fig. 171

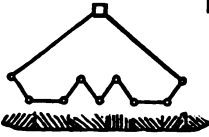


Fig. 174



Fig. 172



Fig. 176

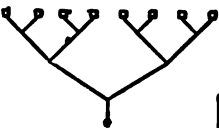


Fig. 173

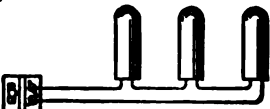


Fig. 175

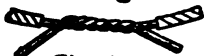


Fig. 178



Fig. 177



Fig. 179



Fig. 180

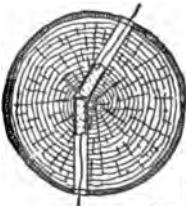


Fig. 181

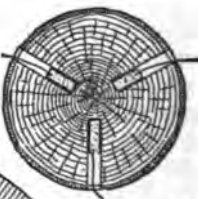


Fig. 182



Fig. 183



Fig. 184



Fig. 185



Fig. 186

the wires must always be brightened by scraping with a knife or otherwise. To insulate, wrap with rubber tape, lapping well onto the covering in both directions.

110. Priming. The cap is inserted in a cartridge, usually called a primer. Whenever reference is made herein to use of explosives in or near water it is to be understood that under all circumstances the cap and primer must be kept perfectly dry. If but one primer is used, it should be placed near the center of the charge when the size and shape of the charge permit it to go in that position. If the cartridges are placed in a drill hole, as in rock blasting and some demolitions, the primer is put in last with the cap end down. The cap may be inserted as shown in Figs. 176 and 177. Fig. 176 applies to caps fired by train fuse and no other method may be used with such caps. The projection of about $\frac{1}{8}$ to $\frac{1}{4}$ inch of the cap case above the surface of the powder is to prevent the latter from taking fire from the sparks of the fuse and burning partially before the fuse goes, which, should it occur, will reduce the force of the explosion, or may cause complete failure.

Primers must be prepared at a safe distance from the charge and from the store of caps and should be placed as short a time as possible before firing.

111. Misfires. In case of a misfire there is risk in approaching the holes for several minutes, if electric firing is used, and for several hours in case of firing by fuse. Rules to this effect are laid down where safety to human life is a paramount consideration. They should be recognized in military operations to the extent which circumstances permit. There is also danger in attempting to reprime a charge, especially if tamping must be removed. The danger is reduced by care and by avoiding hard-metal tools and appliances; if possible, the tamping should be removed with wooden tools. In any case, leave a few inches of tamping above the charge undisturbed, then place several sticks of powder and a primer on top of the first charge and fire again. When conditions permit, it is better practice not to attempt repriming, but to place a new charge in a position to do all or a part of the work of the first charge.

The causes of misfires are various. With electricity, if none of the charges explode, the cause is probably due to overloading the machine, or a short circuit in the leads, or a complete break. An effectual, but less probable, cause is deterioration of all the primers. If part of the charges fire and others do not, the cause will probably be found to be either a defective cap, due to moisture or a broken bridge, or a short circuit in the fuse wires, which prevents current going through one fuse but not the others; or the sensitiveness of the caps may not be uniform, and there may be one or more so sensitive that they explode and break the circuit before the bridges of the others have become heated to the point of ignition.

112. Loading. The charge should fill the chamber as nearly as practicable. If drill holes are used, they should be just large enough to permit a cartridge to slip down without jamming. In quarrying, cartridges are frequently slit open before they are placed in the hole, so that with a slight pressure of the tamping rod, they spread and fill the hole completely. When large charges of free running powder are to be used, such as dynamite, jovite, and rack-a-rock, the cartridges may be opened and the contents put in bulk into another receptacle. As a rule, however, such charges will be made up by bunching sticks or strings of cartridges, par 123, and tying them together. The making up, and every possible detail of preparation, should be done above ground, leaving as little to do in the mine as possible. Charges must not be made up into sizes or weights which can not be conveniently carried through the galleries and placed in the chamber.

The charging should be personally directed by the responsible officer, and if

but one person can get at the charge at a time, he should place the powder himself. Such illumination as may be necessary must be provided by closed lights, with effective precautions against fire. When the primer is placed in the middle of a bulky charge, the wires or fuse must be led out through the powder. Only instantaneous fuse can be so used. If time fuse must be used, place the primer in the middle of one side of the charge so arranged that it must go before any sparks from the fuse can set fire to the powder.

When electric firing is used, the wires of each fuse should be twisted together at the ends to prevent the possibility of a chance current going through the fuse and for identification for connecting to each other and to the leads. Care must be taken that at no stage of the loading or tamping is a strain brought on any fuse or fuse wires, or any injury done to their coverings.

113. Tamping is less important for high explosives than for gunpowder, since the former do a fair proportion of their work without tamping, while the latter does practically none. Light tamping is desirable, however, and may consist of the excavated earth replaced in the communication next to the chamber to a distance of 6 to 10 ft. The use of high explosives facilitates tamping, because so many charges can be placed in drill holes, which are easily tamped.

For drill holes in rock which will hold it, water is the best possible tamping, otherwise sand or stone dust may be used. If the hole points upward, the top should be covered with a board or thick brush to stop the tamping which is blown out like a projectile. If neighboring ground can not be cleared for firing, the entire surface of the probable crater should be masked by brush or timbers piled upon it, and weighted down if necessary.

114. **Effects of Explosion.** It may be assumed as sufficiently exact for present purposes that charges of the same explosive develop total energies directly proportional to their weights. This energy is exerted in all directions in compression of the surrounding medium. The distance at which this disturbance remains sufficient to destroy galleries is called the radius of rupture, R. R. The surface joining the ends of these radii is called the surface of rupture. If the charge is large enough, further relief of pressure is afforded by the bodily displacement of a part of the surrounding medium on the side which presents the shortest distance from the charge to the surface. The relief of pressure on one side shortens all radii of rupture which have a component in that direction, but does not appreciably affect those which have no such component. Hence, when material is displaced the surface of rupture is ellipsoidal; when no material is displaced it is spherical. Fig. 163 illustrates in a very general way the supposed relations of craters and radii of rupture. It is not based on exact data.

The space left by this bodily displacement of material is called a crater. The determination of the crater which a particular charge in a particular place will produce, or of what charge must be put in that place to produce the given crater, or where a given charge must be placed to produce a desired crater, are problems constantly arising in military mining.

Fig. 162 shows a cross section of a typical crater in earth. The position of the charge is indicated; AB is the surface of the ground; CD is the line of least resistance, commonly designated L. L. R. or, in formulas, l ; DE is the crater radius, and CE the radius of explosion. All the elements of the crater are reckoned with respect to the position of the charge and the opening of the original ground surface. This opening for level ground is circular in form and is approximately the intersection of the spheroid of rupture by the ground surface.

Craters are designated as one-lined, two-lined, etc., accordingly as the diam. is once, twice, or three times the L. L. R. A two-lined crater is also called a

common mine; less than two-lined, undercharged; and more than two-lined, overcharged. A mine which does not break the surface is called a camouflet.

When a crater is formed, the part of the total work of the charge represented in crater effects is assumed to be proportional to the volume of earth actually moved. As a part is thrown vertically upward and falls back loosely into place, Fig. 162, the hole actually left does not represent the earth moved. The total volume moved is assumed, from many experiments, to be represented by the frustum of a cone, shown in section in Fig. 162, having the crater opening for its larger base, a circle of the diam. L. L. R. for its smaller base and L. L. R. for its height. For each cubic yard of volume of such a frustum a certain weight of explosive is allowed and it is thus that the corresponding weight of charge is ascertained. The unit weight is the quantity of powder required to throw out one cubic yard. It has been experimentally determined for gunpowder and is deduced for other explosives from their corresponding intensities.

The crater volume, or volume of the conical frustum, Fig. 162, may, for any given ratio of height and crater radius, be expressed by the cube of the height, L. L. R., multiplied by a numerical constant, and hence the weight of explosive required to produce a crater of corresponding proportions may also be expressed by t^3 multiplied by a constant. The constant varies with the character of the material, as well as with the proportions of crater.

115. Table II gives constants for various classes of materials and for craters from 1 to 6 line, the former practically a camouflet and the latter the largest that can be depended upon for results. The table also gives constants from which the R. R. may be determined.

The weight of charge may be determined from Table II. It is to be noted that the user of this table must exercise his judgment in classing the soil under the headings given, so that it can not be said that the table gives charges absolutely. If the mine is important, powder not scarce, and no information has been obtained from actual firings in the soil, the tabular charges should be increased 10% for large quantities and 50% for small ones. It is to be remembered that while if more powder than necessary is used the excess may be said to be wasted, if less than the proper amount is used not only is the total quantity used wasted, but the time and labor spent in getting it into place are also wasted and the opportunity to gain advantage by successful firing is lost. In all uses of explosives in mining the maxim for the first charge should be, do not spare the powder. On the other hand, every charge fired should be carefully observed, and whenever it is obvious that more powder than necessary has been used advantage should be taken of the experience gained to economize powder in future firings. The worst mistake that can be made is having the first charge too small.

116. **Land Mines.** This term is applied to mines or groups of mines usually formed by excavation from the surface and designed to be exploded at the moment the enemy is over them. Such mines are usually employed in front of defensive positions and in connection with visible obstacles. It is not permissible to plant such mines in any ground which is not obviously prepared for defense. Any person who ventures on space so prepared does so at his peril, but if there is a road or path open to passage through such ground mines must not be placed therein, or in a place where the explosion would injure persons occupying the road. If any defensive works or recognized obstacles are thrown across the road, indicating that it is closed to traffic, the road may be mined to a reasonable distance in front of them.

The charges are placed deep enough only to avoid artillery projectiles. If no artillery fire is to be expected they may be placed just under the surface. If a bore hole is sufficient the charge is placed at the bottom and the hole well

tamped. If an open pit is dug the mine chamber should be in firm ground at one side and the hole back-filled and well rammed.

The depth fixed, the charge may be adjusted to give a 2 or 3 line crater. The mines may be in one or more rows. Two rows, 30 to 40 yds. apart, are a good arrangement. The intervals between mines in a row should be such that the craters will nearly but not quite join. The positions of the mines should be concealed as completely as possible and further sophisticated by disturbing the ground slightly at points where there are no mines and so situated as to suggest a systematic arrangement.

A fougasse is a land mine in which the volume of the crater is artificially prepared to increase its range and effect. Fig. 166 shows the form which has been most used. The earth excavated must be piled around the pit, as shown, and well tamped, to prevent the charge blowing out behind the stones. It is not necessary to under-cut the bank as shown in the section. If the soil will not stand it may be thrown out to its natural angle and back-filled and tamped against the stones. A charge of 25 lbs. should scatter a cu. yd. of stones over an area 200 x 100 yds.

This form is difficult to conceal and very easily destroyed by the enemy's fire. Another form, with the axis vertical, is shown in Fig. 167. It is possible to conceal it by sprinkling earth over it, and an automatic firing device may be used with it, which is not practicable with the inclined form.

117. The igniting means may be instantaneous fuse or electricity. Fuses or wires should be laid in trenches 1 to 3 ft. deep. Mines are classed with respect to the method of firing as judgment and automatic. Judgment mines are controlled from a firing point and can be fired only at the will of the operator. Automatic mines are arranged to be fired by the disturbance of some apparatus in or near them. Automatic and judgment firing are often combined for the same mines. If firing by cap, the automatic firing device takes the form of a mechanical trigger, which may be operated by the pressure of feet on the ground over it, or by the pulling of a wire stretched along the line at such height as to be tripped by the feet. With electric firing this device is called a circuit closer, and the actuating force operates to close a contact which completes a metallic circuit from the battery to the fuse.

Planting and operation of land mines will ordinarily be the work of technical troops supplied with approved apparatus.

118. Mine Tactics. In siege operations mining is done at close quarters, and is, or should be, opposed by countermining by the enemy. There is then a double purpose in view; to reach the original objective by placing the charge where intended and firing it, and while so doing to detect and circumvent any attempt of the enemy to interfere, or to prosecute any enterprise of his own.

The only information of neighboring operations which is obtainable results from the sound of working carried through the earth. In compact soil an ordinary blow of a pick can be heard at a distance of 40 ft. and the most careful working is audible to a distance of 20 ft. Other sounds, such as rumbling of trucks and especially tamping, can be heard farther. These distances vary with the character of the soil and the skill of the listener. When more than one gallery is driven they should be parallel and not farther apart than twice the range of hearing, so that an enemy's gallery penetrating between them will be heard from one or both. Returns may be run out from the extreme galleries to detect the sound of working on the flanks. Such galleries are called listeners. They should not be large.

Efforts must be made to detect the enemy's working and to avoid, so far as possible, giving him like information. At occasional and irregular intervals all work should cease, all extraneous sounds be cut off, and men with quick

and trained hearing should listen for sounds of working and estimate the distance and direction. A map of the galleries should be kept, and whenever two headings are approaching, listening should be done in them and the estimates made by the men compared with the measurements on the map as a check on the range of hearing. Accuracy of perception of the sounds may be tested by tapping messages across.

When hostile parties have approached within destructive range of each other the one who fires first is the winner, but the nearer he is, or the longer he holds his fire, the more complete the victory. Each party will be on the alert to discover when the other party is getting ready to fire, and hence the greatest care must be taken to sophisticate the sounds connected with loading. Digging should continue at some point near the end, and all movements of trucks or other operations which make a noise should be continued not less frequently and certainly not more frequently than during the digging. Especially should tamping be cautiously done. The most probable mistake is premature firing, and it should be impressed upon all concerned that it is better to come into actual collision with the enemy's miners than to fire prematurely.

Galleries are much more vulnerable to a side than an end attack. If the enemy's heading can be located, an attempt should be made to get a position on one side of his gallery. The best position is nearly abreast of the end, a little in rear, so that if he is still digging a considerable length of his gallery will be destroyed, or if he is loading or loaded his mine will be exploded.

For long galleries the difficulties of ventilation and earth disposal may make it advisable to take a new departure. The heads of galleries are brought on a line, or nearly so, branches run forward from each so as to end at intervals of $1\frac{1}{2}$ times the depth below the surface, charged for common mines and fired simultaneously. An elongated crater is produced, which becomes a lodgment for new galleries as well as an advanced parallel in any system of surface approaches. The old galleries are reopened to form rear communications. It has frequently happened that entire underground operations have been directed to the single purpose of forming such an advanced trench in a position which could not be reached on the surface.

It will rarely be possible to get close enough to do serious damage with a camouflet, though in some cases it might be advantageous to avoid breaking ground at the surface. The maximum camouflet charge— $\frac{1}{4}$ to $\frac{1}{8}$ of common mines—gives an H. R. R. somewhat less than the L. R. R., which will usually be not more than 15 ft., while a 6-line crater has an H. R. R. of 5 times L. R. R. As countermining will usually result in a crater, consideration must be given to its situation with respect to the surface work, so that it will be an advantage if possible and certainly not a detriment.

DEMOLITIONS.

119. Military demolitions have for their purpose to destroy or make un-serviceable any object in the theater of war the preservation of which would be unfavorable to the army or favorable to the enemy, excepting always objects neutralized by international convention or the laws of war.

The principal objects of demolition may be divided in two general classes, viz.: Natural or artificial objects having no intrinsic or permanent value, such as accidents of ground and structures of purely military character; and

Natural or artificial objects having intrinsic or permanent value, or adapted to useful purposes in time of peace, such as buildings and communications.

Demolition is permissible only under a military necessity. For the first class of objects above the military necessity is obvious, since the destruction is aimed directly and exclusively at the enemy's fighting efficiency.

For the second class, the destruction affects others besides the armed enemy, and for this class the existence of a military necessity justifying demolition can not be presumed but must be determined at the moment, and the amount and character of destruction or disablement explicitly ordered by competent authority.

Demolitions of a local character, which have no effect elsewhere, may be made on the order of the immediate commander, as may also demolitions of a more serious character, but which are necessary to the safety of a local force. For example, a small force in retreat may interrupt a bridge to avoid capture, but the destruction should go no farther than is necessary to produce the result immediately desired by detaining the pursuers long enough to enable the pursued to make their escape. Demolitions which are intended to, or in their ultimate consequences may, affect a larger force or a greater territory, must be ordered by the commanding general of an army or other force operating independently. In case of doubt, orders should be sought from the highest accessible commander. An officer upon whom work of demolition is devolved should, if not provided with proper orders, ask for them.

120. Methods Employed. Demolitions may be made by fire, by mechanical means, or by explosives. Fire is the only recourse when absolute destruction is necessary, as in case of food supplies, munitions of war, structural materials, etc. Soluble matter, as gunpowder, sugar, salt, etc., might be destroyed in water, but this method is laborious. Burning is equally effective and much easier. For quick results with slow-burning materials a quantity of highly combustible stuff must be collected. A small fire gains headway very slowly and much time is lost. Care must be taken that the fire does not spread to objects not intended to be destroyed.

121. Demolition by mechanical means is too simple to require, and too varied to permit, detailed description. Reference is made to a few cases in which the best method may not be obvious.

Abatis is difficult to destroy. If the trees are dry, time suffices, and concealment is not essential, fire is best; otherwise, if working from the front, cut up and carry away enough trees to make a passage through. If working from the rear, loosen the fastenings of the butts and haul away bodily with ropes.

Wire entanglements must be cut with nippers, the more and shorter the pieces the better. Wire may be cut with an ax or machete if a block of wood is held behind it as an anvil. Trous de loup are leveled by shoveling the walls into the pits, or bridged with planks, fascines, or other materials.

Palisades and stockades may be cut down with axes or saws, or the earth may be dug away from one side and the logs pulled over.

Railroads. Operations may be directed against rolling stock, bridges, culverts, tunnels or track, or accessories, such as water stations, telegraphs.

Locomotives are temporarily disabled by removing valves or other small vital parts; permanently, by building a fire in a dry boiler or by detonating a charge of explosive in the boiler. In haste, piston or connecting rods, links, etc., may be destroyed by explosives, or a hole may be blown in the bottom of the tender tank. Cars may be burned or wrecked by collisions or derailment. The best places are in deep cuts or tunnels. A head-on collision in a tunnel will put it out of use for some time.

Wooden bridges may be burned or small ones may be pried off their seats by levers or dragged off with tackle.

Track may be destroyed by taking it up, burning the ties, heating the rails on the fires and twisting them with bars through the bolt holes, with a chain and lever, or a hook and lever, Fig. 167a. Twisting is much better than bend-

ing, as twisted rails must be rerolled before they can be used. The rail should be hot for the greater part of its length, so as to take a long twist. A quick track demolition requiring considerable time to repair, but not injuring the track material, may be made by loosening the ties over a stretch of track, taking off the end fish plates, putting a line of men along one side, two men to each tie, and turning the track over bodily. This plan works best on a high embankment.

Telegraph lines are temporarily disabled by breaks, in which the wires are cut, grounds, in which the wires are connected to the ground, and crosses, in which a metallic connection is made between the wires. A ground may be made by connecting a wire to the rail or to a bar or plate of metal in damp earth. Copper is best. A connection with water or gas pipe forms a ground. All faults should be carefully concealed from view, so as to prolong the time necessary to locate them. If a raid is made on a telegraph office, remove the instruments, bare and brighten the ends of all wires, and tie them together with a wrapping of brightened copper wire. Incoming and outgoing wires should be tied separately.

To destroy a telegraph line cut down and burn poles, cut and tangle wires, and break insulators.

122. Demolition With Explosives. Handling, priming, and firing explosives for demolition purposes are done as already described in pars. 104 to 113. Bickford fuse will be generally used in such work. Simultaneous ignition at long distances from the firing point should not be attempted unless a battery and electric fuses are available. In such cases the charges should be so arranged that the plan will not fail even though all charges do not go off at once. Proper charges and the best way to place them will be indicated for the most frequent and important uses.

123. Weight of Explosives. All calculations of weights of charges are based on the use of an explosive equal in strength to a 50% dynamite. A stick will be understood to mean a cylindrical cartridge $1\frac{1}{4} \times 8$ ins., which will weigh approximately 0.6 lb. A chain will be understood to mean a number of such sticks end to end, in close contact, and is taken at 1 lb. per running ft. The cartridges of a string will usually be attached to a rope or pole. When two or more strings of cartridges are to be used they may be lashed to the same support. In all the following formulas C represents the charge of 50% dynamite, or its equal in strength, in lbs.; d, the diam. in ft.; B, the breadth of the section to be ruptured, and T and t the thickness in ft. and ins., respectively.

124. Timber. A charge of $\frac{1}{2}$ lb. per sq. ft. of sectional area, placed in holes in the same cross section, will cut off trees and round or squared timbers of usual proportions. The holes should be tamped with clay behind the cartridges. One 2, 3, and 4 sticks, Figs. 180 to 182, will cut off trees or poles 13, 19, 23, and 27 ins. diam., respectively. The center of the charge should be at the center of the section. If the holes meet, one primer at the middle will do. If they do not meet, as will usually happen in large trees, a fuse for each hole is required and simultaneous ignition. If firing must be done with time fuse, it may be well to charge and fire one hole, then bore another in the soundest part remaining, charge and fire it, and so on, until the tree falls.

A round timber not over 12 ins. diam. may be cut by a chain completely encircling it in the same plane. It must set snug against the wood and should be fired with primers on both sides.

Such a charge fired 3 ft. under water will cut any pile or trestle leg likely to be encountered. Close contact is not so necessary under water, and it is convenient to lash the charge to a wire ring or to a band or hoop and slip it down.

For squared timbers the charge is placed in one or more holes parallel to one face. The direction will depend on the dimensions of the timber as compared with the length of a stick. The holes should not go entirely through and should be somewhat deeper than the stick is long to allow of tamping. Broadly speaking, the hole should be bored in the direction of the dimension which is nearest 12 ins. for whole sticks or in the direction which is nearest 8 ins. and charged with $\frac{1}{2}$ sticks.

It may be necessary to cut bridge timbers when there is not time to bore. The charge required is 4 lbs. per sq. ft. of section, and may be placed as a chain around, if square or nearly so, or if the piece is thin as compared with its width, across one long side.

Stockades and stockaded walls or palisades are destroyed by strings of cartridges covering so much of their length as it may be necessary to break down. The cartridges can not be got close to the wood except in the case of square timbers, and more powder is required than the actual cross section of wood calls for. Besides, it may not be known what the construction of the stockade is or what strength it may have from braces or other reinforcement.

The charge is best placed along the foot of the wall and should be tamped, especially in the intervals between timbers. So far as its flexibility suffices, the string should be bent to fit the contour of the logs as snugly as possible.

If the demolition is deliberate and the structure can be examined, 1 or 2 strings well placed and tamped will throw down a single wall or one side of a double wall. If the work is to be done under fire, determine the minimum length of breach actually required and place and fire a charge of 4 strings tamped as well as conditions permit.

125. Masonry. For ordinary walls, the charge per running foot varies with the square of the thickness, or $C = 0.85 T^2$. The charge should be laid in chains along the foot of the wall, Fig. 183. If a tamping equal in thickness to the wall is placed, Fig. 184, the charge may be reduced $\frac{1}{4}$. If beside the tamping a groove is cut to hold the charge, Fig. 184, the weight of the powder may be reduced $\frac{1}{2}$.

The following table shows the number of chains required to throw down walls of usual thickness:

| Thickness of wall. | Number of chains required. | | |
|-----------------------|----------------------------|---------|------------------------|
| | Not tamped. | Tamped. | Grooved and tamped. |
| <i>Inches.</i> | | | |
| 13 | 1 | 1 | 1 |
| 18 | 2 | 2 | 1 |
| 22 | 3 | 2 | 2 |
| 26 | 4 | 3 | 2 |

The walls of a house may be blown down with charges taken from the above table. It is sufficient to charge the walls between windows only, preferably inside and with tamping. In haste, one or more charges of 50 lbs. in a central position will demolish the house.

Retaining walls and bridge abutments should be charged at the back and low down. A trench is opened the full width of the back, or a shaft may be sunk and a gallery driven along the back. The charge is tamped with part of the excavated material. In case of a retaining wall it may be found easier to mine under it and place the charge from the front.

When a retaining wall supports a road both may be demolished by a common mine placed as indicated in Fig. 187, L. L. R. being taken at $\frac{1}{4}$ the width of roadway.

Locks should be attacked at the miter sills, the lower first. Start the gates

open slightly and place a concentrated charge between them and the upper edge of the sill.

126. Masonry Bridges. A single arch is best attacked by charging across the extrados at the haunches, or across the crown, Fig. 185. The charge should be $\frac{1}{2}$ more than for a wall of the same thickness. Both methods require digging, and if the spandrel filling is of masonry, the former is scarcely practicable. Both methods also interrupt traffic on the bridge which it may be important to use until the last moment. A thin arch may be broken by a heavy charge exploded on the roadway at the crown. It should be tamped by throwing a mound of earth over it. The charge should be not less than T^2 lbs. per running ft., T reckoned from surface of roadway to soffit of arch.

The charge may be placed in a trough and suspended under the crown. The sides of the trough should make 60° angle. Planks 12 ins. wide will make a trough to hold 36 chains of $1\frac{1}{4}$ cartridges or 36 lbs. to the running ft. If the number to be used will not completely fill the trough, earth must be placed in the bottom so that the top tier of the cartridges will project slightly above the edges of the boards. The trough must not be allowed to sag away from the arch at the middle. If necessary, truss it up, Figs. 216-219, Bridges.

Primers should be placed 3 or 4 ft. apart in the middle chain of the top tier and the wires or fuse led out through notches in the sides.

A bridge of more than one arch is usually most easily attacked at the piers. The destruction of one pier throws down two arches. The charge should be placed where the pier is the thinnest and should extend across one face. If possible, a groove should be cut in the pier, Fig. 186, or irregular voids made by prizing out stones from the same course. This lessens T , partially tamps the charge, and furnishes a convenient support, which must otherwise be provided in the shape of a shelf, trough, or other device.

127. Metals. As soft steel so greatly predominates in structural work, statements under this head will relate to that metal.

All charges will be external, as drilling or boring is not practicable. The standard formula is $C = 2.5 Bt^2$, in which C = the charge in lbs., B the width of the section in ft., and t its thickness in ins. The charge must extend entirely across the plate or sheet.

The following table gives the charges necessary to cut through a plate 1 ft. wide and of the thickness given. It is computed from the above formula for 50% dynamite.

| Thickness of plate. | Charge of 50 per cent. dynamite. | Thickness of plate. | Charge of 50 per cent. dynamite. |
|------------------------|--|------------------------|--|
| <i>Inches.</i> | <i>Pounds.</i> | <i>Inches.</i> | <i>Pounds.</i> |
| $\frac{1}{4}$ | 0.16 | $1\frac{1}{4}$ | 3.90 |
| $\frac{1}{2}$ | 0.62 | $1\frac{1}{2}$ | 5.62 |
| $\frac{3}{4}$ | 1.40 | 2 | 10.00 |
| 1 | 2.5 | 3 | 23.50 |

A single chain will cut a plate up to $\frac{5}{8}$ in. thick. Two, 3, and 4 chains will cut plates of $\frac{3}{8}$, $1\frac{1}{8}$, and $1\frac{1}{4}$ ins. thickness, respectively. The charge must be held snugly against the plate by a piece of plank, lashed or wedged, and whenever possible, must be tamped. For structural shapes figure the width as the sum of web and flange widths, and the thickness as the area of cross section in sq. ins., divided by this sum.

The charge should be in three parts—one on the web and one on each flange. For channels, angles, and Z bars, the entire charge may be on contiguous surfaces, Figs. 188 to 190, and one primer will suffice. For I beams

the flange charges should be on the outside and three primers are needed. See Fig. 191.

As one chain will cut up to $\frac{3}{8}$ in. thickness, and 2 chains up to $\frac{1}{2}$ in. choice will usually lie between the two, as few pieces of structural steel can be found with greater thickness than $\frac{3}{8}$ in.

For lattice girders, diagonals, and posts, all the longitudinal members should be cut. For plate girders, Fig. 192, the web and both flanges should be cut. If short of powder, cut the lower flange and lower part of the web. For box girder, Fig. 193, figure all four sides as plates. If powder is scarce cut the top. For a beam girder, Fig. 194, figure the flange charge for the minimum thickness of beam—flange and plate.

128. Cutting Bridges. Wooden trusses are best cut near the middle of the lower chord. Steel trusses and girders, if a complete fall is desired, should have every member cut on the same cross section. Continuous girder trusses must be cut near the end of the shore spans opposite the abutments as at CC, Fig. 195.

Metal girders and trusses are better cut near the abutments, where the sections of chords and flanges are smaller. Where members meet or cross at panel points, etc., it is usually possible to place charges in a more convenient acute angle and then tamp by throwing earth upon them. The effect of a charge in such a situation is always greater than if placed against the side of a single member, and, unless the panel points are of very massive construction, and so complicated as to make the effect of the charge uncertain, it is better to choose them as the location for cutting, remembering that a complete rupture of the entire cross section of the bridge is the object. Panel points and intersections will be selected so as to attain this object with the smallest number of charges. Figs. 196 to 199 show locations of charges for trusses of different form which meet this condition.

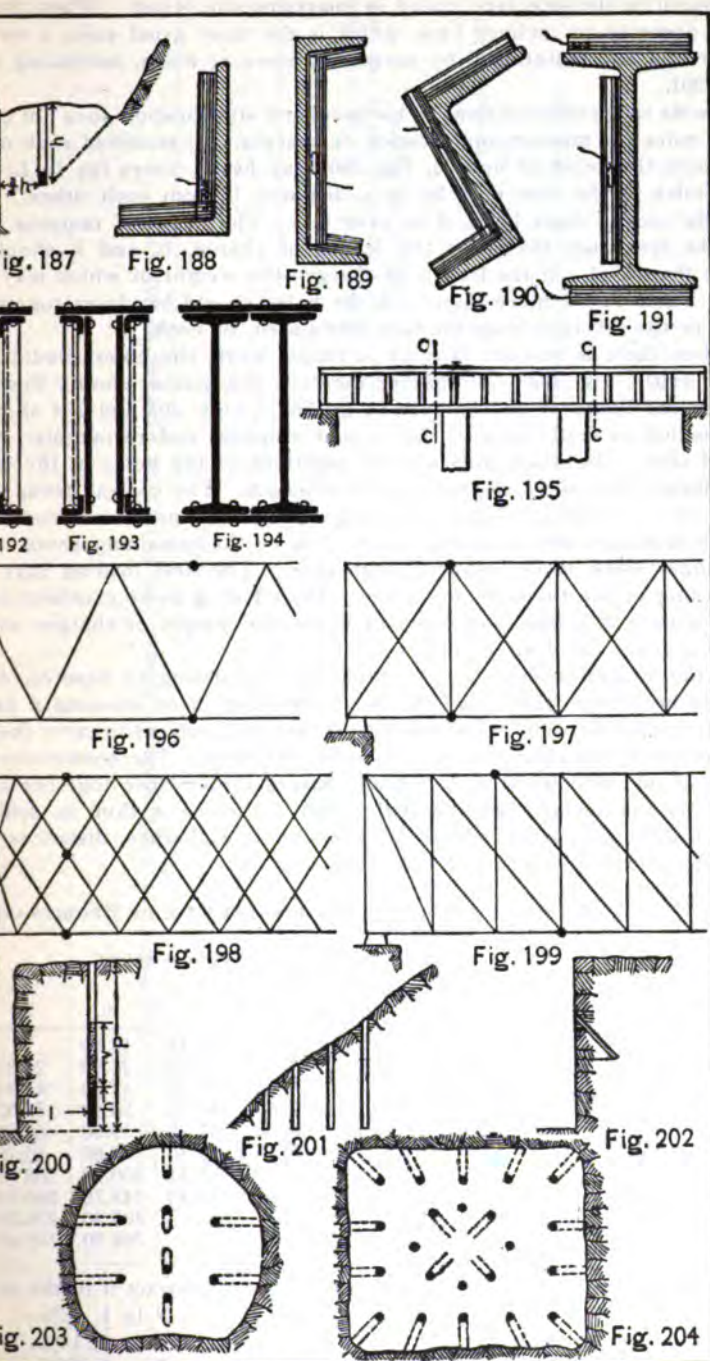
A cantilever bridge should be cut over the towers, with especial care to the complete rupture of the top chords.

Wire cables of suspension bridges are difficult to cut. The best place for work is between the cable and the top of the tower, near the saddle. There are no reliable data as to charges required. A French formula gives $C = 0.21 t^3$ in which t is the diameter of the cable in inches. Assuming the cable to be a plate with a thickness and width which is equal to d , the plate formula becomes $C = 0.21 t^3$. Assuming the cable to be equivalent to a plate of width equal to its circumference and thickness equal to its radius, the formula becomes $C = 0.16 t^3$. It is probable that the last formula will give a charge which will weaken the cable at least, so that it will part under dead load. For a cable of eyebars the charge is computed as for plate and placed between the bars.

129. Railroads. To interrupt traffic rails may be cut and frogs and switch parts of switches broken. A stick fastened against the web of a rail will cut. 70 lbs. will cut a gap in it about a foot long; if the charge is tamped, a rail may be cut. Such a cut may be made to produce derailments, for other purposes two charges should be fired on opposite sides and a foot apart, which will blow out a piece and distort the ends.

A stick in the groove of a frog and covered with ballast will wreck a frog. A stick between two rails, as, for example, a track and a guard rail or the main line and switch rail, will cut both. In such a situation tamping is easy and should always be done.

130. Rock Blasting. For maximum effect, it is desirable to get the charge as elongated as possible at right angles to the L. L. R. It is easier done when the mass of rock presents two surfaces, as a top and bottom. See Fig. 200, when the holes can be drilled vertically from the top with the L.



measured to the side face, called in quarrying the breast. When the rock presents an inclined face, which is the most usual case, a vertical line is secured and maintained by successive rows of holes, increasing in length as shown in Fig. 201.

A wide range of conditions of hardness and stratification does not permit fixed rules for number and location of charges. In stratified rock of uniform hardness the depth of hole, d , Fig. 200, may be $1\frac{1}{2}$ times the L. L. R. distance; the holes in the row may be at a distance, l , from each other. For granite rocks l must be $\frac{1}{2} d$ or even less. The depth of tamping, v , should not be less than $1\frac{1}{2}$ times the length of charge, h , and h should be more than $\frac{1}{2} d$. If the length of charge—the weight of which may be found from Table II—is more than $\frac{1}{2} d$, the holes should be closer together in the row, or the distance from the face diminished, or both.

When there is but one face, as in tunnel work, the holes should be drilled at an angle, Fig. 202. The harder the rock the greater should this angle be, within the limits of convenience in drilling. Figs. 203 and 204 show the disposition of drill holes in the face of elliptical and rectangular tunnels of small size. The black dots are the positions of the holes in the breast; the dotted lines show the direction and length. The central group should be fired first. These are called breaking-in shots and produce a concave surface which facilitates the throwing out of rock by the remaining shots.

Tunnel work is necessarily progressive. The first loading may be made according to the rules already given. The effect is to be carefully noted, and the number, direction, and depth of holes, and weight of charges so modified as to produce the desired results.

If the stratification is very pronounced, amounting to fissures, drill holes should be driven wholly in one layer, not lying in or crossing a fissure.

131. Ice can be removed by blasting if there is a current to carry the blocks away and clear water near to receive them. The connection with the shore should first be broken. Small charges rather close together are necessary; on the surface covered with earth if the ice is thin, in drill holes if very thick. This work will be progressive, and charges, distances, etc., should be determined by trial better than from any rule.

TABLE I.—AREAS IN SQ. FT. OF PARAPET SECTIONS FOR CERTAIN HEIGHTS AND

| Height of parapet in feet = h | Horizontal width of superior slope in feet = s . | | | | | | | |
|---------------------------------------|--|----------------|-------|-------|--------|--------|--------|--------|
| | 2 | $2\frac{1}{2}$ | 3 | 4 | 5 | 6 | 10 | 12 |
| 2 | 7.04 | 7.69 | 8.35 | 9.52 | 10.55 | 11.44 | 13.60 | ..... |
| 3 | 13.70 | 14.78 | 15.84 | 17.84 | 19.70 | 21.62 | 26.90 | 28.88 |
| 4 | 22.36 | 23.86 | 25.33 | 28.16 | 30.85 | 33.40 | 42.20 | 45.84 |
| $4\frac{1}{2}$ | 27.44 | 29.15 | 30.82 | 34.27 | 37.17 | 40.14 | 50.60 | 55.07 |
| 5 | 33.02 | 34.93 | 36.82 | 40.48 | 44.00 | 47.38 | 59.50 | 64.80 |
| 6 | 45.78 | 48.41 | 50.51 | 54.80 | 59.15 | 63.36 | 78.80 | 85.76 |
| 7 | ..... | ..... | ..... | ..... | 76.30 | 81.34 | 100.10 | 108.72 |
| 9 | ..... | ..... | ..... | ..... | 116.60 | 123.30 | 148.70 | 160.64 |
| 11 | ..... | ..... | ..... | ..... | ..... | ..... | 205.30 | 226.50 |
| 13 | ..... | ..... | ..... | ..... | ..... | ..... | 269.90 | 288.48 |

For inclined sites add if slope is to the front, or subtract if to the rear.

15 to 1, 7%

9 to 1, 12%

14 to 1, 7%

8 to 1, 14%

13 to 1, 8%

7 to 1, 16%

12 to 1, 8%

6 to 1, 19%

11 to 1, 9%

5 to 1, 24%

10 to 1, 11%

TABLE II.—CONSTANTS FOR DETERMINING CHARGES AND RADIUS OF RUPTURE OF MINES.

| Kind of material. | Camouflet, 1-line. | Under- charged, 1½-line. | Common, 2-line. | Overcharged. | | | |
|---|-----------------------|--------------------------------|--------------------|--------------|---------|---------|---------|
| | | | | 3-line. | 4-line. | 5-line. | 6-line. |
| Light earth..... | 0.005 | 0.012 | 0.027 | 0.081 | 0.185 | 0.351 | 0.594 |
| Common earth..... | 0.006 | 0.015 | 0.033 | 0.094 | 0.229 | 0.433 | 0.733 |
| Hard sand..... | 0.007 | 0.019 | 0.042 | 0.126 | 0.288 | 0.546 | 0.924 |
| Hardpan..... | 0.008 | 0.023 | 0.050 | 0.150 | 0.343 | 0.650 | 1.100 |
| Ordinary brick masonry..... | 0.010 | 0.026 | 0.057 | 0.161 | 0.391 | 0.741 | 1.254 |
| Medium rock or good <i>new</i> brickwork..... | 0.013 | 0.034 | 0.075 | 0.225 | 0.514 | 0.975 | 1.650 |
| Best <i>old</i> brickwork..... | 0.014 | 0.038 | 0.083 | 0.250 | 0.569 | 1.079 | 1.826 |
| Radius rupture {Horizontal..... | 1.0 | 1.4 | 1.7 | 2.5 | 3.4 | 4.0 | 5.0 |
| {Vertical..... | 1.0 | 1.0 | 1.1 | 1.2 | 1.7 | 2.0 | 2.5 |

These numbers to be multiplied
by *l* for charges of 50 per cent.
dynamite in pounds.

These numbers to be multiplied by
l for radius in feet.

These numbers to be multiplied
by p for charges of 50 per cent.
dynamite in pounds.

These numbers to be multiplied by
 t for radius in feet.

For gun cotton or 75 per cent. dynamite, reduce charges found from above table 40 per cent. For ammonal, reduce 50 per cent.

ADDENDUM, 1907.

22a. Figs. 205 and 206 show an infantry redoubt recently built at Fort Kan., for test purposes. It embodies some of the latest approved features of such works.

There is a tendency to limit the use of redoubts to the strengthening of points. In other situations their depth must be restricted as much as possible so that the redoubt resembles a trench of unusual strength. Overhead cover will always be an important feature.

ADDENDA, 1909.

9a. Certain changes in the consensus of military experts in the matter of profiles of infantry trenches must be noted. These changes rest upon principles which have been stated in former editions but have not heretofore been embodied in typical profiles.

Foremost among them is the increasing weight given to concealment from view and the sacrifices of other desirable conditions which are thought justified to secure or preserve such concealment. There is also to be considered the greater depression angle of lines of vision made possible by balloon reconnaissance.

Of the principal conditions set forth in paragraph 8, only the second and fourth appear to require modification. When the parapet is not seen from view it can be seen more clearly and at greater distance if it presents a marked difference in the inclination of its planes. For this reason it is thought that the exterior slope, instead of being made "as steep as the nature of which it consists will stand," would better be as flat as the supply of material and the labor of placing it will permit, and the superior and exterior slopes should either be merged or make a small angle with each other, and in the latter case should be joined by a curve.

As the new profiles are characterized by lower and wider parapets, the minimum thickness to resist penetration will seldom be a controlling factor.

An ample elbow rest is now considered very desirable. A foot wide and one foot deep are generally accepted dimensions, but when the trench is of such a depth each soldier may be allowed to adapt the elbow rest in front of him to his individual requirements.

9b. The importance of overhead cover is more generally recognized than formerly. In actual trench construction it is not so difficult as it would appear. The lightest possible cover is better than none. Among the first things to be considered by an officer who becomes responsible for intrenching a line of troops are the kind and quantity of material for overhead cover which is in reach and how it can best be utilized. Fig. 212 shows the general features of a trench cover simpler than the forms heretofore proposed in this manual.

9c. It is noted by our observers of the Manchurian war that the lying trench was seldom if ever used. The lying trench still appears to be the best form to obtain slight cover under hot fire with a minimum of casualties not only because it involves less digging, but also because the men are less exposed while digging and are partially protected from the beginning of the work. The use of the lying trench may yet be advisable for our Army. It is premature to relegate this form to oblivion. Normally, the first objective will be a simple standing trench. Lying and sitting forms will be used only when a standing trench is so difficult of construction as to be impracticable. However, the principles of the construction of the lighter forms and their conversion into stronger forms should not be lost sight of.

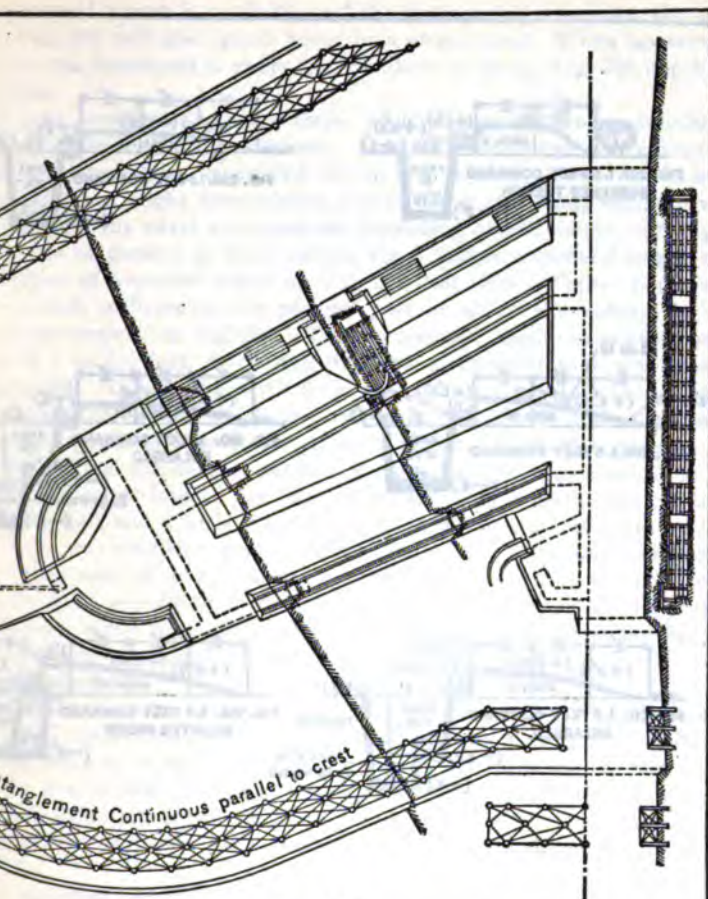


Fig. 205

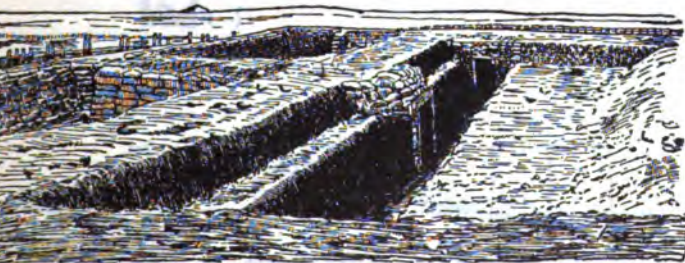
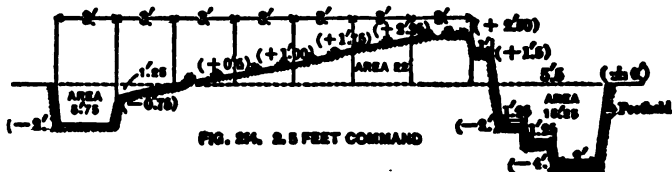
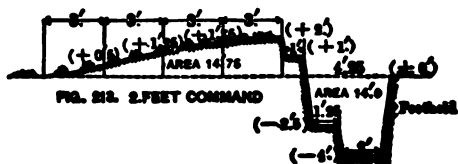
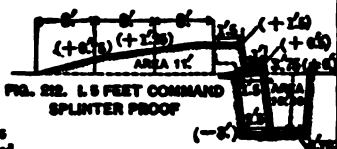
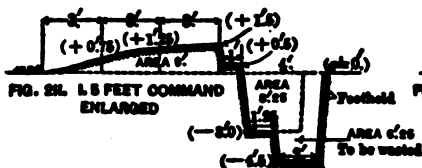
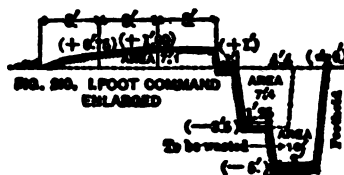
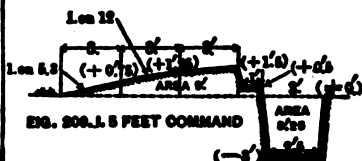
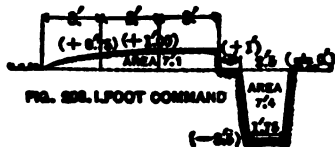
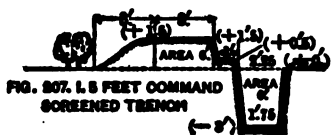


Fig. 206



When a natural screen is available and the fire not too annoying, the profile in Fig. 207 will give good cover in a short time. When no screen is available and the command is under fire, or likely to be so, Fig. 208 is probably the best form.

The type profiles shown are those which represent proper solutions of the problem under average conditions. If actual conditions are exceptional, exceptions should be accounted for in the profile. Thus the existence of a screen of grass might determine a profile which is a compromise between Fig. 207 and 208, the exact arrangement depending on the height of the grass, a slight rise of ground in front calling for a higher command might result in the adoption of a profile based on Fig. 209, but with a higher parapet and a lower trench, utilizing in the parapet part or all of the volume of earth which would "be wasted" in Fig. 211. Type or average condition profiles having parapets of 1 to 2½ feet, increasing by steps of one-half foot, are shown in Figs. 208 to 214. Taking the earth from the entire width of trench and distributing it over the entire width of parapet in the easiest and most natural manner should produce nearly the desired profile. With the interior crest of proper height and the base of parapet of proper width, a general slope from the crest to the outer line of the base, a little full or convex upward in the front or higher half and a little slack or concave upward in the front or lower half will give an excellent profile. The elbow rest only requires especial attention. This may be formed as the parapet goes up or may be cut after the parapet is finished, according to conditions and the preference of the builders. The elbow rest, while most desirable, is not essential, and if under fire or if the earth does not stand well it may be omitted and an interior slope formed as in the older profiles.

1. When the distance between firing and cover trenches is sufficient, the communicating trench may be given a zigzag trace somewhat as in Fig. 119, with the returns or extensions at the angles perpendicular to the general direction of the trench or approximately bisecting the angle between the trench legs. Counting from the firing trench, the first of these returns may be set apart as a rear, the second as a dressing station, and the third as a firing station.

2. The simplest redoubt is an infantry trench inclosing the area selected, with communicating trenches, as described in 12a, ante, joining the front face of the trench to the firing trench and the rear face or gorge which corresponds to the cover trench. All the instructions for siting in paragraph 20 apply except that it is not worth while to make any sacrifices to secure straight lines, and a profile giving surplus earth should be used, which surplus should be thrown to the rear to obtain some cover against reverse fire; this especially applies to the returns for dressing stations, etc., as in case of an attack from the rear the functions of the various parts are reversed; that is, the cover trench becomes the firing trench, the firing trench the cover trench, etc.

PART VI.

ANIMAL TRANSPORTATION.

1. Animal transportation for the Engineer service is divided into wheel and pack transportation. In wheel transportation, the wagon is the unit, and each animal can haul, on a conservative estimate, 1,200 lbs. gross or 700 lbs. net load. In pack transportation, the animal is the unit, and each can carry, on a conservative estimate, 300 lbs. gross or 225 lbs. net load. A given quantity of freight carried on packs will require three times as many animals as would be necessary to carry it on wheels. The larger number of animals means a proportionate increase of the forage to be provided and in the labor of feeding, shoeing, etc. If, however, the country and season are favorable for grazing, the pack mule will get on without any forage, while the draft mule cannot. Other disadvantages of pack service are that packages must be limited in size and weight much more closely than for wagons; long articles, as tent poles, can not conveniently be carried except by special construction, and loading and unloading of pack cargoes is an expert service which must be performed by a few trained men, while loading of wagons is work in which all can participate.

The great advantage of pack transportation is its mobility, and this consideration is often paramount. A good pack train, well handled, can make 2 miles to 1 of the best wagon trains on good roads and more on bad ones, and can besides go where there are no roads at all and where the country is so rough that roads could hardly be made and wagons could not pass them if they were made.

Wagon transportation should be used unless the country is impracticable or the rate of march too rapid for wheels. The permanent pack trains should be limited to the probable requirements of rapidly moving columns, and those the baggage, etc., should be kept down to an absolute minimum. Where great difficulties of wagon transportation are foreseen, the draft mules should be broken to pack service and enough aparejos carried in the train so that in case the wagons must be abandoned, $\frac{1}{4}$ to $\frac{1}{2}$ of the loads may be placed on the mules and the march continued. The combination of harness and pack saddle which naturally suggests itself in this connection, is not practical. Such a combination would make a very poor harness and a worse pack saddle.

Mules were used interchangeably for draft and pack service on the Mexican boundary survey, and pack mules were put into harness in the China campaign.

2. The mule is the standard draft and pack animal of the United States Engineer service. He can best be described and understood by noting his points of difference from the horse, which he resembles so closely that it has not been found necessary to devote books to him particularly. The points of difference in conformation are mainly larger, thicker head, longer ears and smaller feet, larger girth, shorter legs, and longer body. The relative disposition of bones and their angles are the same as for the horse. Fig. 1 shows the skeleton and the names of the bones most likely to be the seat of injuries or diseases. Fig. 2 shows the mule's exterior conformation and the names of the regions into which it is divided.

Where extensive bogs are found, as in some parts of Alaska, horses are used for pack service, selection and breeding being conducted with a view to the maximum size of foot.

the mule is tougher and hardier than the horse, less subject to disease or inflammation from slight injuries, and usually yields more readily to treatment. He is nearly exempt from some common diseases of the horse, and especially from colds. In the field, colic and kicks or other contusions, are his principal troubles. When injured he does not exhibit lameness as quickly as a horse, and on this account needs more careful watching.

Selection of Mules. The cross between a jack and a mare is that most valuable and is the best. Of these, experience seems to indicate that mules resembling the sire—that is, small or medium sized, with strong markings, large ears, and small feet—are hardier, while those resembling the mare, good-sized, smaller ears, larger feet, and no jack markings, are likely to show less endurance. Color does not seem to give any indication of constitution or disposition except as above noted. Good mules will be found in all colors. Mules for immediate use should not be taken under 4 years old. A mule sound and healthy at 4 years should, with proper care and treatment, last until he is 18. There need be no distinction as to sex. Some experienced men prefer mares. Male mules are said to stand sea voyages better than males. Very large mules are not desirable.

A mule should be judged as to his age, strength, endurance, and disposition. Indications of age are not very precise as to exact years, but are clear enough to answer the question whether the mule is too young or too old for service. At 4 years, which should be the minimum age, 4 of the 6 incisors in each jaw are permanent, and the others, the end ones, are temporary or milk teeth. The difference is plain, as the milk teeth are white and smaller than the others and are smooth outside and grooved inside while the permanent teeth are grooved outside and smooth inside. In mules, the tushes also appear at this age, smooth, straight, and pointed, Fig. 3. At 5 years, the remaining milk teeth are replaced by permanent ones, which latter, however, have no inside wall, Fig. 4. At 6 years, these teeth have the inside wall. At 7 years, the ends of the incisors show wear and the tushes begin to appear blunted, Fig. 5. From this stage on, the age is a matter of judgment, based on the amount of wear on the incisors and tushes, and the angle of the incisors, which is obtuse in young mules and gradually changes to acute in very old ones, Fig. 6. Other indications of age in the mule are the temples, full in the young and sunken in the old, and the wrinkles above the eyes, and gray hairs, both of which increase in number as the animal grows older.

The indications of strength are, the size and build of the animal, especially his legs. The fore legs should be set well apart at the shoulders and about equally wide at the feet and should appear straight when looked at from any direction. The hind legs should also set well apart and be parallel, and appear straight when looked at from behind. The angle of the pastern should be such that the middle line of the leg prolonged to the ground will just touch the heel when the animal is standing squarely and naturally on a smooth level surface.

The indications of endurance are principally the breadth and shape of the chest and the girth, both of which show the lung power on which endurance depends. The chest should be broad and muscular, and especially the breastbone should not be prominent. Looking at the animal from the side, the chest should appear to project distinctly in front of the fore legs. The girth, measured 6 to 9 ins. in rear of the fore legs, should not be less than $1\frac{1}{4}$ times the height of the animal.

For indications of disposition look to the head and eye; the latter is especially a good index. Avoid mules with extra long heads; also those with hollow, fishy faces. The eyes should be set well apart and stand out prominently.

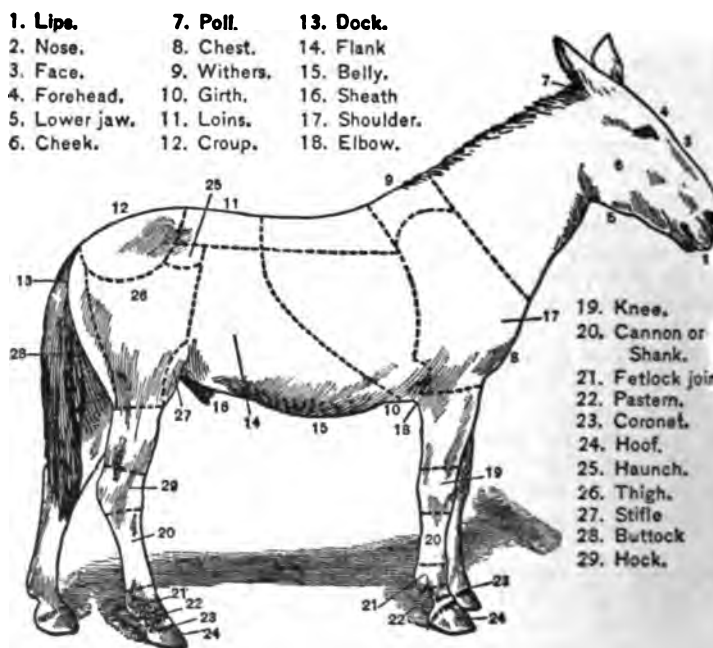
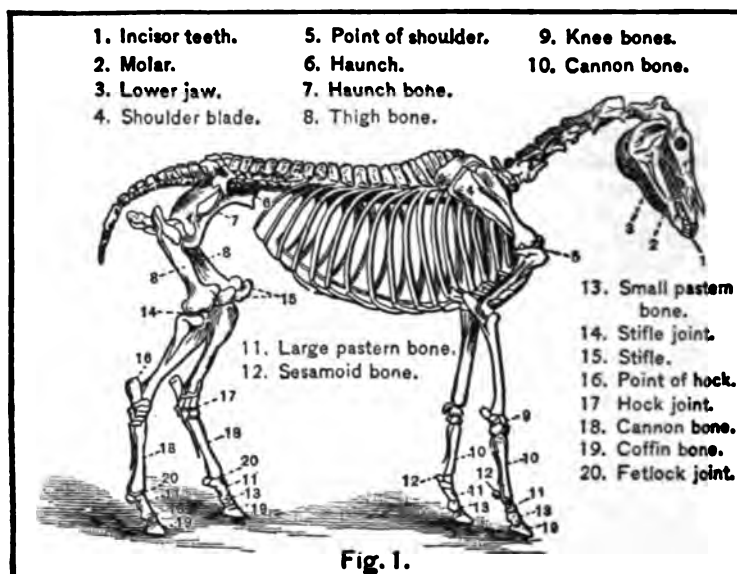




Fig. 3, 4 years



Fig. 4, 5 years.



Fig. 5, 7 years.



Fig. 6, very old.

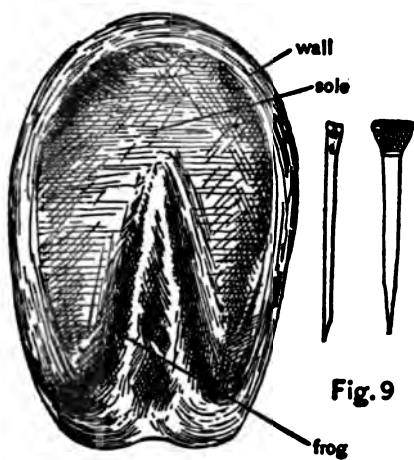


Fig. 9

Fig. 7



Fig. 8

Mule shoe, not fitted.

Eyes close together or sunken show a mean disposition. A good mule has a soft, kindly look in his eye which is difficult to describe but is easily recognized. The ears should be mobile, and in young animals constantly moving; one pointing forward and one back is a good sign; laying both ears clear back when approached is a bad sign; but animals at rest and undisturbed frequently lay the ears back.

4. Feeding. The ration for the mule is 9 lbs. of oats or corn and 14 lbs. of hay, the latter the same as for the horse, the former $\frac{1}{4}$ less. Bran when issued is in lieu of grain, pound for pound. One hundred pounds of straw per month is allowed for bedding, or the same amount of hay if straw can not be had. The smaller grain ration is determined by the smaller average size of the mule and does not mean that he is a lighter eater than the horse or that he can do the same work with less nutrition. The ration is right for the average mule at average work. If he is extra large or is worked beyond this limit, he must have more grain or its equivalent in other food, or he will fall off in condition.

While the mule is less particular about his food than the horse, and will keep himself alive when a horse would starve, it is none the less important that his food should be clean and sound. He is particularly sensitive to sudden changes of diet even when the old food and the new is each good of its kind. Changes from grain to grass and the reverse, or from one kind of grain to another, should be made gradually. In addition to a proper quantity of food, the animal must have time to eat it. All of the hay and more than half of the grain should be fed at night, and the morning feed should be given at least an hour before hitching up. Pack mules frequently have the entire ration at night and are not fed at all in the morning. In the field, the mules can be fed at the picket line by putting a layer of hay along the line, making a hollow or nest in front of each mule and pouring the grain into it. When no hay is fed and the ground is not dry and clean, lay down sacks on which to place the grain. Animals must be watched while feeding to prevent stealing from each other and waste by scattering grain or trampling it into the dirt.

Mules which are nearly exhausted or pumped out after a hard march will sometimes refuse to eat. Their food should be taken away and offered to them later, after they are rested a little, when they will usually take it.

Bran moistened with water to the consistency of brown sugar should be given occasionally, and always if there are signs of constipation. It may be given alone or mixed with a part ration of grain. It must be freshly mixed to make sure that it is not in the least sour. This and a little fresh grass when it can be had are sufficient usually to keep the bowels right. Purgatives should not be given except under the advice of a veterinarian or when constipation persists in spite of the simple remedies suggested. An ounce of nitrate of potash, or, if this can not be had, about a pint of wood ashes mixed with the bran mash, will slightly increase its laxative effect. Common salt has the same effect.

5. Salt. Mules require a certain amount of salt, of which they are the best judges. The allowance is 2 oz. per week for each animal, which may be increased to 12 oz. per month, in the discretion of the commanding officer. In a corral, lumps of rock salt may be kept in boxes from which the mules will lick as much as they need. If glanders should make its appearance anywhere in the vicinity, the use of these boxes should be discontinued and salt fed to the animals separately. This is best done in the bran mash. On the march salt must be fed in the same way. If the mules are found licking each other or the harness, or gnawing wagons or mangers, it is an indication of lack of salt.

6. If the mules are herded for grazing at night, there should be a bell horse

keep them from straggling. The bell horse should be hobbled but not tethered if it can be avoided. There should also be a herd guard on duty. The animals are habitually trained to follow a bell horse, but draft mules are not. Horses have a peculiar fascination for the mule, and if one is turned into a trail with a bunch of mules for 2 or 3 days, they will follow him anywhere and can not be induced to leave him. If a pack train is short of grain, the bell horse should have a full ration, since he can not graze along the line of march and the pack mules can and do.

In open country a white or gray bell horse will make it possible to locate a pack train at a much greater distance. This may or may not be desirable, according to circumstances. This remark applies also to white or gray mules.

Water. A mule requires from 4 to 6 gallons of water a day, depending on the season and his work. In an arid climate 2 or 3 times as much may be required. In an emergency, he may be worked with what he will drink at the watering a day, but whenever possible he should be watered two or three times a day. In corrals there should be, except in freezing weather, a constant supply so that the animals can drink whenever they desire to do so. It is important that the water be pure and wholesome as for any other animal. In fact, the mule is rather particular about his drinking water. In every herd, the animals will refuse water which others drink and which appears to be clean. No pains should be spared to find water which these animals will drink. If the mules have had enough water at night they often will not drink before starting in the morning. In such case every effort must be made to get water at the end of the first hour's march. Especial attention is required on this point, as the watering of draft mules on the road generally involves unhitching teams or carrying the water in buckets, either of which operations causes trouble and delay and is likely to be neglected. In crossing a stream with a pack bottom, if the mules are thirsty they should be watered before driving in; otherwise they may stop to drink and mire themselves or the wagon. A stream entered at the end of a march should usually be crossed before going to camp.

Diseases and Treatment. The normal condition of a mule is indicated by a pulse of 34 to 38 per minute, and a temperature of 99 degrees. The pulse should best be taken inside the lower jaw or inside the fore leg just above the hock. Temperature is taken by a clinical thermometer inserted in the rectum for five minutes. Disease is almost always accompanied by an increase of temperature or pulse, or both. The pulse may run to 100 per minute or even higher. A strong, full pulse of normal rate is a very good indication of freedom from disease or injury. The temperature in some diseases runs from 107 to 109 degrees. In taking either temperature or pulse, avoid exciting or worrying the animal. The normal rate of respiration when at rest is 12 per minute. Apart from accidents, which will be frequent, and contagion, which will be frequent, sick mules in the field will usually be the result of some neglect, as overfeeding, watering, policing, or shoeing; or of abuse or overexertion. It is much easier and better to keep mules well by proper attention and treatment than to cure them when sick.

The diseases and injuries described below include those most likely to be encountered in field service, those in which effective treatment can be given by men who are not skilled veterinarians, and those in which prompt action is necessary to prevent contagion.

Administration of Medicines. Liquid medicines are given as a drench. Put the liquid into a long-necked bottle without a shoulder, and see that there are no sharp edges or projections about the mouth or neck. Raise the animal's head until the mouth is higher than the throat. Insert the neck of the bottle

in the side of the mouth between the incisors and the molars. Point it toward the throat and allow the medicine to run out slowly and with intermission, if necessary.

Powders without disagreeable taste or odor may be dissolved in water and sprinkled on the feed or put into the drinking water.

Balls to contain dry medicines may be made by the addition of honey, sirup, or soap, using oil meal if necessary for required consistency. They should be about 2 ins. long and $\frac{3}{4}$ in. in diameter, freshly made, and inclosed in tissue paper or gelatine capsules.

The mixture may be given a sticky consistency and placed on the tongue with a paddle or spoon. This form is called an electuary.

ADDENDUM, 1907.

8a. War Department Circular 9, series of 1907, provides that the mallein treatment as a preventive against generalized incipient glanders shall be administered quarterly in the United States and oftener in tropical countries.

The Quartermaster's Department supplies the mallein.

9. The following table of veterinary supplies is sufficient for ordinary requirements of field treatment:

| Articles. | Designation. | Quantity for 100 animals. | Quantity for 200 animals. | Quantity for 300 animals. |
|---|--------------|---------------------------|---------------------------|---------------------------|
| Acid, boracic..... | oz. | 4 | 6 | 8 |
| Acid, carbolic..... | oz. | 16 | 20 | 24 |
| Aconite, fluid extract..... | oz. | 1 | 2 | 3 |
| Alcohol, grain..... | gals.. | 1 | 2 | 3 |
| Aloes..... | oz. | 20 | 24 | 32 |
| Alum..... | lbs.... | $\frac{1}{2}$ | $\frac{1}{2}$ | 1 |
| Camphor, gum..... | lbs.... | 1 | $1\frac{1}{2}$ | 2 |
| Calomel..... | oz. | 2 | 4 | 6 |
| Cosmoline..... | lbs.... | 4 | 8 | 12 |
| Creolin..... | lbs.... | 2 | 4 | 6 |
| Flaxseed meal..... | lts.... | 25 | 30 | 40 |
| Ginger, powdered..... | lbs.... | 1 | 2 | 3 |
| Glycerin..... | lbs.... | 1 | 2 | 3 |
| Iodoform..... | oz. | 4 | 6 | 8 |
| Iron, chloride, tincture..... | oz. | 8 | 12 | 16 |
| Lead, acetate..... | lbs.... | 1 | 2 | 3 |
| Needles, surgeon's, asstd..... | doz.... | $\frac{1}{2}$ | $\frac{3}{4}$ | 1 |
| Oil, linseed, raw..... | gals.... | 2 | 3 | 4 |
| Oil of turpentine..... | gals.... | 1 | $1\frac{1}{2}$ | 2 |
| Opium, tincture..... | lbs.... | 2 | 3 | 4 |
| Potassium, nitrate..... | lbs.... | 3 | 4 | 6 |
| Sulphur, powdered..... | lbs.... | 1 | 1 | 2 |
| Sweet spirits of niter..... | lbs.... | 4 | 8 | 12 |
| Tar, pine..... | lbs.... | 1 | 2 | 3 |
| Witch-hazel, distilled..... | qts.... | 2 | 4 | 6 |
| Zinc, sulphate..... | lbs.... | 1 | 2 | 3 |
| Absorbent cotton..... | lbs.... | 2 | 3 | 4 |
| Antiseptic gauze..... | pkgs.... | 2 | 2 | 3 |
| Bandages, red flannel, 4 ins. wide, 4 yds. long..... | doz.... | 2 | 3 | 4 |
| Bandages, white cotton, 4 ins. wide, 4 yds. long..... | doz.... | 4 | 6 | 8 |
| Oakum..... | lbs.... | 10 | 15 | 20 |
| Plaster, adhesive, 2 ins. wide, 10 yds. long..... | rolls.... | 1 | 1 | 2 |
| Silk for ligatures, ordinary..... | oz. | $\frac{1}{2}$ | $\frac{1}{2}$ | $\frac{3}{4}$ |
| Silk for ligatures, heavy-braided..... | oz. | 1 | 2 | 3 |
| Soap, white castile..... | lbs.... | 10 | 15 | 20 |
| Sponges, surgeon's..... | lbs.... | 1 | 2 | 3 |

Standard veterinary prescriptions:

One lb. fluid = 16 oz. = 1 pt.

One dram solid or fluid = $\frac{1}{8}$ oz.

Standard silver dollar weighs $\frac{7}{16}$ apothecary's oz., or $\frac{7}{16}$ avoirdupois.

By giving liberal measure it may be used as an ounce weight.

A 5-cent nickel may be used for a dram weight. If well worn it will be slightly right; if new, take scant measure. A balance can always be improvised.

Antiseptic or sterilizing dressings for external use only (Nos. 2 and 3 may be used on eyes, nose, and mouth):

Creolin 1 part, water 40 parts.

Carbolic acid 1 part, water 40 parts.

Boracic acid 1 part, water 20 parts.

Iodoform, dry, necessary quantity sprinkled on wound.

Boracic acid, dry, necessary quantity sprinkled on wound.

Sulphate of zinc 1 oz., acetate of lead 1 oz., water 1 qt. This is the well-known white lotion. A dram of carbolic acid may be added if a strong antiseptic is needed.

OINTMENTS.

Iodoform 1 part, cosmoline 6 parts.

Boracic acid 1 part, cosmoline 6 parts.

Carbolic acid 1 part, glycerin 6 parts.

Sulphur (if powdered) 2 drams, cosmoline 1 oz.

LINIMENTS.

To relieve pain. Witch-hazel 2 oz., spirits of camphor 2 oz., laudanum 1 dr.

Stimulating. Turpentine 2 oz., spirits of ammonia 2 oz., linseed oil 1 pt.

Spirits of camphor 2 oz., spirits of ammonia 2 oz., turpentine $1\frac{1}{2}$ oz., ether 1 pt.

Soap liniment. Castile soap 6 oz., spirits of ammonia 6 oz., spirits of camphor 2 oz., alcohol and linseed oil each 1 pt.

MISCELLANEOUS.

Purge. Aloes 6 drams, calomel $\frac{1}{2}$ dram, ginger 2 drams.

To stimulate the kidneys. Sweet spirits of niter 1 oz., water 1 pt.

Founder powder. Nitrate of potash 4 oz., gentian 4 drams.

Tonic. Gentian 2 drams, ginger 2 drams, flaxseed meal $\frac{1}{2}$ dram.

Colic. Sweet spirits of niter 1 to 2 oz., laudanum 1 to 4 oz., ginger 2 drams.

To dress saddle and harness galls and to harden the skin. Alcohol 1 pt., water 1 pt. If the skin is abraded, mix with white of eggs to a paste and apply a thick coating.

Constipation. Put the mule on a laxative diet, bran mash, grass or hay. Salt also has a slightly laxative effect.

Diarrhoea. Usually results from too laxative diet or exposure. Put the animal on dry feed without salt and keep dry and warm. Do not work more than necessary. In aggravated cases give $\frac{1}{2}$ pint of raw linseed oil or 1 dram powdered opium.

Spasmodic Colic. The animal appears to be in distress, looks around at its legs, paws, kicks at its belly, attempts to evacuate the bowels and to pass

urine. Pulse and respiration accelerated. The attacks are intermittent and between them the animal returns to apparently normal condition.

Give a drench of 1 pt. of raw linseed oil, and prescription No. 19. If the animal has not been overfed and the case is light, 1 dram of powdered ginger mixed in water will do. Give ample room to move about.

Flatulent Colic. More serious and less frequent than the former; pain apparently less severe but continuous; animal unsteady on its legs; extremities cold; excessive distention of abdomen.

Give No. 19 full strength, repeating at hour intervals until relieved. In severe cases it is necessary to puncture the animal to relieve the distention. The puncture is made in the right flank in the space bounded by the backbone, the hip bone, and the last rib, and at the point of greatest distention. The puncture is made with the trocar directed downward and inward. Leave the cannula in the opening temporarily. This operation should be done by a veterinarian or farrier.

Poll Evil. An abscess on top of the head immediately behind the ears. Troublesome mainly from its unfavorable situation for treatment. Keep bowels open and reduce inflammation by applications of cold water. After pus has formed, open clear to the bottom so that pus can readily run out from the lowest part. Poultice and keep open until discharge of pus has entirely stopped. Use antiseptic dressings Nos. 1, 2, or 6.

Strangles. An inflammation of the glands of the throat and neck, resulting in the formation of an abscess. Good care and soft food, varied as much as possible to stimulate the appetite, are all that is required until the tumor heads, when it should be freely opened and drained until it is free of pus.

Glanders. A yellowish, sticky discharge from the nose, with ulcers inside the nostrils, at first distinct, then with ragged edges and finally confluent; enlargement and hardening of one or both glands below the jaws; staring coat; difficult respiration; extreme debility and profuse perspiration on the slightest exertion; fetid odor from nostrils in advanced cases. The disease is contagious and incurable. As soon as suspected, the animal must be isolated, and when the disease is recognized, he should be killed and burned or deeply buried. All grooming and other implements used about the animal should be destroyed and his surroundings thoroughly disinfected. Attendants should use great care to avoid contagion in handling suspected cases. The hands should be free from cracks or sores, and after touching the animal, should be well washed, with a little carbolic acid in the water. See p. 1258.

Farcy. A different and milder manifestation of the same poison as in glanders. Ulcers appear on head, body, or legs; they are commonly called farcy buds or buttons. When the legs are affected, they swell, and the buds are usually below the knees or hocks, oftenest in a line down the front of the fore leg, beginning at top and running to the bottom. In the early stage, the buds are hard lumps beneath the skin. Later they enlarge and suppurate through the skin. Before this condition is reached, the animal should be killed.

Surra. A disease resembling glanders, prevalent in the Philippine Islands. It is probably a wound disease, caused by contact of the infectious agent with a wounded surface, either skin or mucous membrane. At first loss of appetite, constipation, fever and thirst; later a dropsical swelling, usually beginning around the belly and immediately or quickly extending to legs and feet, with rapid and extreme emaciation. Sometimes the submaxillary glands are involved, with discharge from the nose resembling that of glan-

ders. A very characteristic symptom is dragging the hind feet in walking. The disease runs from 3 to 4 weeks and sometimes longer. No remedy is as yet known. Isolate as soon as suspected, and, when the diagnosis is certain, destroy the animal and burn or bury the carcass.

Isolation hospitals and corrals should be half a mile from other corrals. No nonisolated animals should be allowed to approach them even to bring visitors or supplies, which should be conveyed by other means.

All animals should be carefully examined and all abrasions of skin or mucous membrane should be protected from biting insects by local applications.

Suspected and sick animals should be protected from biting insects, especially flies, by screens, smudges, or washes, and carcasses should be similarly protected until burned or buried.

All possible efforts should be made to exterminate biting insects and rats.

Where surra is or has been prevalent allow no grazing and avoid all green forage, especially from marshy or overflowed ground. The disease is more prevalent in wet places and wet weather.

Mange. Small pustules form on the skin, usually beginning at the roots of mane and tail. The discharges form a crust under which the hair loosens and falls out. The disease is contagious and animals affected must be isolated and usual precautions taken. Cleanse the affected parts thoroughly with soap and water and dress with No. 2. If the skin is affected over a large surface, only a part of it should be gone over with the carbolic solution each day, to avoid carbolic-acid poisoning. It is better in such cases to substitute No. 1, which may be used with impunity.

Scratches. An inflamed condition of the skin of the heel with crusts giving a watery discharge. Caused by exposure to wet and cold, sometimes by trimming the fetlocks. Keep the parts dry and clean. Wash, if at all, with warm water and castile soap and dry thoroughly after washing. If the skin is unbroken, use fresh lard and vaseline; dust with powdered alum twice a day. If the skin is cracked, use No. 10. A dry place for the animal to stand is necessary to a cure.

Thrush. A disease of the frog, usually behind, accompanied by an offensive discharge. It results from uncleanness. Keep the frog clean and dry; pare away ragged parts and open the cracks to facilitate discharge; dust with calomel and dress with iodoform or pine tar.

Laminitis or Founder. An acute inflammation of the processes which connect the wall of the hoof with the coffin bone. More common in the front feet; very painful and causes extreme lameness and stiffness with much heat in the foot. Overexertion, indigestion, and watering when heated are most frequent causes. The animal can scarcely be induced to move and tries to take the weight off the toes by standing on the heels, or, if the fore feet only are affected, by drawing the hind feet forward under the body.

Give laxative diet and plenty of water, remove the shoes, and give the animal a soft footing which will throw as much weight as possible on the sole and frog. In the field a good plan is to make a slight depression in the ground, fill it with water, and let the mule stand with his fore feet in the mud. Give No. 17.

Lockjaw. Induced by pricking the foot with rusty iron, or by punctured wounds. The disease is caused by a microbe which thrives in rich soils, as of highly cultivated gardens, and in the tropics. Common in the Philippine Islands as a result of punctured wounds.

There is difficulty in swallowing and rigidity of the limbs; ears erect and to the front; nostrils dilated; legs spread apart, and tail persistently held

erect. General muscular rigidity; obstinate constipation and torpidity of the liver. The climax usually comes in 3 or 4 days.

Search for the exciting cause, and if found to be a wound of any kind, treat it. Give a strong purgative, and 2 to 3 drams solid extract of belladonna three times a day. Give liquid food—gruels—and have clean water in reach of the animal at all times. Give rest and quiet in a darkened stall. During convalescence give laxative nutritious food and tonics, as No. 18.

Rope Burns. Abrasion of the skin under the fetlock by rubbing against a rope. Very frequent, especially with mules not accustomed to being tethered or picketed. If not severe, cleanse with soap and apply ointments 7, 8, or 9, or tar, or any kind of clean grease. For severe cases, use the same treatment and bandage.

Pricking the Foot. This may result from picking up a nail or from one improperly driven in the shoe. If the point of injury can not be seen, locate it by pressure. The mule will flinch when the sore spot is touched. If suppuration has not set in, clean the part, treat it with antiseptic, and stop the orifice with a plug of sterilized material. If pus has formed, a free exit for it must be provided and maintained. It may be necessary to cut away a considerable amount of horn to do this.

A puncture of the frog is managed in a similar way.

Wounds and Bruises. The prime requisites of treatment are the arrest of hemorrhage (tinct. iron, hot or cold water, pressure, if arterial); removal of foreign objects if possible; cleansing and sterilizing the wound (antiseptics 1, 2, or 6 may be used); replacement of parts in proper relative position by stitches or bandages, and a provision for the discharge of pus from the bottom of the wound. In some cases the greatest possible freedom from motion is desirable.

The healing of wounds in mules is almost always by suppuration. Before the tissues unite they assume a granular appearance. This granulation should begin at the deepest part and progress regularly outward. If granulation appears first near the outside, care must be taken to preserve a channel by which the pus may discharge freely from below. A tube, or a string of tow or other clean fibrous material dipped in melted wax or paraffin, will answer. This can be withdrawn when the wound is dressed, the accumulated pus pressed out, and the string replaced.

Spring Tonic. If mules are sluggish in early spring, lose their appetites, and are slow in shedding out, their condition may be improved by giving a small quantity of saltpeter in soft feed once a week for a month or so. If nothing else can be had, give a teaspoonful of powdered sulphur and a half pint of wood ashes.

11. Shoeing. A mule's feet are designed to carry his weight partly on the lower edge of the outer wall and partly on the sole and frog, Fig. 7. The pressure of the frog on the ground gives a better foothold and besides causes a lateral pressure on the inside of the wall which resists the natural tendency of the hoof to contract. The wall is constantly growing, and on a soft elastic footing it wears away at a rate equal to its growth and is always of the right length to take its share of the load. On a harder footing, such as is presented by most roads, the wall wears faster than it grows, and is constantly shortening, letting the sole down so that it carries too much of the load and lameness results. To prevent this, shoeing is resorted to. But when shoes are on, there is no wear of the walls, which grow longer and raise the sole and frog, removing the internal pressure from the wall and allowing it to contract and cause lameness. The art of good shoeing consists in providing a metal armor for the lower edge of the wall with the

ible interference with any other part of the foot, or with the natural functions of wall, sole, and frog. If the sole and frog have received daily care there will be no excuse for the shoer to touch either of them with any tool. If the bottom of the foot is foul, the shoer may clean it always with a scraping, never with a cutting, tool. Cutting the sole and frog is the business of the veterinarian or farrier, not the shoer.

Shoes are supplied in several sizes. Numbers 2 to 5 will answer all ordinary requirements. The No. 2 shoe is $3\frac{3}{4}$ ins. wide by $5\frac{3}{8}$ ins. long, No. 3 is $4\frac{1}{4}$ ins. wide by 7 ins. long; all are $\frac{1}{2}$ in. thick, and are provided with 4 holes on a side. The top surface of the shoe is slightly beveled outside $\frac{1}{8}$ in. higher than the inside. The nail holes on each side are connected on the bottom of the shoe by a countersunk groove. Shoes are packed in kegs of 100 lbs. each. A keg of No. 2 contains 100 shoes; of No. 3, 85 shoes; of No. 4, 72 shoes, and of No. 5, 60 shoes, Fig. 8. Nails used with the above sizes of shoes are Nos. 5, 6, 7, and 8. No. 5 nails are $2\frac{1}{2}$ ins. long; No. 6, $2\frac{3}{4}$ ins.; No. 7, $2\frac{1}{4}$ ins., and No. 8, $2\frac{1}{2}$ ins. The heads of the nails are beveled on the outside; the inside of the nail is a plane. Nails are supplied in kegs of 100 lbs. No. 5 nails run 190 to the lb.; No. 6, 180; No. 7, 100, and No. 8, 80, Fig. 9.

A shoe should be carefully removed by cutting off the clinches and pulling the nails singly. Starting the shoe and prying it off, bringing the shoe down with it, is dangerous. The bottom of the wall should then be leveled with the sole at the toe and left a little longer at the heel. The shoe wears a little under the shoe and will rarely require much cutting. A rasp is used to cross level the bottom of the wall, which should be done, so that the mule will stand square on the shoe. The shoe should be fitted accurately, so that its outer edge will follow the circle of the hoof all around. The fit must be made close enough so that the clinching of the sides of the wall will be necessary to complete it. The shoe is then applied hot for a moment, and the high points indicated by the rasp are worked down. The shoe should then be applied hot long enough to sear the lower surface of the wall, but no longer. It should be cooled and nailed on. In nailing, begin with the front or toe nails and work them in their order to the rear. After all are driven, cut off the clinches near the hoof, rasp the clinches thin enough to turn easily, but do not rasp cut the horn. Turn the clinches down snug, but do not try to force them into the hoof, nor use a file on them to smooth up.

Treatment of Vicious Mules. Ordinary cases can be handled by lifting the foot with a strap or rope. Take hold of the pastern and be sure the rope can not slide so far as to cause a burn. For a hind foot, draw the rope between the legs or to a collar; for a fore foot, bend sharply at the knee and strap the pastern to the upper leg. For bad cases in the hind foot, lay the mule and shoe him while down. For the shop, construct a stall of stout timbers in which he can be tied in every direction by ropes, or canvas bands. Twitches on the ears should never be used. If necessary to control the animal, put a twitch on the nose.

Normal Power. The capacity of an animal to exert a tractive effort varies with speed and time increase. As a basis, it may be assumed that an average draft mule can pull on a level 80 lbs. at $2\frac{1}{2}$ miles an hour for 10 hours a day, or in other words, can pull 80 lbs. over 25 miles of average grade every day. If a pull of 160 lbs. is required, it can be made over 10 miles a day only, the lesser distance being covered by a slower gait and rests, or as is usually the case, partly by each. An animal can exert 5 times the normal pull for a few minutes at a time, and 5 times

for a few seconds, provided in each case the demand is not repeated too frequently.

The load which can be hauled on any pull depends mainly on the kind and condition of the road and a little on the wagon, especially as to width of tire and size of wheels. For the standard army wagon and on a level average dirt road in good condition, the load corresponding to 80 lbs. standard pull may be taken at 1,000 lbs. per animal. Of this, 300 lbs. will be wagon, leaving 700 lbs. net freight. Any reduction of this load to lessen the pull must come out of the 700 lbs. To reduce the pull to 40 lbs., 500 lbs. must be taken from the freight, leaving 200 lbs. only to be hauled. This 200 lbs. pulled over 25 miles would equal 5,000 lbs. pulled over 1 mile, while if the full load of 700 lbs. is hauled over $12\frac{1}{2}$ miles, which can be done with the same effort, the result equals $700 \times 12\frac{1}{2} = 8,750$ lbs. hauled 1 mile. If the length of the march is fixed, the animals can be relieved only by reducing the pull; otherwise it is better to relieve them by shortening the march.

On hilly roads there is no traction on the down grades and an increased gait is usually taken without appreciable extra exertion. This saves time which may be spent in rests, allowing greater effort on the up grades. Up to 8% grade, the load can be retained by reducing the distance. Up to 3% grade, the distance can be maintained by reducing the pull. Above 8%, both pull and distance must be reduced. The reduction of pull may be accomplished by removing part of the freight, by doubling up teams, or by putting men on drag ropes.

The foregoing is based on the supposition that the animals have the full ration every day and remain in as good condition as when they started. In emergencies they can do more work than indicated, but will go off in condition and some will give out entirely. In campaign, animals are overworked as a rule, and finish in very poor condition. This is necessary because adequate transportation is rarely available and what there is must be worked at a killing rate. When marches are intermittent, mules may be pushed, since what they lose in 2 or 3 days' overwork can be made up by a week's rest with good care, and they will be fit when again required.

The following are the weights and normal loads of some army wagons:

| | Weight. | Maximum net load. | Gross load. |
|--------------------------|----------------------|----------------------|----------------------|
| | <i>Pounds.</i> | <i>Pounds.</i> | <i>Pounds.</i> |
| Army six..... | 1,950 | 4,000 | 5,950 |
| Escort..... | 1,500 | 3,000 | 4,500 |
| Ambulance..... | 1,450 | | |
| Dougherty..... | 1,375 | | |
| Engineer tool wagon..... | 2,200 to 2,600 | 2,500 | 4,700 to 5,100 |
| Pontoon tool wagon..... | 1,700 | 2,100 | 3,800 |
| Bridge train, light..... | 1,750 | 1,856 to 2,060 | 3,606 to 3,810 |
| Bridge train, heavy..... | 1,750 to 2,200 | 2,280 to 2,900 | 4,030 to 5,100 |

Harness. The harness supplied for heavy draft is of three kinds, known as army wagon harness, 4-mule ambulance and wagon harness, and ambulance harness. The first is distinguished by the absence of a saddle; by

, which is of flat leather unstitched, and its traces, which are throughout and pass through leather pipes to prevent chafing. The distinguished by its traces, which are of leather to the breech-chain extensions. The third has all leather traces. The second, the and wagon harness, is most suitable for engineer transport-

le teams are driven with a jerk line, the driver riding the near. 10. Four-mule teams in the bridge train are driven in the. All other 4-mule teams are driven with lines from a seat on Fig. 11. The 6-mule harness includes a riding saddle, jerk line, jockey stick, and blacksnake whip. A set of 4-mule harness pair of wheel lines, a pair of lead lines, a whipstock, and lash. ing of the harness is very important. The bridle should be, the crownpiece and throatlatch not too tight; the brow band place; the cheek pieces so adjusted that the bit will hang in just clear of the angle of the lips, not far from it and not touch- ally not drawing it up into wrinkles. The bit should be of the for the width of the jaw. Less damage will be done, however, oo long than if too short. If the bit tends to irritate the mule's e ends, relief may be given by putting a large leather washer bit inside the ring. The blinds must be so adjusted as not to elashes.

the collar requires close attention. If it is too small, it will ind; if too large, it is likely to make the shoulders sore. When on and adjusted, there should be room to insert the open a the bottom of the collar and the windpipe, and not much more. d always be buckled when off the mules. A collar which is e, but not the right shape, can be improved by soaking it in utting it on wet. A day's work in the rain will produce the The under surface of the collar should be kept clean and soft. pe it, but rub or wash it clean. The same remark applies to f the harness which touches the mule's skin. Cleaning the out- erness is good for the harness only; cleaning the inside is good e and harness. The driver should be provided with two or more f sheepskin with thongs attached. If the skin is abraded by the of these pads may be lashed to the underside, one on each ore, and will afford relief until the march is over and regular a be applied. The hames should be so adjusted to fit the collar ut pinching it out of shape.

harness, hang a set on a pole or line; wet a sponge in clean water, ly over the harness until the dirt is softened. Rinse the sponge d renew the water as often as necessary. Next rub the sponge ess soap until a good lather is formed. Give the harness a ating of it and continue the rubbing until all dirt is removed. necessary to use a thin piece of wood to get some spots clean. rness is clean, rub up a very thick lather and coat the leather it, allowing it to dry without rubbing. After the lather has d and the leather is dry, dip a small, clean sponge in harness touch the harness lightly, rubbing just enough to spread the ly.

ner is very hard, after cleaning as above, take a pint of neat's- a teaspoonful of lampblack to each single set. Mix thoroughly glossy appearance is produced and apply an even coat with a , rubbing it well in. In cold weather warm the oil enough to

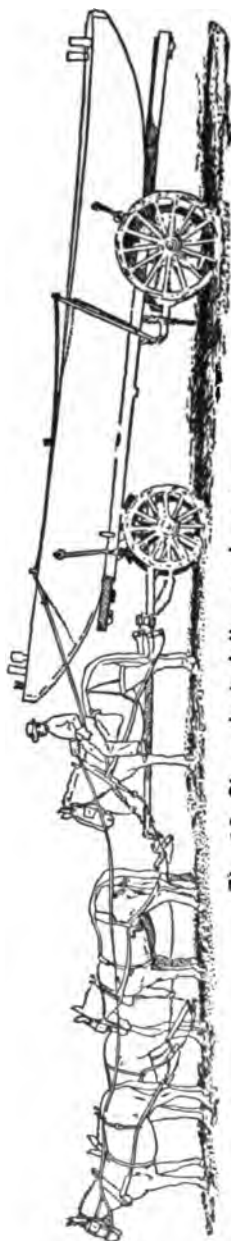


Fig. 10, Six-mule jerk-line and ponton wagon.



Fig. 11, Four-mule team and escort wagon.

make it flow freely, but do not let it get hot. After thoroughly dry, apply harness dressing as above described.

Harness should be looked over carefully every day. If stitches are broken, leather worn or cut, or any metal parts cracked or broken, have the defect remedied at once. If stitches are taken, be careful not to leave knots on the inner surface of the harness. Fasten at beginning and end by drop stitches. In the field, provide supports for the harness and keep it off the ground when not in use.

13. List of materials and spare parts required for repair of harness in the field, with quantities for 100 sets:

| | |
|--|--------------------------------|
| Bits, wagon bridle | 6 |
| Buckles, roller, japanned, $\frac{3}{4}$, $\frac{7}{8}$, 1, $1\frac{1}{4}$, $1\frac{1}{2}$ ins. | 1 doz. each |
| Buckles, trace, $1\frac{3}{4}$ ins. | 1 doz. |
| Chains, trace | 1 doz. |
| Clips, hame | $\frac{1}{2}$ doz. |
| Ink, edge | 1 pt. |
| Harness dressing | 2 gals. |
| Hames, hook, high top, 19, 20, and 21 ins. | 2 prs. each |
| Lampblack | $\frac{1}{4}$ lb. |
| Leather, bridle | 3 sides |
| Leather, lace | 1 side |
| Leather, harness | 6 sides |
| Loops, halter, $1\frac{1}{4}$ ins. | 2 doz. |
| Open links, No. 2 iron, 10 per foot | 50 |
| Oil, neat's foot | 10 gals. |
| Rings, No. 2, $1\frac{3}{4}$ and 2 ins. | 2 doz. each |
| Rings, breeching, No. 3, $3\frac{1}{2}$ and 4 ins. | 2 doz. each |
| Rings, D, $1\frac{1}{2}$ ins. | 1 doz. |
| Rings, line, $1\frac{3}{4}$ ins. | 2 doz. |
| Rivets and burrs, copper, No. 12, $\frac{1}{4}$ and $\frac{3}{8}$ in., No. 8, $\frac{1}{2}$ and $\frac{5}{8}$ in. | 1 lb. each |
| Slides, breast, $1\frac{1}{2}$ ins. | 1 doz. |
| Snap, harness, $\frac{7}{8}$ and 1 in. | 2 doz. each |
| Snap, harness, $1\frac{1}{4}$ and $1\frac{1}{2}$ ins. | 1 doz. each |
| Soap, harness | 100 lbs. |
| Sponges, coarse | 5 lbs. |
| Squares, halter, $1\frac{1}{2} \times 1\frac{1}{4}$ ins. | 3 doz. |
| Tacks, 4, 8, and 12 oz. | $\frac{1}{2}$ doz. papers each |
| Thread, shoe, Barbour's Nos. 3 and 10, white | 1 lb. each |
| Toggles, trace | 6 doz. |
| Wax, saddler's, black, spring, summer, or winter | 1 lb. |

14. **Wagons.** For general freighting, the wagons in use in the United States service are the army six, weighing 1,950 lbs., and carrying 4,000 lbs., with a 6-mule jerk-line team, and the escort, Fig. 11, weighing 1,500 lbs., and carrying 3,000 lbs., with a 4-line team. The army wagon complete includes a fifth-chain with stretcher, 6 wagon bows, ridgepole, wagon cover, double-tree, and 2 singletrees, an extra kingbolt and 2 extra singletrees, feed box, and brake. An escort wagon complete includes a feed box, 6 wagon bows, ridgepole, 1 double and 2 singletrees, axle wrench, tar pot, extra kingbolt, 2 extra nuts for axle, a lead bar with stretcher chains and singletrees attached, and a brake.

The bridge equipage is carried on two types of wagons, the ponton wagon,

Fig. 10, weighing 2,200 lbs., and carrying 2,900 lbs., and the chess wagon, weighing 1,750 lbs., and carrying 2,300 to 2,700 lbs. The ponton wagon is used for the wooden ponton. The chess wagon is used for all other bridge loads.

To keep a wagon in order it is only necessary to keep all nuts tightened, the wheels greased, and to wash the mud off when opportunity offers. Four to 6 lbs. of axle grease per wagon per month will be ample. In dry sand, wagons in constant service should be greased daily. On hard roads they should be greased every 40 to 50 miles. Always clean off the old grease before putting on the new. In washing, use as much water and as little rubbing as possible.

The following spare parts and extras should be carried on each army six and escort wagon:

| | |
|--|---------------------|
| 1 ax. | 2 cans axle grease. |
| 2 extra axle nuts. | 1 lantern. |
| 1 galvanized-iron bucket. | 3 open links. |
| 1 horse brush. | 1 pole, extra. |
| 1 currycomb. | 1 reach, extra. |
| 1 pick. | 2 singletrees. |
| 150 ft. rope, $\frac{1}{2}$ in. or $\frac{3}{4}$ in. | 1 wrench. |
| 1 doubletree. | Coil of stove wire. |

A similar list should be carried for the bridge wagons, but preferably in supply wagons, not on the wagons themselves. For the latter, spare wheels should also be carried.

15. Pack Saddles. The adopted pack saddle is of the Spanish type, and is commonly called by its Spanish name, aparejo, Fig. 12. Its principal parts are the body, the cover, the cincha, and the crupper. These parts have subdivisions, which are less important. The accessories added to the above to make the aparejo complete are the corona, the blanket, the lash rope with its cincha, the sling ropes, the lair ropes, and the mantas or pack covers.

The body of the aparejo consists of 2 pieces of heavy leather 24 ins. wide by 58, 60, or 62 ins. long, sewed together at the edges and across the middle of the length, forming 2 pouches, into which moss or hay is stuffed to form pads fitting the contour of the animal on either side of the backbone. In the American form, the pads are given a peculiar elastic stiffness by means of ribs of wood or metal extending from a saddle piece at the top of each pouch to a boot piece at the bottom. These ribs are stiffer at the front and more flexible at the back, varying uniformly between. They convert each pad into an elastic lever, by which the pull of the cincha on the bottom acts to raise the aparejo and its load from the backbone, while the stuffing distributes the load uniformly over a large space on the ribs. The stuffing is introduced through a hand-hole in the middle of the underside of each pad, through which it is always accessible, and the finest art of the packer consists in fitting the pads to the shape of the particular animal which is to carry the aparejo, and keeping them so regardless of changes in the animal's condition by shifting, removing, or renewing the stuffing. If a bunch rises on the animal, it can be worked down by taking out stuffing immediately over it so as to take off the pressure at that point. Determine the proper point by wetting the top of the bunch and laying the aparejo on the mule. Aparejos and mules are numbered and the same pack is always on the same mule.

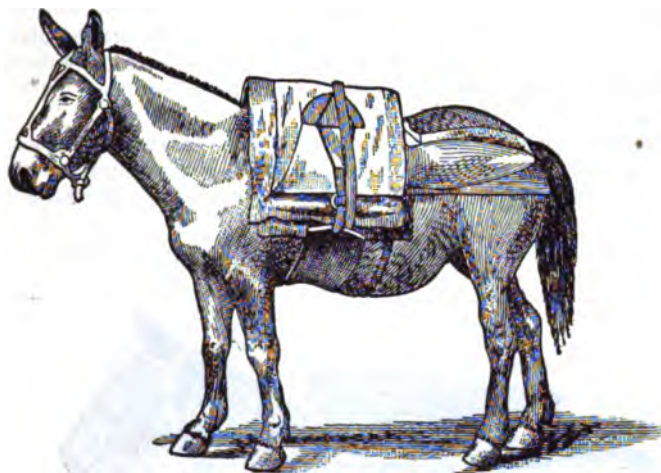


Fig. 12, Aparejo.

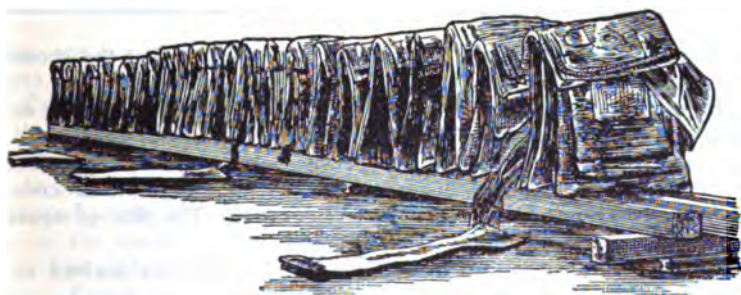


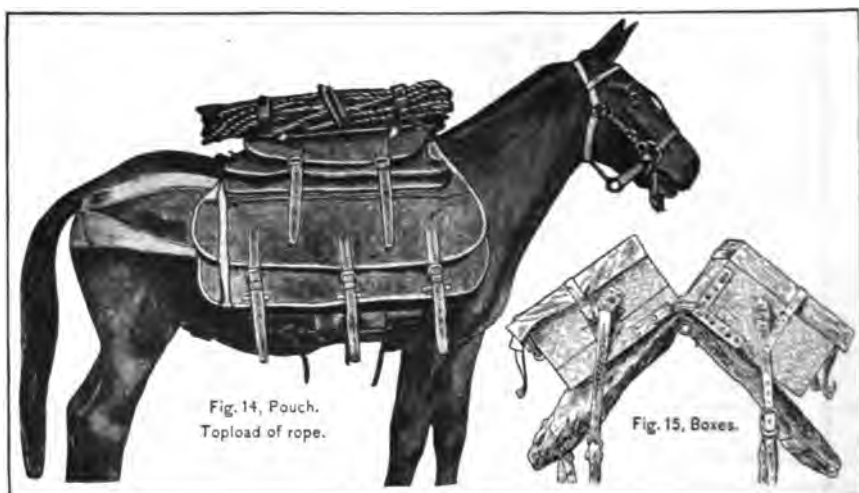
Fig. 13, Rigging.

The function of the crupper is not what would naturally be expected. If the aparejo is properly set up and fitted there will be no tendency to move back or forward. The crupper is in reality a steadying lever to keep the aparejo from rocking fore and aft as the mule travels. For this purpose, the dock piece is large, smooth, and soft, and the crupper is wide, stiff, and firmly laced to the body. The crupper is adjustable in length, and must be accurately fitted so that when the aparejo is in its proper place the dock piece will ride between tail and dock without pressing on either.

The cover is permanently attached to the body and may be considered a part of it.

The cincha is of heavy canvas, doubled, and 10 ins. wide. It is long enough to reach from the near boot under the mule and around the aparejo to a little beyond the middle. The ends are connected by the latigo, or cincha strap.

The corona is a pad usually of several thicknesses of blanket, with a num-



ber or design which identifies the pack. It is important that the corona shall not be separated from its aparejo.

Off the mules, the aparejos are placed in a row on the ground or on skids, standing on their boots, Fig. 13. The cincha, folded with the latigo inside, rests on the aparejo. The crupper is turned so that the dock piece rests on the cincha. The corona is placed on top of all. Canvas covers are stretched over the line of aparejos and tied down. The line of aparejos so arranged is usually referred to as the rigging.

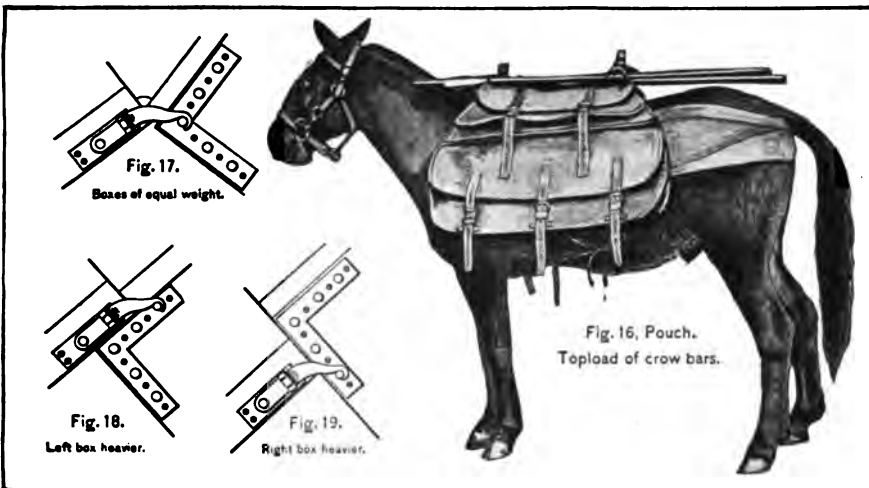
Each packer is provided with a blind. The mules are trained to stand perfectly still when blinded, and if it is necessary to move a mule even by a step, the blind should be lifted.

To place the aparejo on the mule the corona is first put smoothly on, followed by the blanket folded to 6 thicknesses. The aparejo is then put on slightly in rear of its place. The crupper is turned, the dock piece adjusted, the aparejo settled to its place, and the cincha unfolded, placed, and tightened. Never put on or adjust a pack with the mule's head uphill.

16. Loads are divided into side packs and top packs. Side packs should be of approximately equal weight and size. A keg of paint on one side

and an equal weight of oakum on the other do not make a proper load. Side packs should not be longer than 30 ins., wider than 20 ins., nor deeper than 12 ins. If the side packs do not fill out a load, the rest is placed between them as a top pack. Articles which by their size or shape are not suitable for side packs are carried on top. The center of gravity of the entire load should be below the top of the saddle, and the lower the better. For miscellaneous cargoes, the freight is made up into side and top packs, each wrapped in a manta, or canvas cover, and tied, or laired up with lair ropes. If a pack contains articles of different weights, place the heaviest at the bottom. The side packs are slung across the aparejo by the sling ropes and lashed on with the lash rope and cincha in the form of the diamond hitch. Such a load must remain unbroken until the end of the march.

Engineer tools, materials, and supplies, which may be needed for use during the march, are carried in leather pouches, Figs. 14, 16, or pairs of wooden boxes, Figs. 15, 17, 18, and 19. These are secured to the aparejo without



lashing, and may be opened and the required articles taken out and replaced without disturbing the load.

17. Care and Preservation. All parts of the rigging should be kept clean and the leather parts soft and pliable. The materials and methods given for harness may be adapted.

18. In taking off lashed packs, the lash rope is removed; its cincha laid on the ground at the middle of the line to be occupied. The lash rope is coiled down on the cincha and its end stretched out 10 ft. to one side. The sling rope is then unfastened, the packs dropped from the aparejo and laid on the lash rope lengthwise with the cincha. The sling rope is coiled on the packs, and the end of the lash rope brought up on top. The cincha of the second pack is laid down on one side of the first and parallel to it at 2 ft. distance, but with the end of the lash rope on the opposite side. The packs, etc., are placed on it as described. The third pack is placed on the other side of the middle one, and so on until all are down in a line. After all cargoes are off, the aparejos are removed. Cargoes are also covered with pieces of canvas called cargo covers. Mantas may be used if there are spare ones.

19. Marches. A draft mule is rested by a halt; a pack mule is not unless

unloaded. Wagon trains should start early and make frequent halts. These should be of two classes, longer ones at regular time intervals, and shorter ones of a minute or two after every unusually hard pull. The length and interval of the longer halts will depend upon the time and distance to be made.

As a rule, if a mule has made one dead pull, he will not try to pull again on the same load in the same place. When it is evident that the team must stop, the driver should stop it before it is stalled; otherwise, in most cases, he can not get another pull out of the team. A very slight change of conditions will often encourage stalled mules to pull again. Cases have been reported in which reversing the near and off mules had the desired effect. A little visible assistance, as a few men on dragropes, has an excellent effect. Most mules on a hard pull will not go into the collar gradually as a horse does, but will throw themselves forward, and if the load does not move, will immediately fall back. It is difficult to get a steady lay-down pull out of a team of mules in which every animal is doing his best at the same moment. A team of two mules on a hard pull will often *seesaw* on the doubletrees without pulling as much as either could alone. It is better to have stop chains on the doubletrees, leaving only enough slack to prevent one mule from shirking.

It may be quicker, in case of great obstacles, to unload wagons and take them to pieces and carry over, than to attempt to haul over. A portage may also be made when otherwise the train could not advance at all.

A pack train should be allowed to make its march without halts except for water, if it can be done. They may start later or get in earlier, according to circumstances. If the column is of great length, no relief can be given them in this way, and they must halt with the rest.

When going into bivouac or camp, the company and headquarters ration and baggage wagons are conducted at once to the sites of their respective kitchens. If a bivouac, they remain there all night, unless in the presence of the enemy; if a camp, they are unloaded, and join the rest of the train in park.

The train is parked in line, preferably to leeward of the camp, and on ground which does not drain toward it. The picket line will be stretched parallel to the wagon line and preferably in front of it, though always on dry, gently sloping ground, if it can be found. The best site is along a ridge with the ground sloping both ways from the line. The mules stand on both sides, and there should be 3 yds. of line for each 4 mules. If the 4-mule wagons are 3 yds. apart in park and the 6-mule wagons $4\frac{1}{2}$ yds. apart, tongue to tongue, each team at the picket line may stand in front of its own wagon, which is a very convenient arrangement.

Picket lines are of two kinds, ground and high. A ground line is stretched on the ground, attached at its ends and at intervals of about 30 yds. to stakes or some other form of holdfast. A 1-in.-diam. rope of sufficient length should be carried for the purpose, but, if necessary, a ground line may be made up of picket or lash ropes. A high line is stretched on trees or stakes set in the ground. If stakes are used, they should be at least 8 ft. long, set 3 ft. in the ground. At $4\frac{1}{2}$ ft. from the ground, holes should be bored large enough to take the line. From each end post the line should run obliquely to the ground and be attached to a holdfast. A high line for temporary use may be obtained by running every fifth wagon to the front and stretching the line across them. The end wagons should be loaded ones, and all must have the brakes set. Picket lines will be stretched with tackle if any is at hand; otherwise, by the following method: Attach the rope at

one end and lead it through all the supports or fastenings; about 15 ft. from the other end make a bowline in the rope, pass the end around or through the end fastening, and back through the bowline. By hauling on the end of the rope the necessary strain may be set on the line, the bowline acting as a single block. The end stakes of a high line should incline outward slightly.

The picket line should be ditched if it is to be used for some time, and if rain threatens it should be ditched even for a bivouac. The only exception is when the line is on a ridge and the ground slopes from it in both directions. Open a ditch on the high side about 3 yds. from the line. If the ground slopes along the line, the ditch will be parallel to it, and will have an outlet at the lower end; otherwise, the ditch must be farther uphill at the middle, and will have an outlet at each end. This drainage should be kept in mind in locating the line.

20. Stable Duties. The prime requisites in stabling mules are free circulation of air without drafts, equable temperature, dryness, and cleanliness. Grain is fed at reveille by the stable orderlies. When the animals have finished eating, those to be used are harnessed and hitched up. The rest are turned into the corral or tied at the picket line. The stable police then fork all clean and dry bedding to the head of the stall and work the rest of the manure into piles ready for loading. The manure wagon is driven down the aisle and loaded. The hay is then distributed to the mangers and the additional bedding is procured and spread. The aisle may then be washed with hose and brooms if the air is dry; if damp, do not wash, but sweep up with stable brooms. The evening feed is put in the mangers at afternoon stables.

Mules of the same team should stand together, and their harness should be hung on racks in rear of their stalls. It is much better to have harness covers to keep off dust.

Grooming is quite as important to the mule as to the horse, but he does not get so much of it, and in the nature of things he can not. He should be groomed every day, if it can possibly be done. When coming in from a long muddy march, the wet mud should be wiped off with a wisp of straw before it dries and hardens. If the animal will not stand, tie up a hind foot as described in shoeing. Always tie up the foot on the side opposite to that which is to be groomed.

21. Shipping Mules by Rail. The cars furnished may be either:

The palace stock car, length 36 to 40 ft., capacity 16 to 20 head; each animal in a separate stall, with a compartment for attendants, or

The improved stock car, length 36 ft.; capacity 20 to 24 head, with facilities for feeding and watering in car, or

The ordinary stock car, length 30 to 34 ft., capacity 16 to 20 head, with no appliances of any kind.

Before loading, examine the car carefully to see that the floors are not rotten or broken; that the sides are secure, and that there are no projecting nails or splinters on the inside. The car should be cleaned and the floor covered with sand or sawdust. Hay or straw should never be allowed in a stock car on account of the danger from fire. The man in charge should be provided with a lantern, bucket, and hatchet. The latter is to be used to cut away part of a board in case an animal gets his hoof through the side of the car.

Except in very hot weather, pack the animals snugly in the car, as they will ride better than if loosely packed. If an animal falls down in the car it will be almost impossible for it to get up without assistance. The attendant

should enter the car at the end and crawl along the side nearest the animal's head until he is reached. Take him by the halter and raise his head. With this assistance he will probably get up. For loading, use the railroad platform or the loading ramp found at railroad stations, or make a ramp well supported, with strong sides, and with cleats on the floor to prevent slipping. Lanyards should be attached to each side of the floor near the middle and made fast to truss rods or door fittings of the car to prevent the ramp from sliding off the doorsill.

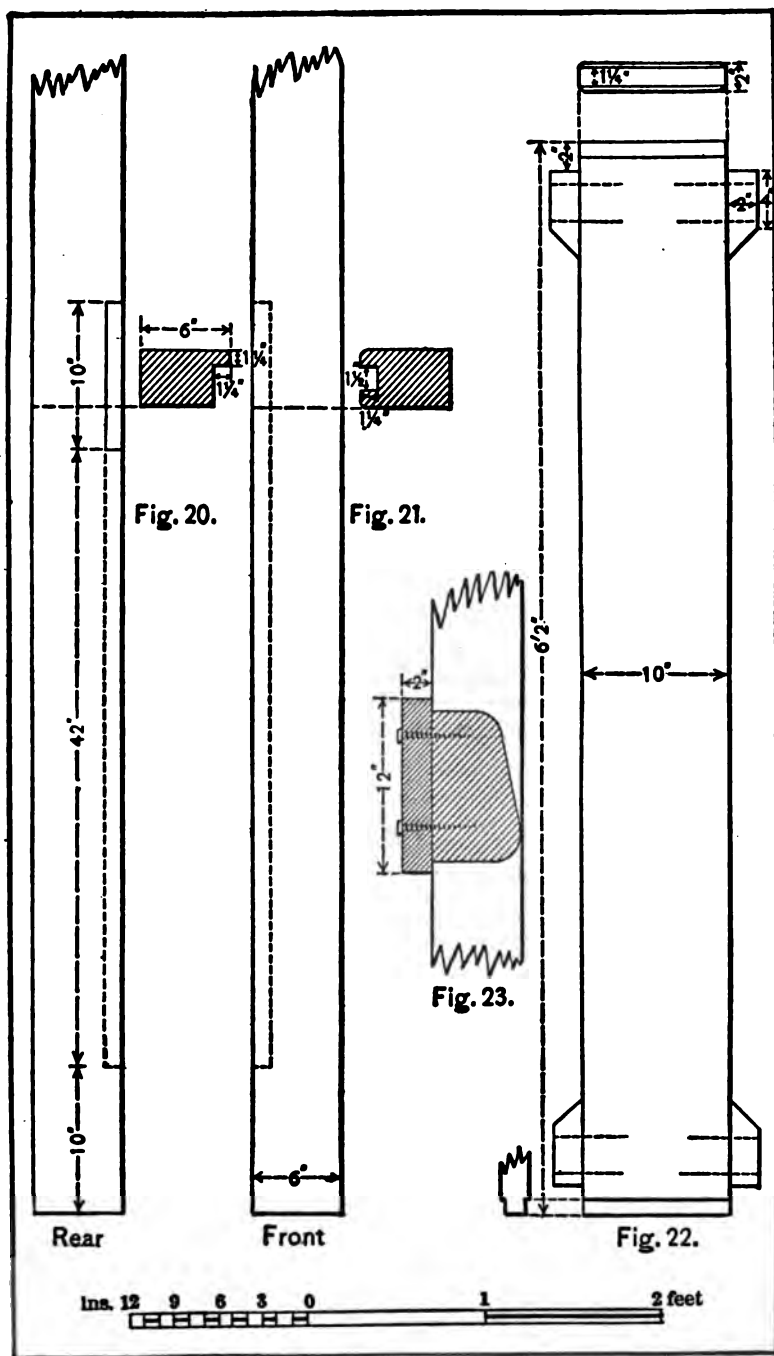
If lumber is not at hand, a ramp may be made of poles and brush, supported on trestles and floored like a bridge (see Bridges). As a last resort, throw up a ramp of earth, reaching as near as possible to the side of the car, and bridge the gap with the car door.

For loading with improvised facilities, always try to get the car into a shallow cut.

Lead the animals up the ramp and into the car and take off the halter straps, but not the halters. If the mules are shy of the ramp, a little hay thrown on it will make them less timid. Very obstinate cases can be handled by passing a rope around the haunches and having a few men pull on each end. The first animal is led to one end of the car and the second to the other end, leaving the middle for the last ones loaded. The animals face opposite sides of the car alternately. Each one led in must be held until the next one is in place. Load quietly and avoid exciting the animals either by haste or by unnecessary delay. It may occasionally be necessary to blind-fold an animal before he can be led in. Animals in transit should be fed and watered once a day at least, or twice if opportunity offers. If closely packed in ordinary cars, they should be unloaded and exercised once in 48 hours and given 6 hours' rest.

22. Shipping Animals by Sea. Ships must be especially fitted up and equipped for this service. Free ventilation and cleanliness are of the utmost importance. Air ports should be large and numerous and wind sails must be set up in every hatch to each deck. If there are dead spaces, special air shafts must be built to supply them. If there is machinery on board, forced ventilation should be employed. Animals do best on deck except in very heavy weather, and should never be put below the water line. Stalls are built in double rows lengthwise of the ship, facing each other, with a 4-ft. aisle between. There should be a passageway athwartships at each end of each compartment, and if the vessel is wide enough, the outside rows of stalls should be 3 ft. from the sides of the ship.

Stanchions 6 x 6 ins. are set up, 30 ins. c. to c. lengthwise, and 6 ft. 6 ins. c. to c. athwartships between the posts of the same stall. The stanchions are well secured at top and lightly to the deck. Before setting up, the stanchions are mortised for the side boards as shown in Figs. 20 and 21. The stanchions should be further stayed near the tops by ties in both directions, fastened to or firmly butting against the framework of the vessel. The ties should run straight, disregarding the curve and sheer of decks. A false floor of 2-in. plank, 8 to 12 ins. wide, is spiked or bolted to the deck, the planks running lengthwise of the stalls, with $\frac{3}{4}$ -in. space between them. If the ship is to be used for this purpose for a considerable time, the floor should be double, with tar paper between the courses. The floor is cut closely around the feet of the stanchions. Hard-wood cleats are placed across the stall and fastened to the false floor with screws. In spiking down the false floor, the nails should be so driven that their heads will be covered by these cleats. Larger cleats are laid lengthwise, from foot to rear posts. The stall partitions are of 2-in. plank, smoothly planed, Fig. 22, inserted in the mortises



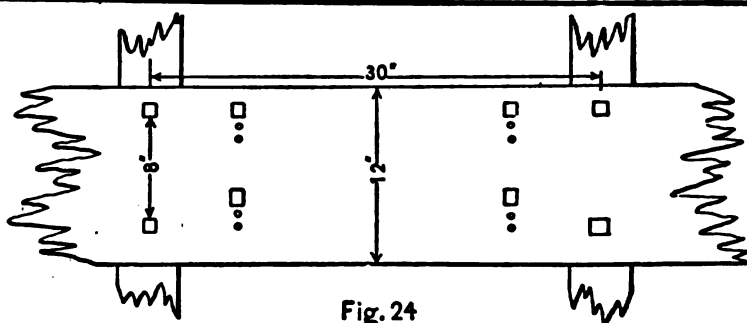


Fig. 24

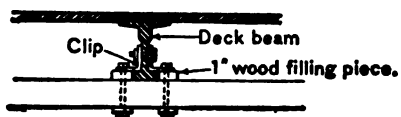


Fig. 25

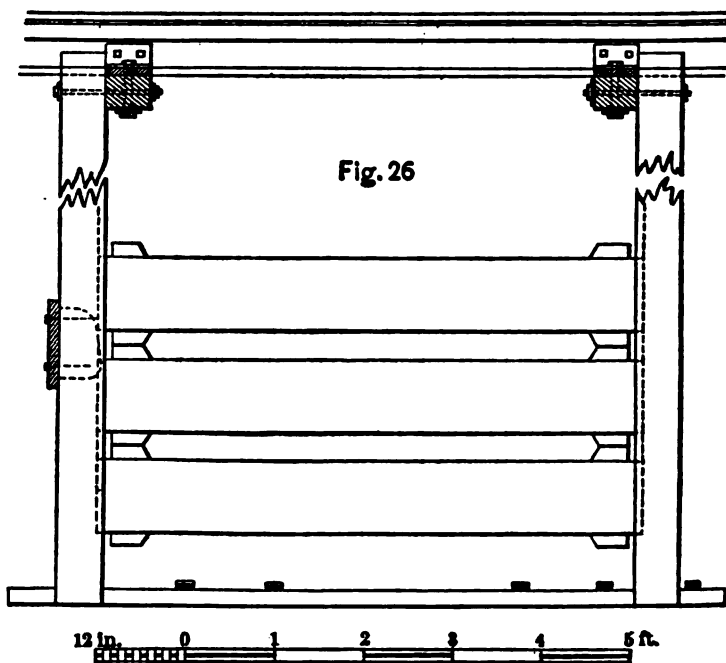


Fig. 26

in the stanchions, and the rear ends are closed by haunch pieces. These are shaped as shown in section in Fig. 23, and are fastened by lag screws to a plank bolted to the rear posts. The haunch piece is adjustable in height, Fig. 24, and should be placed so that its bottom edge will catch the mule 2 ins. above the hock. The front is best closed by a heavy canvas band 8 ins. wide, with reinforced edges, a spreading stick at each end and a grommet in each corner for lashing it to the front posts. A light strap over the neck will keep this band in place like a breast collar and the lashings may be left slack enough to permit the mule to sway and ride easier. Projecting nails must be avoided, edges and corners smoothed and rounded, knot holes trimmed out and splinters removed, and all parts which the mule can reach with his teeth should be sheathed with metal or wrapped with wire.

For deck stalls the posts are capped to form supports for a roof of 2-in. stuff, which should be covered with tar paper. The stalls must also be strongly cross-braced. This is best done by inserting diagonals between the posts of every fifth or sixth partition. The entire structure must be thoroughly strapped or tied down to the deck.

Under no circumstances should any stock be loaded until the ship is ready to sail, completely equipped, supplied, and manned.

Watering is easily done by buckets filled from a hose, the nozzle of which is carried along the aisle. The nozzle should have a cock to enable the flow to be controlled at the end. The supply should not be less than 10 gals. per mule per day. If condensers are used, there should be several days' supply in fresh-water tanks to provide against a breakdown of the machinery or the use of water not thoroughly cooled.

Feeding is best done on the false floor in front of the stalls. Cleats may be nailed down to form shallow boxes to hold the grain in place. In heavy weather it may be better to use nosebags. Grain should be fed early in the morning. None should be given the first day out. The second day a half ration should be fed and increased by small quantities if found necessary to keep the animals in condition. Bran mashes with salt should be fed once a week. After feeding the deck should be thoroughly cleaned and such disinfectants as are to be used should be applied. Then the hay should be fed.

It is better to leave one vacant stall in each tier. Remove the side boards and shift the next animal into the vacant stall. Clean his stall thoroughly and shift the second animal into it, and so on.

In loading and unloading the animals should be led up and down ramps and gangways if possible. If they are to be transferred to or from lighters, or dropped into the water to swim ashore, a sling or flying stall must be used. After landing, animals should be corraled with the shortest possible march and should be allowed to rest 3 or 4 days under conditions which permit gradual increase of activity.

The sling should be 5 ft. long and 2 ft. wide, of heavy canvas, reinforced at the edges by a 2-in. binding of the same. A hem is made at each end to take a 2-in. spreader. A loop of $1\frac{1}{4}$ -in. rope is attached to each end, around the sticks, one 9 ins. long and the other 3 ft. long, measured from the middle of the sticks to the middle of the loop when stretched. The long loop has a heavy iron ring, 3 ins. inside diam. fixed at its middle point. Breast and haunch ropes $\frac{3}{4}$ in. diam. are sewed across the canvas 3 ins. from the sticks and on the outside of the sling. They should be 9 ft. long each way from the center of the sling. The sling is placed under the mule's barrel, the end of the long loop passed through the short one and the hook of the hoisting block engaged in the ring. The small ropes are passed around the

shoulders and haunches and tied. The animal should be lifted from his feet quickly and set down gradually.

The flying stall is a stoutly framed box open at the top and high enough to prevent the mule jumping out. The inside should be smooth, 6 ft. 6 ins. long and 30 ins. wide. The ends should be hinged at the bottom to open outward, with heavy latches at top arranged to be operated by lines from a distance. The floor should have several cleats running from side to side. At each corner a $\frac{1}{2}$ -in. rod should run from bottom to top, terminating in a heavy eye or ring. To the rings slings should be fastened converging to the center, where they are joined together to take the hook of the fall. The slings should be kept apart by spreaders high enough to clear the mule's head to prevent a cross strain on the sides. Guys should be provided to control the stall in raising and lowering to prevent its striking the edges of hatches.

For a short voyage and work immediately on landing, animals may be shipped with shoes on. In this case shoes should be recently set. For long voyages, shoes should be removed.

Animals should not be shipped in high condition. If not worked up to the time of embarking, give exercise and reduce feed.

23. Accountability for Public Animals. A descriptive book of public animals will be kept with the records of every officer responsible for such animals. It will contain a description of every animal received and transferred, showing the kind, name, age, size, color, marks, brands, or other peculiarities of each; how and when acquired, and, if disposed of, in what manner; the name of his rider and driver, and the use to which applied.

A complete descriptive list of each animal will be made at the time of purchase and will accompany him wherever he may be transferred.

When public animals are issued or transferred, the person in charge will be provided with full and accurate descriptive lists, which he will deliver to the receiving officer, by whom they will be entered in his descriptive book of public animals.

Public animals shall, on the day received, be branded with the letters "U S" on the left fore shoulder, the letters to be 2 ins. in height.

Public animals will be assigned to their riders or drivers, who will not exchange or surrender them to the use of any other person without the permission of the company commander, quartermaster, or other officer responsible

A MANUAL FOR COURTS-MARTIAL

**COURTS OF INQUIRY AND OF OTHER
PROCEDURE UNDER MILITARY LAW**

**REVISED IN THE JUDGE ADVOCATE GENERAL'S OFFICE
AND PUBLISHED BY AUTHORITY OF THE SECRETARY OF WAR**

War Department,
Office of the Chief of Staff,
Washington, November 29, 1916.

The Manual for Courts-Martial, Courts of Inquiry, and of other Procedure under Military Law, prepared by direction of the Secretary of War in the Office of the Judge Advocate General for use in the Army of the United States, is approved, and will be published for the information and guidance of all concerned, including all courts-martial in the National Guard of the several States and Territories and the District of Columbia not in the service of the United States, in so far as applicable, under section 102 of the national-defense act, approved June 3, 1916. The provisions of this Manual will be in force and effect on and after March 1, 1917.

By order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

ABBREVIATIONS.

| | |
|--------------------------|---|
| A. R. | Army Regulations, 1913. |
| A. W. | Articles of War, Code of 1916. |
| Bishop | Bishop's New Criminal Law, 8th edition. |
| Clark | Clark's Criminal Law, 2d edition. |
| Clark and Marshall | The Law of Crimes, 2d edition. |
| Cyc | Cyclopedia of Law and Procedure. |
| Davis | A Treatise on the Military Law of the United States, 2d edition. |
| Digest | Digest of Opinions of Judge Advocates General of the Army, 1912. |
| Dudley | Military Law and Procedure of Courts-Martial, 1910. |
| Greenleaf | Law of Evidence, 16th edition. |
| R. S. | Revised Statutes of the United States, 1878. |
| Thompson | Law of Trials. |
| Wharton | Criminal Law, 9th edition. |
| Wigmore | Law of Evidence. |
| Wigmore, P. C. | Pocket Code of Evidence. |
| Winthrop | Military Law and Precedents, 2d edition, 1896. |

The discipline and reputation of the Army are deeply involved in the manner in which military courts are conducted and justice administered. The duties, therefore, that devolve on officers appointed to sit as members of courts-martial are of the most grave and important character. That these duties may be discharged with justice and propriety it is incumbent on all officers to apply themselves diligently to the acquirement of a competent knowledge of military law, to make themselves perfectly acquainted with all orders and regulations, and with the practice of military courts.—Army Regulations, 1835 Article XXXV, paragraph 1.

A MANUAL FOR COURTS-MARTIAL.

CHAPTER I.

MILITARY JURISDICTION.

SECTION I.

SOURCE AND KINDS OF MILITARY JURISDICTION.

1. **Source.** The source of military jurisdiction is the Constitution, the specific provisions relating to it being found in powers granted to Congress, in the authority vested in the President, and in a provision of the fifth amendment.

2. **Kinds.** Military jurisdiction is of four kinds, viz.:

(a) Military government (the law of hostile occupation); that is, military power exercised by a belligerent by virtue of his occupation of an enemy's territory, over such territory and its inhabitants. This belongs to the law of war and therefore to the law of nations. When a conquered territory is ceded to the conqueror, military government continues until civil government is established by the new sovereign.

(b) Martial law at home (or, as a domestic fact); by which is meant military power exercised in time of war, insurrection, or rebellion in parts of the country retaining their allegiance, and over persons and things not ordinarily subjected to it.

(c) Martial law applied to the Army; that is, military power extending in time of war, insurrection, or rebellion over persons in the military service, as to obligations arising out of such emergency and not falling within the domain of military law, nor otherwise regulated by law.

The last two divisions (b) and (c) are applications of the doctrine of necessity to a condition of war. They spring from the right of national self-preservation.

(d) Military law; which is the legal system that regulates the government of the military establishment. It is a branch of the municipal law, and in the United States derives its existence from special constitutional grants of power. It is both written and unwritten. The sources of written military law are the Articles of War enacted by Congress August 29, 1916; other statutory enactments relating to the military service; the Army Regulations; and general and special orders and decisions promulgated by the War Department and by department, post, and other commanders. The unwritten military law is the "custom of war," consisting of customs of service, both in peace and war.

This Manual deals primarily with military law.

SECTION II.

EXERCISE OF MILITARY JURISDICTION.

3. **Military Tribunals.** Military jurisdiction is exercised through the following military tribunals:

(a) Military commissions and provost courts, for the trial of offenders against the laws of war and under martial law.

(b) Courts-martial—general, special, and summary—for the trial of offenders against military law. (A. W. 3.)

[Note 1: The general court-martial has concurrent jurisdiction with military commissions and provost courts to try offenders against the laws of war. (A. W. 12.)]

Note 2: For the authority to appoint courts-martial in the National Guard not in the service of the United States, and the jurisdiction and powers of such courts, see sections 102–108, act of June 3, 1916, 39 Stat., 208, 209; Appendix 2, post.]

(c) Courts of inquiry, for the examination of transactions of or accusations or imputations against officers or soldiers. (A. W. 97.)

[Note: The composition, jurisdiction, procedure, etc., of these tribunals are treated in the succeeding chapters of this Manual.]

SECTION III.

PERSONS SUBJECT TO MILITARY LAW.

4. **Classes Enumerated.** The following persons are subject to the Articles of War (A. W. 2):

[Note: Wherever the following words are used in the Articles of War or this Manual, they are to be construed in the sense indicated below, unless the context shows that a different sense is intended, viz.: (a) The word "officer" shall be construed to refer to a commissioned officer; (b) the word "soldier" shall be construed as including a noncommissioned officer, a private, or any other enlisted man; (c) the word "company" shall be understood as including a troop or battery; and (d) the word "battalion" shall be understood as including a squadron. (A. W. 1.)]

(a) All officers and soldiers belonging to the Regular Army of the United States; all volunteers, from the dates of their muster or acceptance into the military service of the United States; and all other persons lawfully called, drafted, or ordered into, or to duty, or for training in the said service, from the dates they are required by the terms of the call, draft, or order to obey the same.

[Note: (a) Regular Army. The Regular Army of the United States, including the existing organizations, shall consist of sixty-four regiments of Infantry, twenty-five regiments of Cavalry, twenty-one regiments of Field Artillery, a Coast Artillery Corps, the brigade, division, army corps, and army headquarters, with their detachments and troops, a General Staff Corps, an Adjutant General's Department, an Inspector General's Department, a Judge Advocate General's Department, a Quartermaster Corps, a Medical Department, a Corps of Engineers, an Ordnance Department, a Signal Corps, the officers of the Bureau of Insular Affairs, the Militia Bureau, the detached officers, the detached noncommissioned officers, the chaplains, the Regular Army Reserve, all organized as hereinafter provided, and the following as now authorized by law: The officers and enlisted men on the retired list; the additional officers; the professors, the Corps of Cadets, the general army service detachment, and detachments of Cavalry, Field Artillery, and Engineers, and the band of the United States Military Academy; the post noncommissioned staff officers; the recruiting parties, the recruit depot detachments, and unassigned recruits; the service school detachments; the disciplinary guards; the disciplinary organizations; the Indian Scouts; and such other officers and enlisted men as are now or may be hereafter provided for. (Sec. 2, act of June 3, 1916, 39 Stat., 166.)]

(b) Volunteers. The volunteer forces shall be subject to the laws, orders, and regulations governing the Regular Army in so far as such laws, orders,

and regulations are applicable to officers or enlisted men whose permanent retention in the military service, either on the active list or on the retired list, is not contemplated by existing law. (Sec. 4, act of Apr. 25, 1914, 38 Stat., 347.)

(c) National Guard. The National Guard, when called as such into the service of the United States, shall, from the time they are required by the terms of the call to respond thereto, be subject to the laws and regulations governing the Regular Army, so far as such laws and regulations are applicable to officers and enlisted men whose permanent retention in the military service, either on the active list or on the retired list, is not contemplated by existing law. (Sec. 101, act of June 3, 1916, 39 Stat., 208.)

[Note: The militia when called into the service of the United States is also subject to military law. (35 Stat., 399.)]

(d) National Guard when drafted into Federal Service. Members of the National Guard and the National Guard Reserve drafted into the military service of the United States shall, from the date of their draft, stand discharged from the militia, and shall from said date be subject to such laws and regulations for the government of the Army of the United States as may be applicable to members of the Volunteer Army. (Sec. 111, act of June 3, 1916, 39 Stat., 211.)

(e) Officers' Reserve Corps. Any officer who, while holding a commission in the Officers' Reserve Corps, shall be ordered to active service by the Secretary of War shall, from the time he shall be required by the terms of his order to obey the same, be subject to the laws and regulations for the government of the Army of the United States, in so far as they are applicable to officers whose permanent retention in the military service is not contemplated. (Sec. 38, act of June 3, 1916, 39 Stat., 190.)

(f) The Enlisted Reserve Corps. Any enlisted man of the Enlisted Reserve Corps ordered to active service or for purposes of instruction or training shall, from the time he is required by the terms of the order to obey the same, be subject to the laws and regulations for the government of the Army of the United States. (Sec. 55, act of June 3, 1916, 39 Stat., 195.)]

(b) Cadets.

(c) Officers and soldiers of the Marine Corps when detached for service with the armies of the United States by order of the President. (A. W. 2.)

(d) Officers and enlisted men of the Medical Department of the Navy, serving with a body of marines detached for service with the Army in accordance with the provisions of section sixteen hundred and twenty-one of the Revised Statutes, shall, while so serving, be subject to the rules and articles of war prescribed for the government of the Army in the same manner as the officers and men of the Marine Corps while so serving. (Act of Aug. 29, 1916, 39 Stat., 573.)

[Note: (a) Except as provided in (c) and (d) supra or otherwise specifically provided by law, the Articles of War do not apply to any person under the United States naval jurisdiction. (b) An officer or soldier of the Marine Corps detached for service with the Army may be tried by military court-martial for an offense committed against the laws for the government of the naval service prior to his detachment and for an offense committed against the Articles of War he may be tried by a naval court-martial after such detachment ceases. (A. W. 2.)]

(e) All retainers to the camp and all persons accompanying or serving with the armies of the United States without the territorial jurisdiction of the United States, and in time of war all such retainers and persons accompanying or serving with the armies of the United States in the field, both within and without the territorial jurisdiction of the United States though not otherwise subject to the Articles of War.

[Note: In addition to the two classes (a) "retainers to the camp" and (b) "persons serving with the armies of the United States in the field" who were made subject to military jurisdiction by A. W. 60 of the code of 1806 (A. W. 63 of the revision of 1874), A. W. 2 of the code of 1916 includes a third class, viz., (c) "persons accompanying the armies of the United States."]

(f) All persons under sentence adjudged by courts-martial.

(g) Army field clerks.

[Note: Hereafter headquarters clerks shall be known as Army field clerks and shall * * * be subject to the rules and Articles of War. (Sec. 1, act of Aug. 29, 1916, 39 Stat., 625.)]

(h) Field clerks, Quartermaster Corps.

[Note 1: Hereafter not to exceed two hundred clerks, Quartermaster Corps, * * * shall be known as field clerks, Quartermaster Corps, * * * and shall be subject to the rules and Articles of War. (Act of Aug. 29, 1916, 39 Stat., 626.)]

[Note 2: Inmates of the Soldiers' Home (R. S. 4824), the National Home for Disabled Volunteer Soldiers (R. S. 4835), all persons admitted to treatment in the General Hospital at Fort Bayard, New Mexico, while patients in said hospital (act of June 12, 1906, 34 Stat., 255), and all persons admitted to treatment in the Army and Navy General Hospital at Hot Springs, Arkansas, while patients in said hospital (act of Mar. 3, 1909, 35 Stat., 748), are by the statutes cited made subject to the rules and articles for the government of the armies of the United States, but court-martial jurisdiction over them has rarely, if ever, been exercised.]

CHAPTER II.

COURTS-MARTIAL—CLASSIFICATION—COMPOSITION.

SECTION I.

CLASSIFICATION.

5. Kinds. Courts-martial shall be of three kinds (A. W. 3), viz.:

- (a) General courts-martial;
- (b) Special courts-martial; and
- (c) Summary courts-martial.

[Note: The classification of courts-martial adopted by the code of 1916 is identical with that made by the act of March 2, 1913 (37 Stat., 721), which abolished garrison and regimental courts-martial and created special courts-martial.]

SECTION II.

COMPOSITION.

6. Who Competent to Serve. All officers in the military service of the United States, and officers of the Marine Corps when detached for service with the Army by order of the President, shall be competent to serve on courts-martial for the trial of any persons who may lawfully be brought before such courts for trial. (A. W. 4.)

Exceptions. (a) No officer shall be eligible to sit as a member of a general or special court-martial when he is the accuser or a witness for the prosecution (A. W. 8, 9); but when there is only one officer present with a command he shall be the summary court-martial of that command and shall hear and determine cases brought before him. (A. W. 10.) [See Chapter 8, sec. 1, par. 129.]

(b) Chaplains, veterinarians, dental surgeons, and second lieutenants in the

Quartermaster Corps are not in practice detailed as members of courts-martial.

7. Number of Members. Courts-martial shall be composed of the following number of officers (A. W. 5, 6, 7), viz.:

(a) General courts-martial. Any number from 5 to 13, inclusive.

A general court-martial shall not consist of less than 13 officers when that number can be convened without manifest injury to the service. (A. W. 5.) The Articles of War (A. W. 5, 6) governing the number of members which may sit upon a general or a special court-martial are merely directory to the officer appointing the court, and his decision as to the number which can be convened without manifest injury to the service (within the maximum and minimum limits prescribed by law), being a matter submitted to his sound discretion, must be conclusive. (*Martin v. Mott*, 12 Wheaton, 35; see also *Mullan v. U. S.*, 140 U. S., 240.) While a number less than five can not be organized as a general court-martial or proceed with a trial, they may perform such acts as are preliminary to the organization and action of the court. Less than five members may adjourn from day to day, and where five are present and one of them is challenged, the remaining four may determine upon the sufficiency of the objection. A court reduced to four members and thereupon adjourning for an indefinite period does not dissolve itself. The appointing authority may at any time complete it by the addition of a new member or members and order it to reassemble for business (Digest, p. 158, LXXV., B, 3), but if any evidence has been taken before the court is reduced below five, it should be dissolved and a new one ordered.

If for any reason a general court-martial is reduced below five members it will direct the judge advocate to report the facts to the convening authority and wait his orders. The report by the judge advocate will, in all cases, be made through the commanding officer of the post, command, or station where the court is sitting, who will indorse thereon the names of a sufficient number of available officers whom he recommends be detailed on the court to enable it to proceed. More than enough to make a quorum should be recommended where practicable in order to provide for future contingencies, and so far as can be foreseen the officers recommended should not be liable to challenge in any case to be tried. If there be no such officer or officers available, the commanding officer will so state. This report will be made by wire whenever deemed advisable in order to prevent unnecessary delay in trying cases. Similar action will be taken before trial by the judge advocate and commanding officer whenever the former knows or has good reason to believe that the court will be reduced below a quorum at the time of trial. It is the duty of commanding officers to keep in touch with the business before general courts-martial being held within the limits of their commands and from time to time to take the initiative in making recommendations to the appointing authority as to relieving or adding members, changing the judge advocate, or appointing a new court, and as to other matters relating to such courts, so that they may proceed expeditiously and in cooperation with other official business.

(b) Special courts-martial. Any number of officers from three to five, inclusive.

The remarks under ante apply equally to a special court-martial where its membership is reduced below the minimum required by law, except that in the case of special court-martial the report by the judge advocate will be made to the convening authority, who will, without unnecessary delay, detail a sufficient number of qualified officers to enable it to proceed or appoint a new court.

(c) Summary courts-martial. A summary court-martial shall consist of one officer.

8. "Officer" Defined. The word "officer" when used in the Articles of War or this Manual means commissioned officer. (A. W. 1.)

9. "In the Military Service of the United States." (a) An officer suspended from rank should not be detailed to sit as a member of a court-martial during the period of suspension.

(b) A retired officer may be assigned with his consent to active duty upon courts-martial in time of peace (act of Apr. 23, 1904, 33 Stat., 264), and if employed on active duty in time of war in the discretion of the President (sec. 24, act of June 3, 1916, 39 Stat., 183), he is eligible for court-martial duty. At other times he is not available for such duty except that when placed in command of a post under the act of August 29, 1916 (39 Stat., 627), or when assigned to recruiting duty he may act as summary court-martial when he is the only officer present. (See pars. 26 and 27.)

(c) Volunteers become eligible for duty as members of courts-martial from the dates of their muster or acceptance into the military service of the United States (A. W. 2), members of the Officers' Reserve Corps ordered to active service by the Secretary of War (sec. 38, act of June 3, 1916, 39 Stat., 191), and all other officers lawfully called, drafted, or ordered into, or to duty or for training in, the said service, from the date they are required by the terms of the call, draft, or order to obey the same. (A. W. 2.)

10. **Marine Officers.** Marine officers can be detached for duty with the Army only by order of the President (R. S. 1619, 1621), and their eligibility to sit as members of courts-martial to try persons subject to military law continues only during the time they are serving under such order. When any part of the Marine Corps is present with the Army and engaged in a common enterprise with it, without an order of the President detaching it for service with the Army, the case is one of coöperation and not of incorporation, and in such a case no officer of the Marine Corps can exercise command over the Army any more than a naval officer can when some part of the Navy is coöperating with the Army, and the converse is true of Army Officers coöperating with the Marine Corps. (28 Op. Atty. Gen., 15.)

11. **No Distinction between Regulars and Other Forces.** No distinction now exists in the matter of eligibility for court-martial duty among the various classes of officers in the military service of the United States for the trial of any person subject to military law. (Act of Apr. 25, 1914, 38 Stat., 348; A. W. 4.)

12. **Rank of Members.** (a) The order appointing a general or a special court-martial should name the members in order of rank, and they will sit according to rank.

In no case shall an officer, when it can be avoided, be tried by officers inferior to him in rank. (A. W. 16.) This provision (like that in reference to the number of members of a general or special court-martial considered in paragraph 7, ante) is not prohibitory but directory only upon the convening authority. Its effect is to leave to the discretion of that officer, as the conclusive authority and judge, the determination of the question of the rank of the members, with only the general instruction that superiors in rank to the accused shall be selected, so far as the exigencies and interests of the service will permit. (*Mullan v. U. S.*, 140 U. S., 240.)

(b) Rank among officers of the Regular Army, forces drafted or called into the service of the United States, and Volunteers is determined according to the rules laid down in A. W. 119.

13. **Who May be Tried.** (a) For the jurisdiction of general, special, and summary courts-martial as to persons see Chapter IV, Jurisdiction.

(b) In addition to the persons subject to military law enumerated in Chapter I, Section III, ante, the general court-martial also has jurisdiction over any other person who by the law of war is subject to trial by military tribunals. (A. W. 12; see Chap. IV, Jurisdiction.)

CHAPTER III. COURTS-MARTIAL—BY WHOM APPOINTED.

SECTION I.

GENERAL COURTS-MARTIAL.

14. Authorities Enumerated. General courts-martial may be appointed by the following authorities (A. W. 8), viz.:

- (a) The President of the United States.
- (b) The commanding officer of a territorial division.
- (c) The commanding officer of a territorial department.
- (d) The Superintendent of the Military Academy.
- (e) The commanding officer of an army.
- (f) The commanding officer of an army corps.
- (g) The commanding officer of a (tactical) division.
- (h) The commanding officer of a separate brigade.
- (i) The commanding officer of any district or of any force or body of troops, when empowered by the President to do so.

Exceptions. (1) When any of the foregoing commanders is the accuser or the prosecutor of the person or persons to be tried, the court shall be appointed by superior competent authority; (2) the Superintendent of the Military Academy is not empowered to convene a general court-martial for the trial of an officer. (A. W. 12.)

[Note: For the authority to appoint general court-martial in the National Guard not in the service of the United States, see sec. 103 act of June 3, 1916, 39 Stat., 208; Appendix 2, post.]

15. Power of the President to Appoint. In addition to the general statutory authority conferred upon the President by A. W. 8 to appoint general courts-martial he is also empowered to do so by virtue of being Commander in Chief of the Army (Swain v. U. S., 165 U. S., 563) and in the particular case provided for by R. S. 1230.

[Note: When any officer, dismissed by order of the President, makes, in writing, an application for trial, setting forth, under oath, that he has been wrongfully dismissed, the President shall, as soon as the necessities of the service may permit, convene a court-martial to try such officer on the charges on which he shall have been dismissed. And if a court-martial is not so convened within six months from the presentation of such application for trial, or if such court, being convened, does not award dismissal or death as the punishment of such officer, the order of dismissal by the President shall be void. (R. S. 1230.) See also A. W. 118.]

16. Superintendent of the Military Academy. The Superintendent of the Military Academy was authorized by R. S. 1326 to convene general courts-martial for the trial of cadets only; the act of March 2, 1913 (37 Stat., 722), extended this authority to include all persons (except officers) subject to military law under his command. This authority was continued in the Code of 1916. (A. W. 8, 12.)

17. "Accuser" or "Prosecutor." Whether the commander who convened the court is to be regarded as the "accuser or prosecutor" where he has had to do with the preparing and preferring of the charges, is mainly to be determined by his animus in the matter. He may, like any other officer, initiate an investigation of an officer's conduct and formally prefer, as his individual act, charges against such officer; or by reason of a personal interest adverse to the accused he may adopt practically as his own charges initiated by another; in which

cases he is clearly the accuser or prosecutor within the article. On the other hand, it is his duty to determine, when the facts are brought to his knowledge, whether an officer within his command charged with a military offense shall in the interest of discipline and for the good of the service be brought to trial. To this end he may formally refer or revise or cause to be revised and then formally referred, charges preferred against such officer by another; or when the facts of an alleged offense are communicated to him, he may direct a suitable officer, as a member of his staff, or the proper commander of the accused, to investigate the matter, formulate and prefer such charges as the facts may warrant, and having been submitted to him, he may revise and refer them for trial as in other cases; all this he may do in the proper performance of his official duty without becoming the accuser or prosecutor in the case. Of course, he can not be deemed such accuser or prosecutor where he causes charges to be preferred and proceeds to convene the court by direction of the Secretary of War or a competent military superior. (Digest, p. 154, LXXII, I, 1.) It is not essential that the commander who convenes the court-martial for the trial of an officer should sign the charges to make him the "accuser or prosecutor" within the meaning of this article. Nor is the fact that they have been signed by another conclusive on the question whether the convening commander is the actual accuser or prosecutor. The objection that such commander is such, calls in question the legal constitution of the court, and while such objection, if known or believed to exist, should regularly be interposed at or before the arraignment it may be taken during the trial at any stage of the proceedings. If not admitted by the prosecution to exist, the accused is entitled to prove it like any other issue. (For decisions as to when the convening authority is the accuser or prosecutor, see Digest, p. 155, LXXII, I, 1, a; p. 155, LXXII, I, 2; p. 156, LXXII, I, 3, a; p. 156, LXXII, I, 3 a (1).)

18. Power to Appoint an Attribute of Command. As the authority to appoint general courts-martial is an attribute of command, a commanding officer can not delegate to another officer such as his adjutant or any other staff officer or subordinate the authority to appoint a court, detail an additional member, or relieve a member. If the authority to appoint a general court-martial is vested by law in a commanding officer he retains that authority, wherever he may be, so long as he continues to be such commanding officer. In the absence of orders or legislation, personal presence within the territorial limits of his department is not essential to the validity of commands given by a department commander to be executed within the department. Therefore he may appoint a court-martial while absent from his department if he continues to exercise command. But a department commander detached and absent from his command for any considerable period by reason of having received a leave of absence (whether of a formal or informal character), or having been placed upon a distinct and separate duty, is held to be in a status incompatible with a full and legal exercise of such authority and therefore incompetent during such absence to order a general court-martial as department commander, even though no other officer has been assigned or has succeeded to the command of the department. (Digest, p. 153, LXXII, A.)

19. Rank of Appointing Authority. The power of the various commanders enumerated in paragraph 14, *supra*, to appoint general courts-martial is independent of their rank, but no officer other than those enumerated can appoint a general court-martial no matter what his rank may be. An officer who succeeds to any command or duty stands in regard to his duties in the same situation as his predecessor. (A. R. 17.) In the event of the death or disability of the permanent commander of a territorial department, or his temporary absence from the limits of his command, the senior line officer present

and on duty therein will exercise the command of the department, unless otherwise ordered, until relieved by proper authority. (A. R. 196.)

20. Power of Appointing Authority, How Limited. An officer who has power to appoint a court-martial may control its existence, dissolve it, and determine the cases to be referred to it for trial, but he can not control the exercise by the court of powers vested in it by law.

SECTION II.

SPECIAL COURTS-MARTIAL.

21. Authorities Enumerated. Special courts-martial may be appointed by the following authorities (A. W. 9), viz.:

- (a) The commanding officer of a district.
- (b) The commanding officer of a garrison.
- (c) The commanding officer of a fort.
- (d) The commanding officer of a camp.
- (e) The commanding officer of any place other than (a), (b), (c), and (d) where troops are on duty.
- (f) The commanding officer of a brigade.
- (g) The commanding officer of a regiment.
- (h) The commanding officer of a detached battalion.
- (i) The commanding officer of any other detached command.

Exception. When any one of the foregoing commanding officers is the accuser or the prosecutor of the person or persons to be tried, the court shall be appointed by superior authority.

When any superior authority deems it desirable, he may appoint a special court-martial for any part of his command.

[Note: For the authority to appoint special courts-martial in the National Guard not in the service of the United States, see sec. 104, act of June 3, 1916, 39 Stat., 208; Appendix 2, post.]

22. Commanding Officer as "Accuser or Prosecutor." The rules laid down in Section I, paragraph 17, *supra*, for determining when a commander is the accuser or prosecutor apply equally to trials by special courts-martial. When a superior appoints a court because of such disqualification on the part of a subordinate commanding officer, he will specify in the order the names of the person or persons to be tried, and the court will adjourn *sine die* upon the completion of the last case which it is ordered to try.

23. Rank of Appointing Authority. As in the case of general courts-martial, the test of the power to appoint a special court-martial is whether the officer is one of the commanders designated in A. W. 9. Such authority is an incident of his power to command, and is independent of his rank.

24. Commanding Officer as Member. When but two officers in addition to the commanding officer are available for detail on a special court-martial, the commanding officer will not detail himself as a member of such court. In such a case, if superior authority desires to appoint a special court-martial for such command, the commanding officer, if otherwise eligible, may be appointed as a member thereof.

SECTION III.

SUMMARY COURTS-MARTIAL.

25. Authorities Enumerated. Summary courts-martial may be appointed by the following authorities (A. W. 10), viz.:

- (a) The commanding officer of a garrison.
- (b) The commanding officer of a fort.

- (c) The commanding officer of a camp.
- (d) The commanding officer of any other place not enumerated in (a), (b), and (c) where troops are on duty.
- (e) The commanding officer of a regiment.
- (f) The commanding officer of a detached battalion.
- (g) The commanding officer of a detached company.
- (h) The commanding officer of any other detachment not enumerated in (f) and (g).

A summary court-martial may in any case be appointed by superior authority when by the latter deemed desirable.

[Note: For the authority to appoint summary courts-martial in the National Guard not in the service of the United States, see sec. 105, act of June 3, 1916, 39 Stat., 208; Appendix 2, post.]

26. When More Than One Officer Present. When more than one officer is present the summary court-martial will be appointed from staff officers or available line officers junior to the commanding officer. The commanding officer will not in such cases designate himself as the summary court-martial. The senior officer on duty at a recruiting station is a "commanding officer" in the sense of the last preceding sentence when there is another officer present at the same station, even though the latter may be serving at an auxiliary or branch station. (Bul. 46, War Dept., Oct. 24, 1914.)

27. When but One Officer Present. When but one officer is present with a command he shall be the summary court-martial of that command and shall hear and determine cases brought before him. (A. W. 10.) In such a case, no order appointing the court will be issued, but the officer will enter on the record that he is the "only officer present with the command." (As to retired officers, see par. 9, b).

28. "Detachment" Defined. A battalion or other unit is "detached" when isolated or removed from the immediate disciplinary control of a superior of the same branch of the service in such a manner as to make its commander primarily the one to be looked to by superior authority as the officer responsible for the administration of the discipline of the enlisted men composing the same. The term is used in a disciplinary sense, and is not necessarily limited to what constitutes detachment in a physical or tactical sense. The commanding officers of such units as field signal battalions, aero squadrons, field bakeries, and ammunition, engineer, or sanitary trains, if their respective commands are independent, except in so far as they constitute parts of a division, and if their commanders are responsible directly to the division commander for the maintenance of discipline in those commands, are competent to appoint summary courts for the same, subject to the power of the division commander to appoint summary courts for all subordinate organizations and detachments under his command if by him deemed advisable.

So likewise the various service schools, such as the Mounted Service School at Fort Riley, though they may be located within the immediate limits of higher commands, constitute "detachments" within the meaning of A. W. 10, and the commandants thereof have power to appoint summary courts-martial for the trial of enlisted men connected with such schools, subject to the right of the commanding officer of the garrison or fort to appoint such courts when by him deemed desirable. (Bul. 13, War Dept., 1913, p. 7.)

29. Power of Brigade Commanders. A brigade commander is responsible for the instruction, tactical efficiency and preparedness for war service of his brigade. (A. R. 194.) If the brigade is serving at one garrison or post he has, by virtue of his power as such garrison or post commander, authority to retain within himself the appointing power of all summary courts within his command,

but if he does not exercise the authority which is vested in him by statute he allows the appointing power, including the power of review, to pass to regimental (and detachment) commanders. (Digest, p. 580, XVI, E, 7.) If the brigade is acting as a tactical unit in the field, he may as superior authority appoint summary courts-martial for his command whenever he deems it desirable, but such authority will ordinarily be exercised by the regimental commanders.

SECTION IV.

JUDGE ADVOCATE.

30. Power to Appoint. For each general or special court-martial the authority appointing the court shall appoint a judge advocate, and for each general court-martial one or more assistant judge advocates when necessary. (A. W. 11.)

31. Duties of Judge Advocate and Assistant Judge Advocates. For discussion of the duties of the judge advocate and his assistants see Chapter VII, Sections II and III.

CHAPTER IV.

COURTS-MARTIAL—JURISDICTION.

SECTION I.

JURISDICTION IN GENERAL.

32. Jurisdiction Defined. The jurisdiction of a court-martial is its power to try and determine cases legally referred to it and, in case of a finding of guilty, to award a punishment for the offense within its prescribed limits. Being courts of special and limited jurisdiction their organization, powers, and mode of procedure must conform to all the statutory provisions relating to their jurisdiction. (For the source and kinds of military jurisdiction and persons subject to military law see Chap. I, Secs. I and III.)

33. Courts-martial Not Part of Federal Judicial System. While courts-martial have no part of the jurisdiction set apart under the article of the Constitution which relates to the judicial power of the United States, they have an equally certain constitutional source. They are established under the constitutional power of Congress to make rules for the government and regulation of the land forces of the United States, and are recognized in the provisions of the fifth amendment expressly exempting "cases arising in the land and naval forces" from the requirement as to presentment and indictment by grand jury. They are tribunals appointed by military orders issued under authority of law. The power to appoint them, as well as the power to act upon their proceedings, is vested by law in certain commanding officers. Their jurisdiction is entirely criminal. They have no power to adjudge damage for personal injuries or private wrongs, nor to collect private debts. Their judgments upon subjects within their limited jurisdiction, when duly approved or confirmed, are as legal and valid as those of any other tribunal. No appeal can be taken from them, nor can they be set aside or reviewed by the courts of the United States, nor of any State, but United States courts may, on writ of habeas corpus, inquire into the legality of detention of a person held by military authority, at any time, either before or during trial or while serving sentence, and will order him discharged if it appears to the satisfaction of the court that any of the statutory requirements conferring jurisdiction have not been fulfilled. Their sentences have in themselves no legal

effect until they have received the approval or confirmation of the proper commanding officer. With such approval or confirmation, however, their sentences become operative and are as effective as the sentences of civil courts having criminal jurisdiction, and are entitled to the same legal consideration.

34. Conditions Necessary to Show Jurisdiction. The jurisdiction of every court-martial, and hence the validity of each of its judgments, is conditioned upon these indispensable requisites:

- (a) That it was convened by an officer empowered by statute to appoint it.
- (b) That the persons who sat upon the court were legally competent to do so.
- (c) That the court thus constituted was invested by the acts of Congress with power to try the person and the offense charged.
- (d) That its sentence was in accordance with law.

"Persons, then, belonging to the Army and the Navy are not subject to illegal or irresponsible courts-martial, when the law for convening them and directing their proceedings of organization and for trial have been disregarded. In such cases, everything which may be done is void—not voidable, but void; and civil courts have never failed, upon a proper suit, to give a party redress, who has been injured by a void process or void judgment. * * * When we speak of proceedings in a cause, or for the organization of the court and for trials, we do not mean mere irregularity in practice on the trial, or any mistaken rulings in respect to evidence or law, but a disregard of the essentials required by the statute under which the court has been convened to try and to punish an offender for an imputed violation of the law." (*Dynes v. Hoover*, 61 U. S., 81; see also *Deming v. McClaughry*, 113 Fed. Rep., 650; *McClaghry v. Deming*, 186 U. S., 63; *Mullan v. United States*, 140 U. S., 240; *Ex parte Tucker*, 212 Fed. Rep., 569; and *A. W. 37.*)

35. Procedure When Military and Civil Jurisdiction Concurrent. Courts-martial have exclusive jurisdiction to try persons subject to military law for all purely military crimes and offenses; they have concurrent jurisdiction with the proper civil courts to try such persons for civil crimes and offenses denounced and punished under A. W. 92, 93, 94, and 96. (For limitation as to the crimes of murder and rape, see A. W. 92.) In accordance with a principle of comity as between the civil and military tribunals in cases of concurrent jurisdiction the jurisdiction which first attaches in a particular case is entitled to proceed to its termination. This is, however, not an inflexible rule and need not govern the action of the military authorities in the case of an accused person demanded by the civil authorities to answer for an offense which is primarily one against the civil community.

When any person subject to military law, except (a) one who is held by the military authorities to answer, or (b) who is awaiting trial, or (c) result of trial, or (d) who is undergoing sentence for a crime or offense punishable by the Articles of War, is accused of a crime or offense committed within the geographical limits of the States of the Union and the District of Columbia, and punishable by the laws of the land, the commanding officer is required, except in time of war, upon application duly made, to use his utmost endeavor to deliver over such accused person to the civil authorities; or to aid the officers of justice in apprehending and securing him, in order that he may be brought to trial. Any commanding officer who upon such application refuses or willfully neglects, except in time of war, to deliver over such accused person to the civil authorities or to aid the officers of justice in apprehending and securing him shall be dismissed from the service or suffer such other punishment as a court-martial may direct.

When, under the provisions of this article, delivery is made to the civil authorities of an offender undergoing sentence of a court-martial, such delivery,

if followed by conviction, shall be held to interrupt the execution of the sentence of the court-martial, and the offender shall be returned to military custody, after having answered to the civil authorities for his offense, for the completion of the said court-martial sentence. (A. W. 74.) When offenses against the peace and good order of civil communities are committed by persons subject to military law, the proper military authorities will be prompt in the preferring of charges and the arraignment of offenders, having due regard for arrangements existing for the purpose of securing between the authorities of the two jurisdictions, civil and military, mutual aid and coöperation in the administration of justice. In such cases, if, after charges are preferred, the officer competent to order trial by the proper court-martial deems it inadvisable to bring the case to trial, he will hold the offender and forward the charges, with his views thereon, to The Adjutant General of the Army.

36. Can Not be Divested by Act of Accused. A court-martial having once duly assumed jurisdiction of a case, can not, by any wrongful act of the accused, be ousted of its authority or discharged from its duty to proceed fully to try and determine according to law and its oath. Thus the fact that, after arraignment and during the trial, the accused has escaped from military custody, furnishes no ground for not proceeding to a finding, and, in the event of conviction, to a sentence, in the case; and the court may and should find and sentence as in any other case. During such absence it is proper for his counsel to continue to represent him in all respects as though present.

37. Not Territorial. Military jurisdiction is not territorial. It extends as to persons legally subject to it to offenses committed by them in any place whatsoever, whether within or beyond the territorial jurisdiction of the United States.

38. When Terminated—Rule Stated. The jurisdiction of courts-martial over officers, cadets, and soldiers ordinarily ends when they become separated from the service. The following are, however, exceptions to this general rule:

(a) If any person, being guilty of any of the offenses of fraud, embezzlement, etc., against the United States, while in the military service of the United States, receives his discharge or is dismissed from the service, he shall continue to be liable to be arrested and held for trial and sentence by a court-martial in the same manner and to the same extent as if he had not received such discharge nor been dismissed. (A. W. 94.)

(b) When any officer, dismissed by order of the President, makes, in writing, an application for trial, setting forth, under oath, that he has been wrongfully dismissed, the President shall, as soon as the necessities of the service may permit, convene a court-martial to try such officer on the charges on which he shall have been dismissed, and if a court-martial is not so convened within six months from the date of making of such application for trial, or if such court, being convened, does not award dismissal or death as the punishment of such officer, the order of dismissal by the President shall be void. (R. S. 1230.)

[Note: In time of peace no officer shall be dismissed except in pursuance of the sentence of a court-martial or in mitigation thereof. (A. W. 118.)]

(c) All persons under sentence adjudged by courts-martial remain subject to military law while under such sentence. (A. W. 2.)

(d) Where a soldier obtains his discharge by fraud, the discharge may be canceled and the soldier arrested and returned to military control. He may also be required to serve out his enlistment and may be tried for his fraud. (Digest, p. 457, XVI, A. 3.)

(e) An honorable discharge releases from the particular contract and term of enlistment to which it relates, and does not therefore relieve the soldier from the consequences of a desertion committed during a prior enlistment. (Digest, p. 462, XXII, A.) A dishonorable discharge does not relate to any particular

contract or term of enlistment; it is a discharge from the military service as a punishment—a complete expulsion from the Army—and covers all unexpired enlistments. A soldier thus dishonorably discharged can not be made amenable for a desertion or other military offense committed under a prior enlistment except as provided in A. W. 94. Nor would a subsequent enlistment after such dishonorable discharge operate to revive the amenability of the soldier for such offenses. (Digest, p. 462, XXII, B.)

[Note: For an offense committed prior to the expiration of his term of enlistment, a soldier may be held in the service and tried after the expiration of his term. So, also, a soldier may be tried for offenses committed while making good time lost through desertion, through absence without leave, through disease or injury, the result of his own misconduct, etc., under A. W. 107.]

SECTION II.

JURISDICTION OF GENERAL COURTS-MARTIAL.

39. Persons and Offenses. General courts-martial have power (A. W. 12) to try—

- (a) Any person subject to military law, for
- (b) Any crime or offense made punishable by the Articles of War.

[Note: No officer shall be brought to trial before a general court-martial appointed by the Superintendent of the Military Academy. (A. W. 12.)]

In addition they have power to try—

- (c) Any person other than (a) above, who by the law of war is subject to trial by military tribunals, for
- (d) Any crime or offense in violation of the law of war.

40. Limits of Punishment—Exception. Punishment upon conviction is discretionary with a general court-martial, except—

- (a) When mandatory under the law, or
- (b) When limited by order of the President under A. W. 45; in addition,
- (c) The death penalty can be imposed only when specifically authorized.

[Note: The death penalty is mandatory in the case of spies (A. W. 82); dismissal is mandatory for conduct unbecoming an officer and gentleman (A. W. 95); either death or imprisonment for life is mandatory for murder and rape (A. W. 92); punishment is mandatory in part and discretionary in part for false muster (A. W. 56), false returns (A. W. 57), officer drunk on duty in time of war (A. W. 85), and personal interest in the sale of provisions. (A. W. 87.) For limits of punishment fixed by the President under A. W. 45, see Chapter XIII, post, Punishments.]

SECTION III.

JURISDICTION OF SPECIAL COURTS-MARTIAL.

41. Persons and Offenses. Special courts-martial shall have power (A. W. 13) to try—

- (1) Any person subject to military law, except—
 - (a) An officer;
 - (b) Any person subject to military law belonging to a class or classes excepted by the President, for
- (2) Any crime or offense (not capital) made punishable by the Articles of War.

[Note: Cadets and soldiers holding a certificate of eligibility for promotion are excepted from the jurisdiction of Special Courts-martial.]

The following are capital crimes and offenses under the Articles of War, viz.:

(1) Peace offenses. (a) Assaulting or disobeying a superior officer (A. W. 64); (b) mutiny or sedition (A. W. 66); (c) failure to suppress mutiny or sedition (A. W. 67).

(2) War offenses. (a) Desertion (A. W. 58); (b) advising or aiding another to desert (A. W. 59); (c) misbehavior before the enemy (A. W. 75); (d) subordinates compelling commander to surrender (A. W. 76); (e) improper use of countersign (A. W. 77); (f) forcing a safeguard (A. W. 78); (g) relieving, corresponding with, or aiding the enemy (A. W. 81); (h) spies (A. W. 82); (i) misbehavior of sentinel (A. W. 86).

42. Limits of Punishment. A special court-martial shall not have power to adjudge—

- (a) Dishonorable discharge, nor
- (b) Confinement in excess of six months, nor
- (c) Forfeiture of more than six months' pay.

[Note: (a) Reduction to the ranks in the case of noncommissioned officers and (b) reduction in classification in the cases of first-class privates are within the limits of the punishing power of special courts-martial. (Act of Mar. 2, 1913, 37 Stat., 722.)]

SECTION IV.

JURISDICTION OF SUMMARY COURTS-MARTIAL.

43. Persons and Offenses. Summary courts-martial shall have power (A. W. 14) to try—

- (1) Any person subject to military law, except—
 - (a) An officer;
 - (b) A cadet;
 - (c) A soldier holding the privilege of a certificate of eligibility to promotion;
 - (d) A noncommissioned officer who objects thereto (without the authority of the officer competent to bring him to trial before a general court-martial);
 - (e) Any person belonging to a class or classes excepted from the jurisdiction of summary courts-martial by the President.

(2) Any crime or offense (not capital) made punishable by the Articles of War.

[Note: For list of capital crimes under the Articles of War see Sec. III, par. 41, *supra*.]

44. Limits of Punishment. A summary court-martial shall not have power to adjudge—

- (a) Dishonorable discharge,
- (b) Confinement in excess of three months, nor
- (c) Forfeiture of more than three months' pay.

Exception. When the summary court officer is also the commanding officer, no sentence of such summary court-martial adjudging confinement at hard labor or forfeiture of pay, or both, for a period in excess of one month shall be carried into execution until the same shall have been approved by superior authority. (A. W. 14.)

[Note: (a) Reduction to the ranks in the case of noncommissioned officers and (b) reduction in classification in the cases of first-class privates are within the limits of the punishing power of summary courts-martial. (Act of Mar. 2, 1913, 37 Stat., 723.)]

SECTION V.

JURISDICTION OF OTHER MILITARY TRIBUNALS.

45. When Concurrent with Courts-martial. The provisions of the Articles of War conferring jurisdiction upon courts-martial shall not be construed as depriving military commissions, provost courts, or other military tribunals of concurrent jurisdiction in respect to offenders or offenses that by the law of war may be lawfully triable by such military commissions, provost courts, or other military tribunals. (A. W. 15.)

CHAPTER V.

COURTS-MARTIAL—PROCEDURE PRIOR TO TRIAL.

SECTION I.

ARREST AND CONFINEMENT.

46. Arrest or Confinement of Accused Persons. (a) An officer charged with crime or with a serious offense under the articles of war shall be placed in arrest by the commanding officer, and in exceptional cases an officer so charged may be placed in confinement by the same authority.

(b) A soldier charged with crime or with a serious offense under the articles of war shall be placed in confinement, and when charged with a minor offense he may be placed in arrest.

(c) Any other person subject to military law charged with crime or with a serious offense under the articles of war shall be placed in confinement or in arrest, as circumstances may require; and when charged with a minor offense such person may be placed in arrest. Any person placed in arrest under the provisions of this article (A. W. 69) shall thereby be restricted to his barracks, quarters, or tent, unless such limits shall be enlarged by proper authority. Any officer who breaks his arrest or who escapes from confinement before he is set at liberty by proper authority shall be dismissed from the service or suffer such other punishment as a court-martial may direct; and any other person subject to military law who escapes from confinement or who breaks his arrest before he is set at liberty by proper authority shall be punished as a court-martial may direct. (A. W. 69.)

[Note: A failure to place a person subject to military law in arrest or confinement or the disregard of any custom or formality connected therewith does not affect the jurisdiction of a court.]

47. Who May Order Arrests. (a) Only commanding officers have power to place officers in arrest, except as provided in A. W. 68.

[Note: The "commanding officer" thus authorized is the commander of the regiment, separate company, detachment, post, department, etc., in which the officer is serving. Digest, p. 481, I, D. 1.]

(b) A judge advocate of a court-martial has no authority to place in arrest an officer or soldier about to be tried by the court, or to compel the attendance of the accused before the court by requiring a noncommissioned officer to bring him, or otherwise. These are duties which devolve upon the convening authority or upon the post commander or other proper officer in whose custody or command the accused is at the time. (Digest, p. 498, IV, B, 5.)

(c) A court-martial has no control over the nature of the arrest or other status of restraint of a prisoner except as regards his personal freedom in its presence. It cannot place an accused person in arrest or confinement nor can

the court, even with a view to facilitate his defense, interfere to cause a close arrest to be enlarged. The officer in command is alone responsible for the prisoners in his charge. (Davis, p. 62.)

48. Arrest, How Executed. An officer is placed in arrest by his commanding officer in person or through another officer, by a verbal or written order or communication, advising him that he is placed in arrest, or will consider himself in arrest, or words to that effect.

49. Status of Officer in Arrest. An officer in arrest can not exercise command of any kind. He will not wear a sword nor visit officially his commanding or other superior officer, unless directed to do so. His applications and requests of every nature will be made in writing. (A. R. 926.)

50. Arrest of Officer Without Preferring Charges. Officers will not be placed in arrest for light offenses. For these the censure of the commanding officer will generally answer the purpose of discipline. Whenever a commanding officer places an officer in arrest without preferring charges, he will make a written report of his action to the brigade or Coast Artillery district commander, stating the cause. The brigade or Coast Artillery district commander, if he thinks the occasion requires, will call on the officer arrested for any explanation he may desire to make, and take such other action within his authority as he may think necessary, forwarding the papers, with his recommendation, to the department commander, who will, in case a trial is not deemed advisable, forward the papers to The Adjutant General of the Army for file with the officer's record, or for further action. In the case of officers belonging to organizations not attached or belonging to a brigade or Coast Artillery district, the report will be sent directly to the officer exercising general court-martial jurisdiction. (A. R. 924.)

51. Arrest of Medical Officer. In ordinary cases where inconvenience to the service would result from it, a medical officer will not be placed in arrest until the court-martial for his trial convenes. (A. R. 925.)

52. Arrest and Confinement of Soldiers. Except as provided in A. W. 68, or when restraint is necessary, no soldier will be confined without the order of an officer, who shall previously inquire into his offense (A. R. 930); it is proper, however, for a company commander to delegate to noncommissioned officers of his company the power to place enlisted men in arrest as a means of restraint at the instant when restraint is necessary, but such action must be reported to the company commander at once. (Digest, p. 481, I, E, 1.)

53. Status of Noncommissioned Officer in Arrest. Noncommissioned officers will not be confined in company with privates if it can be avoided. When placed in arrest, they will not be required to perform any duty in which they may be called upon to exercise authority or control over others, and when placed in confinement, they will not be sent out to work.

54. Abuse of Authority to Arrest. The fact that cases of officers put in arrest "at remote military posts or stations" are excepted from the application of A. W. 70 does not authorize an abuse of the power of arrest in these cases. And where, in such a case, an arrest, considering the facilities of communication with the department headquarters and other circumstances, is in fact unreasonably protracted without trial the officer is entitled to be released from arrest upon a proper application submitted for the purpose. (Digest, p. 152, LXXI, C.) Though an officer, in whose case the provisions of A. W. 70 in regard to service of charges and trial have not been complied with, is entitled to be released from arrest, he is not authorized to release himself therefrom. If he be not released in accordance with the article he should apply for his discharge from arrest, through the proper channels, to the authority by whose order the arrest was imposed, or other proper superior. (Digest, p. 153, LXXI, D.)

When an officer is placed in arrest in the operation of A. W. 69 and subsequently tried he is not entitled to be released from arrest, as a right, until the proper reviewing authority has acted on the record of his case. (Digest, p. 152, LXV, C.)

55. Refusal to Receive and Keep Prisoners. No provost marshal or commander of a guard shall refuse to receive or keep any prisoner committed to his charge by an officer belonging to the forces of the United States, provided the officer committing shall, at the time, deliver an account in writing, signed by himself, of the crime or offense charged against the prisoner. Any officer or soldier so refusing shall be punished as a court-martial may direct. (A. W. 71.)

[Note: A. W. 72 requires every commander of a guard to submit a report in writing to his commanding officer within twenty-four hours after the confinement of a prisoner (or as soon as he is relieved from his guard) showing (a) the name of such prisoner, (b) the offense charged against him, and (c) the name of the officer committing him. Such report is ordinarily contained in the "Guard report" and presented to the commanding officer by the old officer of the day at guard mounting. For duty of commanding officers to surrender prisoners to civil authorities, see par. 35.]

56. Placing Prisoners in Irons. Prisoners will not be placed in irons except in the extraordinary case of a prisoner who, in the judgment of the commanding officer, is a desperate or dangerous character, in which case report of action and the circumstances will be immediately made to the department or tactical division commander. When a prisoner is removed from irons a report of that action will be made to the department or tactical division commander. A prisoner may be shackled or handcuffed while being transported from one post to another or from a post to a penitentiary, when, in the judgment of the officer in charge, the escape of the prisoner can not otherwise be prevented. (A. R. 935.)

57. Releasing Prisoner Without Proper Authority. Any person subject to military law, who, without proper authority, releases any prisoner duly committed to his charge, or who, through neglect or design, suffers any prisoner so committed to escape, shall be punished as a court-martial may direct. (A. W. 73.)

SECTION II.

ARREST OF DESERTERS BY CIVIL AUTHORITIES.

58. Authority for Apprehension. It shall be lawful for any civil officer having authority under the laws of the United States, or of any State, Territory, District, or possession of the United States, to arrest offenders, summarily to arrest a deserter from the military service of the United States and deliver him into the custody of the military authorities of the United States. (A. W. 106.)

59. Authority of Citizens Other Than Peace Officers to Arrest Deserters. The statute conferring authority upon civil officers to apprehend and deliver deserters (A. W. 106) should not be construed as taking away the authority for their apprehension by a citizen under an order or direction of a military officer, but the legislation should be treated as providing an additional means of securing the arrest of deserters by conferring authority upon civil officers to apprehend them without military orders—leaving the former method still legal. The offer of reward for the apprehension and delivery of a deserter, coupled with the act of Congress which provides for the payment of such a reward, is considered sufficient authority for the arrest of the deserter by a citizen. (C-17327-A, July 20, 1909.)

60. Minority of Deserter. The right of the United States to arrest and bring to trial a deserter is paramount to any right of control over him by a parent on the ground of his minority. (See Digest, p. 401, III, G; *In re Cosenow*, 37 Fed. Rep., 668; *In re Kaufman*, 41 Fed. Rep., 876; and compare *In re Grimley*, 137 U. S., 147, and in *In re Morrissey*, 137 U. S., 157.)

CHAPTER VI. COURTS-MARTIAL—PROCEDURE PRIOR TO TRIAL. CONTINUED.

SECTION I.

PREPARATION OF CHARGES.

61. Definitions. A charge corresponds to a civil indictment. It consists of two parts—the technical “charge,” which should designate the alleged crime or offense as a violation of a particular article of war or other statute, and the “specification,” which sets forth the facts constituting the same. The requisite of a charge is that it shall be laid under the proper article of war or other statute; of a specification, that it shall set forth in simple and concise language facts sufficient to constitute the particular offense and in such manner as to enable a person of common understanding to know what is intended. The general term “charges,” in the sense that the word “charge” is used in the first sentence of this paragraph, includes any number of technical charges and their specifications.

[Note: For forms for charges, see Appendix 4.]

62. Who May Initiate Charges.—Military charges, though commonly originating with military persons, may be initiated by civilians. Indeed, it is but performing a public duty for a civilian who becomes cognizant of a serious offense committed by an officer or a soldier to bring it to the attention of the proper commander. A charge may likewise originate with an enlisted man. But by the usage of the service all military charges should be formally preferred by—that is, authenticated by the signature of—a commissioned officer. Charges proceeding from a person outside the Army and based upon testimony not in the possession or knowledge of the military authorities, should, in general, be required to be sustained by affidavits or other reliable evidence, as a condition to their being adopted. (Digest, p. 482, II, B.)

63. Who May Prefer Charges. Any officer may prefer charges. An officer is not disqualified from preferring charges by the fact that he is himself under charges or in arrest. (Digest, p. 483, II, C.)

64. Signing Charges. The officer preferring charges will sign his name following the last specification, adding his rank and organization in the Army.

The signing of charges, like orders, with the name of an officer, adding “by order of” his commander, is unusual and not to be recommended. (Digest, p. 487, II, D, 12, a.) The signature of the officer preferring charges forms no part of the charges themselves, but such signature will nevertheless be copied into the record of trial by a general or special court-martial, in order that it may affirmatively appear whether the officer preferring the charges (who is *prima facie* the accuser) sat as a member of the court. (See A. W. 8, 9.)

65. Accumulation of Charges. It may sometimes be expedient, where the offenses are slight in themselves and it is deemed desirable to exhibit a continued course of conduct, to wait, before preferring charges, till a series of similar acts have been committed, provided the period be not unreasonably prolonged;

but, in general, charges should be preferred and brought to trial immediately or presently upon the commission of the offenses. Anything like an accumulation or saving up of charges, through a hostile animus on the part of the accuser, is discountenanced by the sentiment of the service. (Digest, p. 490, II, F, 2.)

66. Duplication of Charges. The duplication of charges for the same act or omission will be avoided except when, by reason of lack of definite information as to available evidence, it may be necessary to charge the same act or omission as constituting two or more distinct offenses. When the same act or omission in its different aspects is charged as constituting two or more offenses, the court, even though it arrives at a finding of guilty in respect of two or more specifications, should impose punishment only with reference to the act or omission in its most important aspect, and if this rule be not observed by the court the reviewing authority should take the necessary action. Thus a soldier should not be punished for disorderly conduct and for assault, when the disorderly conduct consisted in making the assault. And so, a person subject to military law should not be charged under A. W. 61 for failure to report for a routine duty at a time included in a period for which he is charged with absence without leave under the same article; otherwise, when the duty is not a routine duty. Routine duties are those that are regularly scheduled, such as reveille, retreat, stables, fatigue, schools, drills, and parades, but do not include practice marches or other previously specially appointed and important exercises, of which the accused is chargeable with notice.

67. Consolidation of Charges. Ordinarily all the charges against the accused should be consolidated into one set of charges, and one trial had upon the consolidated set instead of having two or more trials, one upon each set. To avoid taking up unnecessarily the time of a court with minor offenses, where charges are preferred for serious offenses, there should not be joined with them charges for minor derelictions, unless the latter serve to explain the circumstances surrounding the serious charges. For instance, charges for desertion should not ordinarily be joined with charges for losing through neglect Government property of small value; nor should charges for willful disobedience of the orders of a commissioned officer ordinarily be joined with charges for an absence from a routine duty.

68. Refusal to Submit to Medical Treatment. An officer or soldier may be charged for refusing to submit to a surgical operation or medical treatment at the hands of the military authorities if it is designed to restore or increase his fitness for service, and is without risk of life.

A soldier who refuses to submit to a surgical operation that the attending surgeon certifies is without risk to his life and is necessary for the removal of a disability that prevents the full performance of any or all military duties that properly can be required of him will, for such refusal, be brought to trial by general court-martial; but if in any such case the attending surgeon is in doubt as to whether the proposed operation involves risk to life, the soldier will not be brought to trial but will be discharged on surgeon's certificate of disability. (G. O. 43, War Dept., 1906.)

69. Joint Charges. Where two or more persons jointly and in pursuance of a common intent commit a crime or offense which can be committed by a combination of persons acting in concert, they may be separately charged and tried for such crime or offense or may be jointly charged and jointly tried. The actual presence of all of the accused persons at the actual commission of the offense is not necessary, for all who take part in the enterprise are equally guilty, though they may be absent from the place of actual commission of the offense with which they are charged. The fact that justice may require that different degrees of punishment be awarded to the different parties con-

stitutes no objection to such a joint prosecution. The mere fact of their committing the same offense together and at the same time, although material as going to show concert, does not necessarily establish it. Thus the fact that several soldiers have absented themselves together without leave will not, in the absence of evidence indicating a concert of action, justify their being arraigned together on a joint charge, for they may merely have been availing themselves of the same convenient opportunity of leaving. Nor is desertion, unless in execution of a conspiracy, chargeable as a joint offense. (Digest, p. 484, II, D, 7.) In joint charges the form of the charge does not differ from that in other charges. The form of specification will read as follows:

In that Private ———, Company ———, ——— Infantry; Private ———, Company ———, ——— Infantry; and Private ———, Company ———, ——— Infantry, acting jointly, and in pursuance of a common intent, did [here allege the offense in the language prescribed where the offense is committed by only one person.]

The right of challenge may, of course, be exercised by each of the accused.

[Note: In cases of joint trials, the judge advocate will, in case a stenographer is employed, have one carbon copy of the proceedings made for each of the accused requesting the same.]

70. Charges Not to be Preferred upon Uncorroborated Confession. Charges should not be preferred for an offense unless there is some evidence other than the confession of the accused that the offense has been committed. This applies particularly in cases of fraudulent enlistment. The mere confession by the accused that he had prior service, or was under a certain disability at the time he enlisted, and concealed that fact, should not be made the basis for charges unless there is something confirming the confession. Charges should not be preferred in such cases until corroborating evidence that the offense was committed has been secured, or that, the existence of such evidence being ascertained, the necessary steps to obtain it have been taken. (See par. 225.)

71. Charges for Private Indebtedness. The military authorities will not attempt to discipline officers and soldiers for failure to pay disputed private indebtedness or claims—that is, indebtedness or a claim where, in the opinion of the military authorities, there is a genuine dispute as to the facts or law—nor will the military authorities attempt to decide such disputed indebtedness or claims. If the indebtedness is disputed the creditor should resort to the civil courts to establish the liability. If, in the opinion of the military authorities, the facts and law are undisputed and there appears to the military authorities to be a private indebtedness, and the officer or soldier does not claim to have a legal or equitable set-off or counterclaim to urge against it, an officer may be brought to trial if his failure is considered to be a violation of A. W. 95 or A. W. 96, and a soldier may be tried if his failure is considered to be a violation of A. W. 96, but no action will be taken by the military authorities to enforce payment. If an officer or soldier by his conduct in incurring the indebtedness or by his attitude toward it or his creditor thereafter reflect discredit upon the service to which he belongs, he should be brought to trial for his misconduct. If the facts and law, in the opinion of the military authorities, are undisputed and there appears to the military authorities to be no indebtedness, the department will take no further action. Where a soldier was largely indebted and failed to pay his indebtedness and the commanding officer denied the soldier all pass privileges until the indebtedness was paid, it was held that such action on the part of the commanding officer constituted an attempt to enforce payment of the indebtedness and was contrary to the policy of the War Department and such action should be revoked. (Digest, p. 878, IV.)

72. Numbering Charges and Specifications. Where there are several specific-

cations under one article, the usual procedure is to place them all under one charge, rather than to make several charges with one specification under each. Where there are several specifications under one charge they will be consecutively numbered, and where there are several charges, the charges will be consecutively numbered.

73. Additional Charges. New and separate charges which are preferred after others have been preferred are known in military law as "additional charges." Such charges may relate to past transactions which were not known by or brought to the attention of the officer framing or ordering the original charges at the time they were preferred; or they may, as is more frequent, arise from acts of the accused subsequent to his arrest or confinement on the original charges. Thus, if after charges have been preferred he commits a "breach of arrest," an additional charge will properly be preferred in the case, and should be designated as an "additional" charge. Charges of this character do not require a separate trial, but may and preferably should be tried by the same court that tries the original charges, and at the same time subject to the limitation regarding service of charges contained in A. W. 70. If practicable to consolidate the two sets of charges this should be done, otherwise the second set will be denominated "additional" charges. The accused must, however, be arraigned on the additional charges before the court is sworn to try the original charges. After the court has been duly sworn to try the original charges "additional" charges can not be tried with the original ones, but must be separately tried. (See Winthrop, pp. 225, 226.)

74. Rules to be Observed in Pleading. (a) **Statement of Charge.** The charge should be limited to a statement of the article violated, as "Violation of the 58th article of war," or "Violation of the 85th article of war." Common law and statutory crimes, not specified in the Articles of War, over which courts-martial have jurisdiction, should, if not capital, be charged under A. W. 96.

(b) **Statement of Specification.** The specification need not possess the technical nicety of an indictment. In general a bald statement of the facts in simple and concise language, and in such a manner as to enable a person of common understanding to know what is intended, is sufficient, provided the offense itself be distinctly and accurately described. More specifically, (1) the name, rank, title, and organization of the accused person, if he belongs to the Army of the United States, should be stated, or if he is a civilian he should be so described that it appears he is a person subject to military law, or by statute or the law of war, is subject to trial by military tribunals; (2) the facts that constitute the offense charged will be set out briefly but clearly, together with the place and time of commission. Care should be taken that all the elements of the offense as denounced in the article of war or other statute are set forth. The specification must be appropriate to the charge. (See Winthrop, p. 189, and authorities there cited.)

(c) **Alternative Pleading.** A specification should not allege two offenses in the alternative. For example, an offense under A. W. 84 can not be charged by the words, "did sell or through neglect lose." If, as the result of an investigation, there is doubt whether the property has been sold or lost, both offenses may be charged under separate specifications. Care will be taken in every case where an article of war includes two or more offenses to see that each specification alleges but a single offense. (See Digest, p. 487, II, D, 11, d.)

(d) **Evidence Not to be Pleaded.** It is not good pleading in alleging an offense to state the circumstances or evidence proving or tending to prove it, such as the acts, occurrences, and matters of description, which should properly form part of the testimony of witnesses; but there is no objection to

stating very briefly in the specification the immediate result or effect of the act charged as a circumstance of description illustrating the character and extent of the offense committed. For instance, in charging a striking or doing of violence to a superior officer under A. W. 64, it is allowable, in a case where the assault was fatal, to add in the specification, "thereby causing his death," as indicating the measure of violence employed. (Digest, p. 488, II, D, 14, a.)

(e) Specific Articles, When Used. When a crime or offense is specifically provided for in an article of war, the charge will be laid under that article and not under the general article, i.e., under A. W. 96. This rule is particularly to be observed when the crime or offense falls under an article which prescribes a fixed punishment. (See, however, A. W. 37.)

[Note: In charging offenses against cadets for violation of regulations of the Military Academy, the offense, if covered by a specific article applicable to cadets, will be laid under that article (G. O. 64, War Dept., 1906), otherwise it will be laid under the general article.]

(f) Forms for Charges. The forms for charges and specifications set forth in Appendix 4 cover most of the offenses that are tried by military courts and covered in the maximum-punishment order. These forms may be followed, in the cases to which they apply, but they are not mandatory.

(g) Time and Place. The allegations of the time and place of the commission of an offense should be stated as accurately as possible, but where the act or acts charged extend over a considerable period of time it may be necessary to cover such period in the allegation. Thus allegations of "from March to September, 1887," and "from May to October, 1888," have been countenanced in a case in which the accused was charged with the neglect of a duty that required continuous performance. (Digest, p. 486, II, D, 10, b.) So, also it is proper to allege that an offense was committed while "en route" between certain points. (Digest, p. 486, II, D, 9, b.) So where the exact time or place of the commission of the offense is not known it is frequently preferable to allege it as having occurred "on or about" a certain date or time, or "at or near" a certain locality, rather than to aver it as committed on a particular day or between two specified days or at a particular place. There is no defined construction to be placed upon the words "on or about" as used in the allegation of time in a specification. The phrase can not be said to cover any precise number of days or latitude in time. It is ordinarily used in military pleading for the purpose of indicating some period, as nearly as can be ascertained and set forth, at or during which the offenses charged are believed to have been committed—in cases where the exact day can not well be named. And the same is to be said as to the use of the words "at or near" in connection with the averment of place. (Digest, p. 485, II, D, 9, a.) If the specification alleges the offense to have been committed "on" a certain date or "at" a certain place, the court in its findings may, by exceptions and substitutions, find another date or place if the evidence supports such amendments, provided the new date or place is sufficiently near the one alleged that an injustice is not done the accused. In preparing several specifications under one charge, the time and place of the alleged offense will be given in each specification.

(h) Christian Name. The Christian name of an accused should be used in preparing charges, but where there are one or more middle names they may be indicated by the initials only. In the case of a person in the military service the name used in the charges should correspond to that borne by the accused on the muster rolls or the Army register.

(i) Charging under "Alias." If the accused is known by two names, as where a soldier enlists under a name different from that under which he was known in his prior enlistment, both the heading of the charge and the speci-

cation will describe him under his true name and also under his assumed name as an alias.

(j) General Prisoners. In charging a general prisoner with an offense, the form of the charge will not be changed but the specification will read as follows:

In that General Prisoner A—— B—— did [here allege the offense in the language prescribed when it is committed by an officer or soldier].

It is not necessary to allege in the specification that the general prisoner was formerly a soldier, was tried by a general court-martial, and sentenced to dishonorable discharge and a term of confinement, and that he committed the offense while serving such confinement. The words "general prisoner" necessarily import such facts.

[Note: General prisoners are persons sentenced to dismissal or dishonorable discharge and to terms of confinement at military posts or elsewhere.]

(k) Change of Rank. Where the rank of the accused has changed since the commission of an offense, the specification will read as follows:

In that Private A—— B——, Company ——, —— Infantry, then sergeant, Company ——, —— Infantry, did, etc.

(l) Written Papers and Oral Statements. A specification in alleging the violation of an order which has been given in writing, or of any written obligation—as an oath of allegiance, parole, etc.—should preferably set forth the writing verbatim, or at least state fully its substance, and then clearly specify the act or acts which constitute its alleged violation. Oral statements should be alleged in as nearly the exact words as possible, but should always be qualified by the words "or words to that effect," or some similar expression, since proof will generally vary as to some word or words, particularly if some time has elapsed since the incident. A similar rule obtains in cases involving insubordinate or disrespectful language.

(m) Scandalous and Disgraceful Offenses. In framing charges it is permissible, under the custom of the service, after alleging the facts in the specification, to add, "This to the scandal and disgrace of the military service." This form of charge is appropriate in cases of particularly disgraceful conduct occurring in the presence of a number of persons, particularly civilians, or in uniform, or otherwise resulting in publicity.

(n) Desertion Followed by Fraudulent Enlistment. Enlistment by a soldier in desertion is fraudulent. Such soldier should be charged with desertion under A. W. 58, and with fraudulent enlistment under A. W. 54. (Cir. 28, War Dept., 1908.) A fraudulent enlistment is no defense to a charge of desertion but is proof of such desertion, for a soldier can not be excused from repudiating a pending contract by substituting another in its place. In such a case the status of desertion remains, notwithstanding the deserter's presence in the military service under a fraudulent enlistment, until he surrenders as a deserter or is apprehended as such. For a single desertion followed by a fraudulent enlistment, but one specification for desertion will be preferred, in addition to the specification for fraudulent enlistment.

[Note: A. W. 29 constitutes a rule of evidence and is not a punitive article.]

(o) Larceny and Sale of Public Property. In cases of larceny of property (not described in A. W. 94) where the accused has sold the stolen property, the charges should not include specifications alleging the sale except where the same has been made to an innocent party and constitutes such a fraud upon the purchaser as to warrant the preferment of a specification based upon such fraud. Proof of a subsequent sale of stolen property goes to show intent to steal, and, therefore, evidence of such sale should be introduced to support charges of larceny, wherever available. Larceny and sale of United States property in violation of A. W. 94 should each be charged in separate specifications, since that article denounces both offenses.

(p) Wording of Statute to be Followed. Wherever practicable the exact words of the articles of war will be followed. A person under the influence of intoxicating liquor which incapacitates him mentally or physically for the proper performance of duty is "drunk." Therefore, under A. W. 85 the word "drunk" will be used. So in charging other offenses involving drunkenness no other word or phrase will be used as a substitute for "drunk." Under such charges the court should not in its findings substitute such phrases as "under the influence of intoxicating liquor" and "intoxicated" for "drunk."

SECTION II.

ACTION UPON CHARGES.

75. Submission of Charges. All charges for trial by court-martial will be prepared in triplicate, using the prescribed charge sheet as a first sheet and using such additional sheets of ordinary paper as are required. They will be accompanied—

(a) Except when trial is to be had by summary court, by a brief statement of the substance of all material testimony expected from each material witness, both those for the prosecution and those for the defense, together with all available and necessary information as to any other actual or probable testimony or evidence in the case; and

(b) In the case of a soldier, by properly authenticated evidence of convictions, if any, of an offense or offenses committed by him during his current enlistment and within one year next preceding the date of the alleged commission by him of any offenses set forth in the charges.

They will be forwarded by the officer preferring them to the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs, and will by him and by each superior commander into whose hands they may come either be referred to a court-martial within his jurisdiction for trial, forwarded to the next superior authority exercising court-martial jurisdiction over the command to which the accused belongs or pertains, or otherwise disposed of as circumstances may appear to require.

76. Investigation of Charges. If the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs or pertains decides to forward the charges to superior authority he will, before so doing, either carefully investigate them himself or will cause an officer other than the officer preferring the charges to investigate them carefully and to report to him, orally or otherwise, the result of such investigation. The officer investigating the charges will afford to the accused an opportunity to make any statement, offer any evidence, or present any matter in extenuation that he may desire to have considered in connection with the accusation against him. (See par. 225 (b), p. 1351.) If the accused desires to submit nothing, the indorsement will so state. In his indorsement forwarding the charges to superior authority the commanding officer will include:

(a) The name of the officer who investigated the charges;

(b) The opinion of both such officer and himself as to whether the several charges can be sustained;

(c) The substance of such material statement, if any, as the accused may have voluntarily made in connection with the case during the investigation thereof;

(d) A summary of the extenuating circumstances, if any, connected with the case;

(e) His recommendation of action to be taken.

77. Prompt Action Required. No person put in arrest shall be continued in confinement more than eight days, or until such time as a court-martial can be assembled. When any person is put in arrest for the purpose of trial, except at remote military posts or stations, the officer by whose order he is arrested shall see that a copy of the charges on which he is to be tried is served upon him within eight days after his arrest, and that he is brought to trial within ten days thereafter, unless the necessities of the service prevent such trial; and then he shall be brought to trial within thirty days after the expiration of said ten days. If a copy of the charges be not served, or the arrested person be not brought to trial, as herein required, the arrest shall cease. But persons released from arrest, under the provisions of A. W. 70, may be tried whenever the exigencies of the service shall permit, within twelve months after such release from arrest. (A. W. 70.)

78. Determination of Proper Trial Court. When an officer who exercises court-martial jurisdiction receives charges against an enlisted man it is his duty to consider whether they shall be tried by general, special, or summary court-martial. He should not withhold charges from trial by special or summary court solely for the reason that the maximum limit of punishment is beyond the jurisdiction of such courts to impose. On the other hand, he should not refer to a special or summary court-martial offenses which by reason of their inherent gravity or of the circumstances surrounding their commission merit greater formality of trial or more condign punishment than is found in the procedure or jurisdiction of such courts. No fixed rule can be laid down and the matter must be decided by the careful consideration of commanders subject to the limitations that while, in a proper case, desertion may be tried before a special court, felonies and crimes involving moral turpitude should not be, and capital crimes can not be, tried by special or summary courts-martial. (A. W. 18, 14. For list of capital crimes and offenses see Chap. IV, Sec. III.)

79. Disposition of Copies of Charges. (a) When trial is to be had by summary court the charges will be completed as the record of trial, a copy thereof will be completed as a copy of the summary court record for the company or other commander, and the other copy will, with the least practicable delay after action has been taken on the sentence, be completed and transmitted as the required report of trial to the officer exercising general court-martial jurisdiction over the command, there to be filed in the office of the judge advocate for a period of two years, at the end of which time it may be destroyed.

(b) When trial is to be had by special or general court-martial the charges and one copy thereof will be referred to the trial judge advocate, the copy to be furnished by him to the accused or his counsel, and the other copy will be used for record purposes in the office of the officer appointing the trial court, the top fold of this copy of the charge sheet, in case of trial by general court-martial, being detached at the proper time and forwarded with the record of trial to the Judge Advocate General of the Army.

80. Service of Charges Upon Accused. In order that the accused may have sufficient time to prepare for his defense it is provided by A. W. 70 that in time of peace no person shall, against his objection, be brought to trial before a general court-martial within a period of five days subsequent to the service of charges upon him.

CHAPTER VII. COURTS-MARTIAL—ORGANIZATION.

SECTION I.

THE MEMBERS.

81. Place of Meeting—Duties of Members. The authority appointing a general or special court-martial designates the place for holding the court, hour of meeting, the members of the court, and the judge advocate. A general or special court-martial assembles at its first session in accordance with the order convening it; thereafter, according to adjournment. Courts will be assembled at posts or stations where trial will be attended with the least expense. A member stationed at the place where the court sits is liable to duty with his command during adjournment from day to day. Subject to any instructions that may be given by the authority that appoints the court, the court will determine the hours of holding its sessions.

82. Uniform. For regulations regarding uniform to be worn by members of courts-martial, the judge advocate, the accused and witnesses, see Regulations for the Uniform of the United States Army. In any case of doubt (as where the court consists of members but recently mustered into the service), the president of the court will designate the uniform in the notice sent to members notifying them of the place and hour of meeting of the first session.

83. Seating of Court. When the court is ready to proceed it is called to order by the president. Members will be seated according to rank, alternately to the right and left of the president. The judge advocate, the accused, and his counsel are seated so as to be most easily seen and heard by all the members of the court. The reporter should be seated near the judge advocate.

84. Roll Call. At the beginning of each session the judge advocate verifies the presence or absence of the members of the court by calling each officer's name or by informally noting his presence or absence. This verification is noted in the record. (See Appendices 6, 7 for record of general and special courts-martial.) When the accused and his counsel appear before the court for the first time the judge advocate will announce their names to the court.

[Note: For number necessary to constitute a quorum of a general or special court-martial and the procedure to be taken when the number is reduced below five, see par. 7.]

85. Absence of Member. A member of a court-martial who knows, or has reason to believe, that he will, for a proper reason, be absent from a session of the court, will inform the judge advocate accordingly. When a member of a court-martial is absent from a session thereof, the judge advocate will cause that fact, together with the reason for such absence if known to him, to be shown in the record of proceedings. If the reason for such absence is not known to the judge advocate, he will cause the record to show the member as absent, cause unknown. In any event, the appointing authority will take such action, if any, relative to such absence as he may deem proper.

86. Decorum to be Observed. Trials before courts-martial will be conducted with the decorum observed in civil courts. The conduct of members should accordingly be dignified and attentive. Reading of newspapers or other evidence of inattention by members of a court-martial during its sessions constitutes a neglect of duty to the prejudice of good order and military discipline. It is the duty of the president of the court to admonish against such inattention, and charges may be preferred against a member who does not heed the

admonition. A court-martial has no power to punish its members, but a member is liable to charges and trial for improper conduct as for any other offense against military discipline. Improper words used by a member should be taken down in writing and any disorderly conduct reported to the appointing authority. During the reading of the order appointing the court and the arraignment the judge advocate, the accused, and his counsel will stand; while the court and the judge advocate are being sworn all persons concerned with the trial, including any spectators present, will stand; when the reporter, an interpreter, or a witness is being sworn he and the judge advocate will stand; and when the judge advocate, the accused, or his counsel addresses the court, he will rise. (For punishment for contempts, see Chapter X, Sec. I, par. 173.)

87. Control of Court Over Accused. A court-martial has no control over the nature of the arrest or other status of restraint of a prisoner except as regards his personal freedom in its presence. For the relation between a court-martial and the accused during trial as regards arrest, see Chapter V, Section I.

88. Accused Not to be Tried in Irons. The accused should not be brought before the court in irons, unless there are good reasons to believe that he will attempt to escape or to conduct himself in a violent manner, but the fact that a prisoner has been tried in irons can not in any case affect the validity of the proceedings.

89. Duties of the President. A president of the court will not be announced. The officer senior in rank present will act as such. The president does not by virtue of being such exercise command of any kind. He is in no sense the commanding officer of the court, and can not by virtue of being president give an order to a member. As the organ of the court he gives the directions necessary to the regular and proper conduct of the proceedings; but a failure to comply with a direction given by him, while it may constitute a neglect to the prejudice of good order and military discipline, can not properly be charged as a violation of the sixty-fourth article of war. (Digest, p. 508, VI, G, 3.) Neither the court nor the president is authorized to place the judge advocate in arrest. Only the proper commanding officer can impose an arrest. It is the duty of the commanding officer to secure the attendance of the accused before the court. (Digest, p. 509, VII, C, 2; id., VII, C, 3.) The president is the presiding officer of the court, and as such is the organ of the court to maintain order and conduct its business. In addition, he has the duties and privileges of other members. He has an equal vote with other members in deciding all questions, including challenges, findings, sentences, acquittal, and adjournments. He speaks and acts for the court in every instance where a rule of action has been prescribed by law, regulations, or its own resolution, and has no authority to open or close the court or make a ruling upon the admissibility of evidence, the competency of witnesses, or method of procedure without the acquiescence of the court or by custom of the service. He administers the oath to the judge advocate and authenticates by his signature all acts, orders, and proceedings of the court requiring it. (See Winthrop, p. 249.) It is his duty to take the proper steps to insure prompt trial and disposition of all charges referred for trial and to keep the court advised thereof.

[Note: For duty of the president to explain to the accused the effect of a plea of guilty, see Chap. IX, Sec. II, "Pleas to the general issue."]

90. Voting. Members of a general or special court-martial, in giving their votes, shall begin with the junior in rank. (A. W. 31.) In all deliberations, including those on challenges, findings, sentence, acquittal, and adjournments, the law secures the absolute equality of the members, the president having no greater rights in such matters than any other member. A tie vote on the findings is a vote of "not guilty"; a tie vote on a proposed sentence or on a

challenge or any objection or motion is a vote in the negative. The sentence is not adopted and the challenge, objection, or motion is not sustained. When the offense charged includes a minor offense, voting shall first be had upon the major offense.

All convictions and sentences (other than those involving death), whether by general or special court-martial, may be determined by a majority of the members present. (A. W. 43.) Refusal to vote on any question arising during the proceedings constitutes a neglect to the prejudice of good order and military discipline punishable under A. W. 96. (For voting on findings and sentence, see Chap. XII, Sec. II.)

91. Closed Sessions. Members take an oath not to disclose or discover the vote or opinion of any particular member of the court-martial. (See A. W. 19.) In order to avoid disclosing or discovering such vote or opinion the court is closed while voting upon any question. When the court is closed all persons (including the judge advocate) withdraw. In important cases, where delay would ensue due to the number of spectators present, the court itself may withdraw to another room prepared for the purpose for deliberating in closed session. It is not necessary, however, for the court to go into closed session in every case requiring action, where such action would be unanimous and business can properly be transacted without disclosing the vote or opinion of any member. Thus, on a request by the judge advocate or the accused for a short recess, it is proper for the president to announce "without objection, the request will be granted," or words to that effect. Similarly, if the accused objects to a member because he preferred the charges and is the accuser and the member admits the fact, he may be excused without going into closed session. Care will be taken in such cases that no votes are taken in open session. If any member believes the matter should be passed upon in closed session, it is proper for him to move that the court be closed, whereupon the president will announce that the court will be cleared.

92. Sitting with Closed Doors. A court-martial is authorized, in its discretion, to sit with doors closed to the public. Except, however, when temporarily closed for deliberation, courts-martial in this country are almost invariably open to the public during a trial. But in a particular case where the offenses charged were of a scandalous nature, it was recommended that the court be directed to sit with doors closed to the public. (Digest, p. 516, IX, C.)

93. Change in Membership. Although it is undesirable to change the membership of a court during a trial it is within the discretion of the appointing officer in a proper case, to relieve members or appoint new members. The promotion of a member during the trial of a case does not affect his competency as a member. He should sit according to his changed rank. The rule is that no member who has been absent during the taking of evidence shall thereafter take part in the trial; but the nonobservance of this rule shall not be construed as invalidating the proceedings of courts-martial if no objection is made, and the court permits the member to sit. The rule, however, should be complied with when practicable. Especially should a member who has been absent during an important part of the proceedings not be permitted to resume his seat. Where a member who has been absent is permitted to resume his seat, or a new member is added after the trial of the case has begun, all proceedings and evidence during his absence should be read over to him in open court before the case proceeds further and the record should show this fact; but in proceedings in revision the presence of any member who did not vote on the findings and sentence will invalidate the proceedings in revision.

SECTION II.

THE JUDGE ADVOCATE.

94. Selection. The prompt, speedy, and thorough trial of a court-martial case is principally dependent upon the judge advocate. He will, accordingly, be carefully selected. Where it can be avoided, no officer will be detailed as judge advocate of a general court-martial until he has had experience as a member or as an assistant judge advocate of a court.

95. General Duties. The judge advocate of a general or special court-martial shall prosecute in the name of the United States, and shall, under the direction of the court, prepare the record of its proceedings. (A. W. 17.) Before the court assembles the judge advocate will obtain a suitable room for the court, see that it is in order, procure the requisite stationery, summon necessary witnesses, make a preliminary examination of the latter, and, as far as possible, systematize his plans for conducting the case. During the trial he executes all orders of the court; reads the appointing order and any modifying orders to the accused; swears the members of the court, the reporter, interpreter, and all witnesses; arraigns the accused; examines witnesses; keeps or superintends under the direction of the court, the keeping of a complete and accurate record of the proceedings; and affixes his signature to each day's proceedings. Whenever the court adjourns to meet at the call of the president; the judge advocate will notify the members of the time designated by the president for reassembling. In conjunction with the president of the court, he authenticates the record by his signature and, at the end of the trial, transmits the same to the reviewing authority. In case the record can not be authenticated by the judge advocate by reason of his death, disability, or absence, it shall be signed by the president and an assistant judge advocate, if any; and if there be no assistant judge advocate, or in case of his death, disability or absence, then by the president and one other member of the court. (A. W. 33.)

96. Duty Toward Accused. Should the accused, for any reason, not be represented by counsel, the judge advocate shall, from time to time throughout the proceedings, advise him of his legal rights. (A. W. 17.) He should—

- (a) Acquaint the prisoner with the accusations against him;
- (b) Inform him of his right to have counsel;
- (c) Inform him of his right to testify in his own behalf; and
- (d) Inform him of his right to have a copy of the charges.

He may ask a prisoner how he intends to plead, but he should in no case try to induce him to plead guilty, or leave him to infer that if he does so his punishment will be lighter. (Winthrop, p. 293.) When the accused determines to plead guilty the judge advocate should advise him of his right to introduce evidence in explanation of his offense, and should assist him in securing it. During the trial he will see that the accused has full opportunity to interpose such pleas and make such defense as may best bring out the facts, the merits, or the extenuating circumstances of his case. In so far as such action may be taken without prejudice to the rights of the accused, any advice given him by the judge advocate should be given or repeated in open court and noted upon the record.

97. Examination of Charges. The judge advocate will note and report to the convening authority any irregularity in the order convening the court and see that the charges are technically and correctly drawn. He may ordinarily correct obvious mistakes of form, or slight errors in names, dates, amounts, etc., but he will not, without the authority of the convening officer, make substantial amendments in the allegations, or—least of all—reject or withdraw a charge or specification or substitute a new and distinct charge for one trans-

mitted to him for trial by the proper superior. (Digest, p. 496, IV, B, 1.) It is the duty of the president as well as the judge advocate of every court-martial to examine carefully the indorsement on the charges when referred for trial in order that an accused may not be brought to trial before the wrong court.

98. Whole Truth to be Presented. Throughout the trial the judge advocate should do his utmost to present the whole truth of the matter in question. He should oppose every attempt to suppress facts or to distort them, to the end that the evidence may so exhibit the case that the court may render impartial justice.

99. Legal Adviser of the Court. While the court is in open session the judge advocate should respectfully call the attention of the court to any apparent illegalities in its action, and to any apparent irregularities in its proceedings. He should act as legal adviser of the court so far as to give his opinion upon any point of law arising during the trial, when it is asked for by the court, but not otherwise. (See, however, par. 197, p. 1339.) When his legal advice or assistance is required it will be obtained in open court. In case the accused desires to plead guilty the judge advocate will, whenever necessary, invite the attention of the president of the court to the fact that the effect of such plea must be explained to him. (See Chap. IX, Sec. II, "Pleas to the general issue.")

100. Freedom in Conducting Case. The judge advocate should be left free by the court to introduce his evidence in such order as he sees fit, and in general to bring cases to trial in such order as he deems expedient. (Winthrop, pp. 281-283.) But while it is not the province of the court to direct or control the judge advocate in his prosecution of the case, it is responsible for the thorough investigation of the case, and need not content itself with the evidence brought out by the prosecution and defense. It is proper for the court as a body or for any member to ask questions of a witness if it is believed the examination already submitted has failed fully to develop the case. Usually such questions are not asked until after the prosecution and defense have fully completed their examination of the witness. The court may direct that the judge advocate recall a witness, secure the attendance of a particular witness, or that he introduce evidence on a particular point. It is the duty of the court to take such action if it believes that thereby the facts in the case will be more clearly presented.

101. Closed Sessions. Whenever a general or special court-martial shall sit in closed session, the judge advocate and the assistant judge advocate, if any, shall withdraw; and when their legal advice or their assistance in referring to the recorded evidence is required, it shall be obtained in open court and in the presence of the accused and of his counsel if there be any. (A. W. 30.) If through mistake or inadvertence the judge advocate should be present during the whole or a part of a closed session of the court, such irregularity is, subject to the provisions of A. W. 37, ground for a disapproval of the proceedings by the reviewing authority, but it does not deprive the court of jurisdiction and courts of the United States do not interfere in such a case to release a prisoner by writ of habeas corpus. (Ex parte Tucker, 212 Fed. Rep., 569; see also A. W. 37.)

102. Accuser or Prosecutor. The judge advocate is not challengeable; but in case of personal interest in the trial or of personal hostility toward the accused he should apply to the convening authority to be relieved.

103. Expediting Trials. Charges to be tried by a general or special court-martial are referred to the judge advocate of the court. It is his duty to bring them to trial promptly. In most cases tried by court-martial the facts are few and simple, and the witnesses are officers or soldiers stationed at the

post where the trial is had. Usually the members of the court, judge advocate, and accused and his counsel are stationed at the same post. In such cases the preliminary investigation, reference for trial, and the trial should take place promptly. If the other official duties of the judge advocate and counsel do not leave time to prepare cases properly and to bring them to trial promptly the president will advise the commanding officer with a view to their being relieved from other duties.

104. Weekly Reports. On Saturday of each week each judge advocate of a general court-martial will report, through the president of the court and the commanding officer, to the appointing authority, a list of charges on hand, showing the date of receipt of each; and if any case has been in the hands of the judge advocate for one week or more and the record of trial has not been forwarded to the convening authority, the report will include a statement of the reasons for the delay. No record need be made of this report by the president of the court or the commanding officer.

105. Detail of Orderly. The commanding officer will detail, when necessary, suitable soldiers as clerks or orderlies to assist the judge advocate of a general or special court-martial or military commission, or the recorder of a court of inquiry.

SECTION III.

ASSISTANT JUDGE ADVOCATE.

106. Appointment. The authority appointing a general court-martial shall appoint one or more assistant judge advocates when necessary. (A. W. 11.) An assistant judge advocate of a general court-martial shall be competent to perform any duty devolved by law, regulation, or the custom of the service upon the judge advocate of the court. (A. W. 116.)

107. Duties. An assistant judge advocate will perform such duties in connection with the trial as the judge advocate may designate. Ordinarily he will be expected to relieve the judge advocate of minor details, such as arranging for a place of meeting of the court, stationery, and messenger service, stenographers and interpreters, subpoenaing witnesses, and notifying the court of the place and hour of meeting. During trial he will be expected to see that witnesses are on hand when needed, that all details of procedure are observed and the record accurately kept. He may also be intrusted by the judge advocate with the investigation before trial and proof during trial of any special phase of the charges, or he may, where the judge advocate is otherwise engaged, take charge of the complete trial of a case. (See also A. W. 33.) While the judge advocate and assistant judge advocate will ordinarily be present during trial, if their duties require the presence of either of them elsewhere, he may be excused by the court; but the fact of his withdrawal or absence, the reason therefor, and his return to the court will be noted in the record. (See form for record of a general court-martial, Appendix 6.)

Wherever in this Manual the judge advocate of a general court-martial is mentioned, the term will be understood to include assistant judge advocates, if any, unless the context shows clearly that a different sense is intended.

SECTION IV.

COUNSEL.

108. Appointment. The accused shall have the right to be represented before a general or special court-martial by counsel of his own selection, for his defense, if such counsel be reasonably available. (A. W. 17.) Civilian counsel

will not be provided at the expense of the Government. (Digest, p. 506, V, G, 5.) Should the accused request the appointment as his counsel of an officer stationed at the station where the court sits, and such officer be not a member of the court, the commanding officer will appoint such officer as counsel if he is reasonably available. Should the commanding officer decide that the officer desired by the accused is not reasonably available, the accused may appeal to the officer appointing the court, whose decision shall be final. If the counsel desired by the accused is not under the control of the commanding officer where the trial is held, application for counsel will be submitted by the accused in writing to the appointing authority, whose decision as to whether the officer desired is "reasonably available" is final. Officers of the Judge Advocate General's Department are not available for appointment as counsel for the defense in trials by courts-martial.

109. Duty of Officer as Counsel. An officer acting as counsel before a general or special court-martial should perform such duties as usually devolve upon the counsel for a defendant before civil courts in criminal cases. He should guard the interests of the accused by all honorable and legitimate means known to the law, but should not obstruct the proceedings with frivolous and manifestly useless objections or discussions.

110. Right to Interview the Accused. An accused, even if in close arrest, will be allowed to have such interviews with his counsel, military or civil, as may be required in order to prepare his defense. Counsel will also be permitted to have interviews with any other person who may be a witness for the accused, or whose knowledge of facts may be useful to the accused in preparing for trial.

111. Witnesses, How Questioned During Trial. If the judge advocate personally prepares the record the counsel will be required to reduce his questions and arguments to writing; but if the court has a stenographic reporter, the counsel will be allowed to question witnesses and address the court orally.

SECTION V.

REPORTER.

112. Employment. Under such regulations as the Secretary of War may from time to time prescribe, the president of a court-martial or military commission, or a court of inquiry, shall have power to appoint a reporter, who shall record the proceedings of and testimony taken before such court or commission and may set down the same, in the first instance, in shorthand. (A. W. 115.) Reporters will be employed only when authorized by the appointing authority. They will not be authorized for special courts-martial, except when the appointing authority directs that the testimony be reduced to writing.

[Note: For form of oath for reporter see par. 135.]

113. Compensation—Decisions. The reporter shall be paid at the following rates of compensation by the Quartermaster Corps on vouchers certified to be correct by the judge advocate or recorder:

(a) For each case not to exceed \$1 an hour for time actually spent in court during the trial or hearing, except when the court or commission sits less than three hours during the first day, when the allowance for such day shall be \$3. Time will be reckoned to the nearest half of an hour.

(b) Fifteen cents for each 100 words for transcribing notes and making that portion of the original record which is typewritten; but no allowance shall be made for the first carbon copy of that portion of the record which is typewritten or for original papers which are appended as exhibits.

(c) Ten cents for each 100 words for copying papers material to the inquiry, and 2 cents for each 100 words for each carbon copy of the same, when ordered by the court or commission for its use.

(d) Two cents for each 100 words for the second and each additional carbon copy of the record when authorized by the convening authority.

(e) Except for such part of the journey as may be covered by Government transportation, mileage at the rate authorized for a civilian witness not in Government employ and \$3 a day for expenses when the judge advocate or recorder keeps him, at his own expense, away from his usual place of employment for twenty-four hours or more, on public business referred to the court or commission, shall be allowed the reporter for himself, and, when ordered by the court or commission, for each necessary assistant.

(f) When a stenographic reporter is authorized for a special court-martial only one copy of the proceedings will be required, and for transcribing notes and making that part of the record of a trial by special court-martial which is typewritten, the reporter, other than an enlisted man, shall receive 13 cents for each 100 words.

[Note: The following decisions regarding compensation of reporters will be observed in preparing vouchers:

(a) The payment to a reporter of \$3 for each case completed by him is not authorized when more than one case is disposed of in one day, each case requiring less than three hours in which to be completed, but simply guarantees the reporter at least \$3 for each day that the court or commission sits when a new case is taken up for that day. (Cir. 81, War Dept., 1908.)

(b) In determining the period for which a reporter is entitled to the allowance of \$3 a day for expenses when kept away from his usual place of employment time should be counted from the date on which he is required to leave his usual place of business by the terms of his employment to the date of his return thereto, provided there be no unnecessary delay in the travel to and from the place where the court meets. (Par. 1244, Manual Q. M. Corps, 1916.)

(c) The fact that a reporter returns each night to his home does not preclude the view that he was kept away from his place of business for 24 hours. He is not, however, entitled to mileage for such journeys unless the sessions of the court are held on nonconsecutive days. (Op. J. A. G., Sept. 7, 1910.)

(d) A reporter serving two separate courts-martial on the same day is entitled to have his allowances (except mileage) computed separately for each court. (Op. J. A. G., Oct. 13, 1910.)

(e) A reporter duly employed, but who, after arrival at court, performs no service, owing to adjournment, is entitled to mileage, \$3 for constructive service, and also to the additional \$3 if kept away from place of business for 24 hours. (Op. J. A. G., Feb. 18, 1911; June 4, 1914.)

(f) The abbreviations "Q.," standing for the word question, and "A.," standing for the word answer, and all dates as "25th" and "1914" will each be counted as one word. Punctuation marks will not be counted as a word. It is not necessary for the judge advocate to count the actual number of words on every page to justify him in certifying the account of the reporter. He may ascertain the total number of words by counting the words on a sufficient number of pages to enable him to ascertain a fair average of the number of words on a page and then ascertain the total by multiplying this average by the number of pages. (Op. J. A. G., Oct. 22, 1909; Feb. 8, 1915.)]

114. **Disposition of Vouchers.** The original voucher for payment of the reporter will be properly completed and certified by the judge advocate and

will be sent for payment to the nearest disbursing quartermaster. A carbon copy of the voucher will be forwarded with the record for the information of the appointing authority.

[Note: For form of voucher for payment of reporter, see Appendix 18.]

115. Detail of Soldier. A soldier may be detailed to serve as a stenographic reporter for general courts-martial, courts of inquiry, and military commissions, and while so serving shall receive extra pay at the rate of not exceeding five cents for each one hundred words taken in shorthand and transcribed, such extra pay to be met from the annual appropriation for expenses of courts-martial. (Act of Aug. 25, 1912, 37 Stat., 575.) Such detail will be made only when a reporter is authorized by the appointing authority.

116. Time Limit for Completing Record. The judge advocate or recorder shall require the reporter to furnish the typewritten record of the proceedings of each session of the court or commission (together with one carbon copy of the same) not later than twenty-four hours after the adjournment of that session. The complete record will be finished, indexed, bound, and ready for authentication not later than forty-eight hours after the completion of its action by the court or commission on the merits of the case or hearing.

117. Carbon Copies of the Record. Whenever a record of a trial of general court-martial is to be typewritten by a reporter, the judge advocate will inform the accused of his right to demand a copy of the record, and will require of him a statement as to whether or not he desires a copy. If the answer be in the affirmative the judge advocate will cause the reporter to prepare a carbon copy; this copy will be turned over to the accused, and the judge advocate will note on the index sheet of the record, "Carbon copy of record of trial furnished the accused." (See form for record of general court-martial, Appendix 6.)

In joint trials a sufficient number of carbon copies should be prepared to enable one to be furnished each accused if required.

118. Extra Compensation for Clerical Duties. No person in the military or civil service of the Government can lawfully receive extra compensation for clerical duties performed for a military court except as provided in paragraph 115, *supra*. (A. R. 987.)

SECTION VI.

INTERPRETER.

119. Employment and Pay. Under such regulations as the Secretary of War may from time to time prescribe, the president of a court-martial or military commission, or court of inquiry, or a summary court, may appoint an interpreter, who shall interpret for the court or commission. (A. W. 115.) Interpreters may be employed whenever necessary without application to the appointing authority. They will be allowed the pay and allowances of civilian witnesses, which will be paid by the Quartermaster Corps on vouchers certified by the judge advocate or recorder.

[Note: For oath of interpreter see par. 136.]

CHAPTER VIII. COURTS-MARTIAL—ORGANIZATION.

SECTION I.

CHALLENGES.

120. Occasion For. The composition of the court-martial having been made known to the accused by the reading of the appointing order, together with any orders which have operated to modify the composition of the court as originally constituted, he is asked by the judge advocate whether he objects to being tried by any member present named in the order and modifying orders. If his reply be in the negative, the court and judge advocate are sworn; if, on the other hand, the accused has objection to a member, he exercises his right in this respect by challenging, in turn, each member to whom he objects. Members of a general or special court-martial may be challenged by the accused, but only for cause stated to the court. The court shall determine the relevancy and validity thereof, and shall not receive a challenge to more than one member at a time. (A. W. 18.) Neither a summary court officer nor the judge advocate of a general or special court-martial is subject to challenge. (Digest, p. 502, IV, N; Davis, p. 85, n. 3.)

[Note: The various classes of challenges recognized at common law have been practically reduced in courts-martial practice to two, viz., (1) principal challenges, or those where the member must be excused upon proof of the ground for challenges as alleged; (2) for favor, where the court must decide whether the facts proved constitute cause to excuse the member.]

121. Grounds for Challenge. (a) Principal Challenges. In the following cases a member will be excused when challenged upon proof of the fact as alleged:

(1) That he sat as a member of a court of inquiry which investigated the charges.

(2) That he has personally investigated the charges and expressed an opinion thereon, or that he has formed a positive and definite opinion as to the guilt or innocence of the accused.

(3) That he is the accuser.

(4) That he will be a witness for the prosecution.

(5) That (upon a rehearing of the case) he sat as a member on the former trial.

(6) That, in the case of the trial of an officer, the member will be promoted by the dismissal of the accused.

(7) That he is related by blood or marriage to the accused.

(8) That he has a declared enmity against the accused.

(b) Challenges for Favor. Where prejudice, hostility, bias, or intimate personal friendship are alleged it is for the court, after hearing the grounds for challenging stated and the reply, if any, of the challenged member, as well as any other evidence presented, to determine whether the grounds stated and proved or admitted are sufficient in fact to disqualify a challenged member.

122. Challenge of New Member. Where new members join or are added to the court after its organization the order detailing such new members should be read to the accused and he should be given full opportunity to challenge. The record will show affirmatively that the right has been accorded the accused to challenge every member of the court.

123. Challenge by Judge Advocate. There is no statutory authority for a

challenge by the judge advocate, but under the custom of the service after the accused has fully exercised his right of challenge the judge advocate may also challenge for cause in the same manner as the accused. (Digest, p. 502, IV, O.)

124. Member Can Not Challenge. There is no authority of law or custom of the service for a member of a court-martial to challenge another member, but where one member has knowledge of the fact that another is the accuser in the case or will be a witness for the prosecution he will bring the fact to the attention of the court in order that proper action may be taken. (See par. 129, below.)

125. Procedure Upon Challenges. A positive declaration by a member challenged on the ground of prejudice or interest that he is not prejudiced against the accused nor interested in the case is ordinarily satisfactory to the accused, and, in the absence of material evidence in support of the objection, will justify the court in overruling it. If, however, the statement is unsatisfactory, or the member makes no response, the accused may offer testimony in support of his challenge or may subject the challenged member to an examination under oath as to his competency as a member. In such a case the judge advocate administers the oath to the challenged member. The accused and other witnesses may be cross-examined, witnesses may be introduced in rebuttal by the judge advocate and arguments may be made. The whole proceedings will, in the case of a general court-martial, appear in the record. During the deliberation of the court the challenged member will withdraw. If but four members remain they may pass upon the challenge. (See Chap. II, Sec. II.)

[Note: For form of oath to be administered to a challenged member see par. 137.]

126. Member Disqualified But Not Challenged. In the absence of a challenge the court of itself can not excuse a member from sitting on the trial of a case, but a member not challenged, who thinks himself disqualified for reasons other than those indicated in paragraph 129, below, may announce in open court his supposed disqualification, in order that he may be challenged; or he may apply to the appointing authority to be relieved.

127. Waiver of Objection. The rule is that challenges should be made before the arraignment, and if an objection to the competency of a member was known at that time and not made, it will be considered as waived; but if the cause of a member's incompetency was not known at the time of arraignment or did not arise until later, the court will entertain a challenge based on such cause, at any stage of the proceedings.

128. Liberality Required. Courts should be liberal in passing upon challenges, but they will not entertain an objection that is not specific, and they should be reluctant to sustain one upon the mere assertion of the accused, except where it is admitted by the challenged member.

129. Member as Accuser or Witness for the Prosecution. No officer shall be eligible to sit as a member of a general or special court-martial when he is the accuser or a witness for the prosecution. (A. W. 8, 9.) After the accused is brought before the court, preferably before the court is sworn, any member thereof who is or believes himself to be the accuser in the case will formally announce that fact to the court, whereupon he will be excused. When the accused, his counsel, the judge advocate, or any member of the court, at any time before the finding, shall have reason to believe that any member thereof is the accuser in the case, or may be called as a witness for the prosecution, such belief shall be communicated to the court, and, if the court, after hearing the facts, find that such member is the accuser or is to be called as a witness for the prosecution, he shall be excused. If at any stage of the proceedings prior to the findings any member of the court be called as a witness for the

prosecution, he shall, before qualifying as a witness, be excused from further duty as a member.

130. Member Signing Charges—When Accuser. Whether or not an officer is the accuser in a particular case is a question of fact. If, notwithstanding his ineligibility, he does sit as a member of a general or special court-martial, the proceedings are necessarily invalid. (A. W. 8, 9; Op. J. A. G., Oct. 11, 1913; id., Nov. 13, 1913, Bull. 38, War Dept., 1913, p. 6.) An officer may be ordered by superior authority to prefer and sign a charge. The action of the officer preferring and signing the charge may be purely ministerial and represent no conviction whatever on his part that an offense has been committed, or that if an offense has been committed it was committed by the person charged. In such a case the accuser is not, in fact, the officer signing the charge, but the officer who directs the preparation and signing of the charge. The former is, therefore, not within the prohibition of the statute. The officer who has signed the charge in a particular case is, however, *prima facie*, the accuser in that case, and therefore ineligible to sit as a member of the trial court. (Op. J. A. G., Feb. 20, 1914, Bull. 8, War Dept., 1914, p. 6.) If in such a case the court should decide that he is eligible, all the evidence upon which the court reached its decision will, in the case of a general court-martial, be made of record, and in the case of a special court-martial the record will show that evidence touching the eligibility of the officer was heard by the court and the finding arrived at thereon.

131. Member of Court as Witness. (a) For the Prosecution. No officer shall be eligible to sit as a member of a general or a special court-martial who is a witness for the prosecution. (A. W. 8, 9; Bull. 38, War Dept., 1913, p. 6.) In any case where the proceedings of a court are invalidated by reason of the failure to excuse a member who is the accuser or a witness for the prosecution a new trial may be ordered. (Bull. 8, War Dept., 1914, p. 8.)

(b) For the Defense. The fact that a member is a witness for the defense will not necessarily disqualify him to sit as a member of the court, and the fact that such a witness sits throughout the trial as a member of the court will not in any way affect the validity of its proceedings.

(c) When Called by Court. Whether a member called as a witness by the court is to be considered as a witness for the prosecution depends on the character of his testimony, which should be carefully considered before a conclusion is reached that he is not. In any case of doubt he should be excused from further participation in the trial as a member. (Op. J. A. G., Nov. 20, 1913.)

(d) When Accused Pleads Guilty. When a member is a witness to any charge or specification to which the accused pleads guilty and he is not called as a witness for the prosecution to any other charge or specification, he is not disqualified from sitting as a member. (Op. J. A. G., Nov. 19, 1914, Bull. 52, War Dept., 1914, p. 3.)

SECTION II.

OATHS.

132. Oath of Members. (a) The challenges having been disposed of, the judge advocate of a general or special court-martial shall administer to the members of the court, before they proceed upon any trial, the following oath or affirmation (A. W. 19):

You, A. B., do swear (or affirm) that you will well and truly try and determine, according to the evidence, the matter now before you, between the United States of America and the person to be tried, and that you will duly administer justice, without partiality, favor, or affection, according to the

provisions of the rules and articles for the government of the Armies of the United States, and if any doubt should arise, not explained by said articles, then according to your conscience, the best of your understanding, and the custom of war in like cases; and you do further swear (or affirm) that you will not divulge the findings or sentence of the court until they shall be published by the proper authority, except to the judge advocate and assistant judge advocate; neither will you disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof as a witness by a court of justice in due course of law. So help you God.

(b) In case of affirmation the closing sentence of adjuration will be omitted.

(c) When more than one case is tried by the same court, the oath must be administered anew for each case.

(d) The oaths or affirmations prescribed in A. W. 19 for the members, the judge advocate, a witness, and others will always be administered, but in addition there may be such additional ceremony or acts as will make the oath or affirmation binding on the conscience of the person taking it.

(e) For decorum to be observed during the administration of oaths, see Chapter VII, Section I.

133. Oath of Judge Advocate. When the oath or affirmation has been administered to the members of a general or special court-martial, the president of the court shall administer to the judge advocate and to each assistant judge advocate, if any, an oath or affirmation in the following form (A. W. 19):

You, A. B., do swear (or affirm) that you will not divulge the findings or sentence of the court to any but the proper authority until they shall be duly disclosed by the same. So help you God.

134. Oath of Witness. (a) All persons who give evidence before a court-martial shall be examined on oath or affirmation in the following form (A. W. 19), administered by the judge advocate:

You swear (or affirm) that the evidence you shall give in the case now in hearing shall be the truth, the whole truth, and nothing but the truth. So help you God.

(b) If either the judge advocate or assistant judge advocate is to testify, the oath or affirmation will be administered by the other or by the president.

135. Oath of Reporter. (a) Every reporter of the proceedings of a court-martial shall, before entering upon his duties, make oath or affirmation in the following form (A. W. 19), administered by the judge advocate:

You swear (or affirm) that you will faithfully perform the duties of reporter to this court. So help you God.

(b) For authority for hiring reporters, and compensation, see Chapter VII, Section V.

136. Oath of Interpreter. Every interpreter in the trial of any case before a court-martial shall, before entering upon his duties, make oath or affirmation in the following form (A. W. 19), administered by the judge advocate:

You swear (or affirm) that you will truly interpret in the case now in hearing. So help you God.

137. Oath to Test Competency. When a member of a general or special court-martial is challenged and it is desired to question him regarding his eligibility to sit as a member in the trial of a case, the judge advocate will administer to him the following oath:

You swear that you will true answers make to questions touching your competency as a member of the court in this case. So help you God.

138. Oaths for Administrative Purposes. (a) Any officer or clerk of any of the departments lawfully detailed to investigate frauds on, or attempts to defraud, the Government, or any irregularity or misconduct of any officer or

agent of the United States, and any officer of the Army, Navy, Marine Corps, or Revenue-Cutter Service detailed to conduct an investigation, and the recorder, and if there be none the presiding officer, of any military, naval, or Revenue-Cutter Service board appointed for such purpose, shall have authority to administer an oath to any witness attending to testify or depose in the course of such investigation. (R. S. 183, as amended by the act of Feb. 13, 1911, 36 Stat., 898.)

(b) Any judge advocate or acting judge advocate, the president of a general or special court-martial, any summary court-martial, the judge advocate or any assistant judge advocate of a general or special court-martial, the president or the recorder of a court of inquiry or of a military board, any officer designated to take a deposition, any officer detailed to conduct an investigation, and the adjutant of any command shall have power to administer oaths for the purposes of the administration of military justice and for other purposes of military administration; and in foreign places where the Army may be serving shall have the general powers of a notary public or of a consul of the United States in the administration of oaths, the execution and acknowledgment of legal instruments, the attestation of documents, and all other forms of notarial acts to be executed by persons subject to military law. (A. W. 114.)

SECTION III.

CONTINUANCES.

139. Authority For. A court-martial may, for reasonable cause, grant a continuance to either party for such time and as often as may appear to be just. (A. W. 20.) If before the first meeting of the court a continuance is deemed necessary by either party, application therefor should be made to the appointing authority, but if made after assembling the application will be made to the court. When application is made to the court for an extended delay which appears to be well founded, it may be referred to the appointing authority in order that he may determine whether the court should grant it or whether he should dissolve the court.

140. Reason for Application to be Stated. The party desiring a continuance must state the reasons upon which his application is based. When it is desired because of the absence of a witness he should distinctly show that the witness is material, that he has used due diligence to procure the testimony or attendance of the witness, and that he has reasonable ground to believe that he will be able to procure such testimony or attendance within a reasonable time, which time shall be stated.

141. Number of Continuances. The number of continuances which may be granted is not limited, but where extended delays will ensue the court will be justified in exacting proof of due diligence on the part of the party requesting the same, and may even require the reasons to be stated under oath if it has reason to suspect that the intention is merely to delay the proceedings.

SECTION IV.

COMPLETION OF ORGANIZATION.

142. When Accomplished. The court having met, the accused and his counsel having been introduced, the reporter sworn, the convening order read, the right of challenge accorded, and the court and judge advocate sworn, the organization of the court is complete for the trial of the case.

CHAPTER IX.

COURTS-MARTIAL—PROCEDURE DURING TRIAL.

SECTION I.

ARRAIGNMENT.

143. When Made. On the swearing in of the members and the judge advocate, the organization of the court is complete for the trial of the charges in the case then before the court. In each case tried by the court the appointing order must be read anew, a new opportunity to challenge must be given, and the members, judge advocate, reporter, and interpreter must be sworn anew. In each case the proceedings must be complete without reference to any other case.

144. Procedure. The court being organized, and both parties ready to proceed, the judge advocate will read the charges and specifications, separately and in order, to the accused and ask him how he pleads to each. The order pursued, in case of several charges or specifications, will be to arraign on the first, second, etc., specifications to the first charge, then on the first charge, and so on with the rest. The reading of the charges and specifications and the pleas of the accused in answer thereto constitute the arraignment of the accused. In reading the charges the judge advocate will also read the name and rank of the officer preferring them.

[For decorum to be observed during the arraignment see par. 86.]

SECTION II.

PLEAS.

145. Kinds of Pleas. In court-martial procedure the usual pleas are the following: (a) Pleas to the jurisdiction; (b) pleas in abatement; (c) pleas in bar of trial; and (d) pleas to the general issue. The first three mentioned are also known as special pleas. These pleas should be made in the order named. (Dudley, p. 93; Bouvier's Law Dictionary, Rawle, 3d Rev., p. 2603.)

146. Plea to the Jurisdiction. A plea to the jurisdiction denies the right of the court to try the case. The following are grounds for a plea to the jurisdiction of a court:

(a) That it was appointed by an officer who did not have the legal authority to do so (see Chap. III, Courts-martial—By whom appointed);

(b) That it is composed wholly or in part of members not authorized by law to sit upon such court-martial (see Chap. II, Courts-martial—Composition);

(c) That the accused is not subject to its jurisdiction (see Chap. I, Persons subject to military law); or

(d) That it has not legal power to try the offense charged (see Chap. XVII, Punitive articles).

A plea to the jurisdiction, if well grounded and sustained by the court, bars further prosecution before the court. If well grounded and not sustained by the court, the proceedings may be disapproved by the appointing authority, or, even though approved, may be reviewed on writ of habeas corpus by a United States court, which will cause the proceedings to be set aside as illegal and void. Waiver of objection will never avail to confer jurisdiction upon a court not legally possessing it, even though the accused fails to submit a plea to the jurisdiction at the proper time.

147. Plea in Abatement. A plea in abatement is based upon some defect in

the charge or specification and is one that operates merely to delay the trial, such as an error in the name, rank, or organization of the accused or in the allegation as to time and place in the specification. An accused who submits a plea in abatement must show how the error may be amended. When a plea in abatement is sustained, the judge advocate will correct the charge and specification objected to so as to meet the objection, and the trial will proceed on the corrected charges. To enable him to make the correction a continuance may be granted. Matters which might have been objected to by a plea in abatement will be considered as waived by pleading to the general issue.

148. Plea in Bar of Trial. A plea in bar of trial, if sustained, is a substantial and conclusive answer to the charge or specification to which it is addressed. Such a plea may be made on the grounds set forth in pars. 149, 150, and 151.

149. The Statute of Limitations. (1) Definition. Statutes of limitation in criminal law are statutes of which the accused may take advantage and deprive the Government of the power to try and punish him after the lapse of a specific period since the offense was committed. They are enacted to secure the prompt punishment of criminal offenses and with a view to obtain the attendance of the witnesses at the trial while the recollection of the event is still fresh in their minds. In court-martial practice prosecutions are limited both as to time and as to number. (A. W. 39, 40.)

(2) Limitations as to Time. (a) In the following cases there is no limitation as to time upon trial by court-martial (A. W. 39), viz.:

- (1) Desertion committed in time of war;
- (2) Mutiny; or
- (3) Murder.

(b) The period of limitation upon trial and punishment by court-martial shall be three (3) years in the following cases (A. W. 39), viz.:

- (1) Desertion in time of peace;
- (2) Any crime or offense punishable under A. W. 93; or
- (3) Any crime or offense punishable under A. W. 94.

(c) No person subject to military law shall be liable to be tried or punished by a court-martial for any crime or offense not enumerated in paragraph (a) or paragraph (b), supra, committed more than two (2) years before the arraignment of such person (A. W. 39).

(d) Computation of the Period of Limitation. The point at and from which the period of limitation is to begin to run is the date of the commission of the offense. The point at which the period of limitation is to terminate and from which said period is to be reckoned back is the date of arraignment of the accused. There must be excluded in computing this period—

(1) The period of any absence of the accused from the jurisdiction of the United States; and

(2) Any period during which by reason of some manifest impediment the accused shall not have been amenable to military justice.

[Notes: "Manifest impediment" means only such impediments as operate to prevent the court-martial from exercising its jurisdiction, and includes such conditions as being held as a prisoner of war in the hands of the enemy, or being imprisoned under the sentence of a civil court upon conviction of crime (In re Davison, 4 Fed. Rep., 510); but any concealment of the evidence of their guilt or other like fraud on their part while they remain within the jurisdiction of the United States, by which the prosecution is delayed until the time the bar has run, did not deprive them of the benefit of the statute. (14 Op. Atty. Gen., 268.)

The thirty-ninth article of war did not have the effect to authorize trial or punishment for any crime or offense barred by the provisions of law existing at the date of its enactment, August 29, 1916.]

(3) Limitation as to Number of Trials. (a) No person shall be tried a second time for the same offense. (A. W. 40.)

(b) Where a person subject to military law has been once duly convicted or acquitted by a court-martial he has been "tried" in the sense of the article, and can not be tried again, against his will, for the same offense, or for any included offense, and it is immaterial whether the conviction or acquittal has been approved or disapproved.

(c) A person subject to military law has not been "tried" in the sense of A. W. 40 in any of the following cases:

Where the party, after being arraigned or tried before a court which was illegally constituted or composed, or was without jurisdiction, was again brought to trial before a competent tribunal; where the accused, having been arraigned upon and having pleaded to certain charges, was rearraigned upon a new set of charges substituted for the others which were withdrawn; where one of the several distinct charges upon which the accused had been arraigned was withdrawn pending the trial, and the accused, after a trial and finding by the court upon the other charges, was brought to trial anew upon the charge thus withdrawn; where, after proceedings commenced, but discontinued without a finding, the accused was brought to trial anew upon the same charge; where, after having been acquitted or convicted upon a certain charge which did not in fact state the real offense committed, the accused was brought to trial for the same act, but upon a charge setting forth the true offense; where the court was not sworn; where the first court was dissolved because reduced below five members by the casualties of the service pending the trial; where, for any cause, without fault of the prosecution, there was a "mistrial," or the trial first entered upon was terminated, or the court dissolved, at any stage of the proceedings before a final acquittal or conviction. (Digest, p. 167, C, II, B.)

(d) The same acts constituting a crime against the United States can not, after the acquittal or conviction of the accused in a court of competent jurisdiction, be made the basis of a second trial of the accused for that crime in the same or in another court, civil or military, of the same government.

Although the same act when committed in a State might constitute two distinct offenses, one against the United States and the other against the State, for both of which the accused might be tried, that rule does not apply to acts committed in the Philippine Islands. The government of a State does not derive its powers from the United States, while that of the Philippine Islands does owe its existence wholly to the United States.

A soldier in the Army, having been acquitted of the crime of homicide, alleged to have been committed by him in the Philippine Islands, by a military court-martial of competent jurisdiction proceeding under authority of the United States, can not be subsequently tried for the same offense in a civil court exercising authority in that Territory. (Grafton v. U. S., 206 U. S., 333.)

A similar rule applies in Alaska, Hawaii, Porto Rico, The Panama Canal Zone, or any other locality where the civil courts derive their authority from the United States.

(e) There can not be a second trial where the offense is really the same though it may be charged under a different description and under a different article of war. Thus, where the Government elects to try a soldier under A. W. 61 for absence without leave, and the testimony introduced develops the fact that the offense was desertion, the accused, after an acquittal or conviction, can not legally be brought a second time to trial for the same absence charged as desertion. (Digest, p. 169, C, II, D.)

(f) It is not misrepresentation or concealment by an applicant for enlistment, but the procuring of his enlistment by means of misrepresentation or con-

cealment, together with the receipt of pay or allowances, which constitutes the military offense of fraudulent enlistment under A. W. 54. Therefore, where a soldier was tried for and convicted of fraudulent enlistment in procuring his enlistment by means of a misrepresentation or concealment, to try him again for the same enlistment on account of another misrepresentation or concealment subsequently discovered would be a second trial for the same offense. (Digest, p. 169, C, II, E, 1.)

(g) The thirty-ninth article of war does not deprive a court-martial of jurisdiction of an offense after the periods prescribed. The court still has jurisdiction. The article gives the accused a right of exemption from trial if the accused claims the exemption and proves it. In other words, the exemption from trial is a defense that the accused must assert in order to take advantage of it. The defense may be made by entering a plea in bar, or it may be made after a plea of not guilty by introducing evidence showing the facts that entitle him to the exemption.

(h) In each case tried by general court-martial in which, upon the face of the record, it appears that the accused might successfully plead the statute of limitations but in which he has not interposed such plea, it shall be made to appear of record that the president of the court advised the accused of his legal rights in the premises.

150. Pardon. A pardon is an act of the President which exempts the individual on whom it is bestowed from the punishment the law inflicts for a crime he has committed. (See Words and Phrases, vol. 6, p. 5168, and authorities there cited.)

151. Constructive Condonation. Where a deserter has been restored to duty without trial by authority competent to order his trial, this action is regarded as a constructive condonation of the offense and may be pleaded in bar of trial subsequently ordered. (Digest, p. 839, XV, D, 4.)

152. Inadmissible Special Pleas. (a) Former Punishment. The plea of former punishment, i.e., that he has already been adequately punished for his offense by his commanding officer, is not recognized by our military law, and, when made in our military trials, has been properly overruled; but where an accused has, prior to trial, been subjected, on account of his offense, to any physical punishment, or to reduction to the ranks, or to protracted arrest, or to reprimand, or other unusual or unauthorized discipline, he may properly show the fact in evidence on the general issue in mitigation of such sentence as the court, in the event of his conviction, may impose. Except in this form, he can not avail himself of such circumstances upon his trial. (Winthrop, p. 411; 25 Op. Atty. Gen., 623; 28 idem., 622.)

(b) Illegal Enlistment. The accused, upon arraignment, has sometimes pleaded that on account of some illegality in his enlistment, as that he was under age, or that he was enlisted for a shorter period than the law required, etc., he was not amenable to trial. But no such form of special plea is recognized in our law. If the accused, by reason of his invalid enlistment, is not duly or legally in the Army, he should, regularly, offer the facts in evidence under a plea to the jurisdiction, or bring them out under the general issue. (Winthrop, p. 411.)

(c) Release From Arrest. Release from arrest upon the charges and restoration to duty before trial—already noticed as not a ground for a plea of pardon or condonation (except in case of a deserter restored to duty without trial)—is, similarly, no ground for a special plea in bar of trial. (Idem., p. 412.)

(d) Other Forms of Inadmissible Pleas. Such objections (which have been taken in some cases) as that the accused, at the time of the arraignment, is undergoing a sentence of general court-martial, or that, owing to the long delay

in bringing him to trial, he is "unable to disprove the charge or defend himself"; or that his accuser is actuated by malice or is a person of bad character—are, it need hardly be said, not proper subjects for special pleas, however much they may constitute ground for continuance, or affect the question of the measure of punishment. So, as to all such objections as are properly matters of defense under the general issue—for example, that the accused committed the offense charged when insane, or intoxicated, or in obedience to a military order, or under a mistake of fact or law, etc.—these are not within the scope or purpose of special pleas in bar, nor can they properly be raised in an interlocutory form, or otherwise than upon the trial and by the testimony, being, as they are, of the very substance of the defense. (*Idem.*, p. 412.)

153. Action Upon Special Pleas. (a) Each special plea should be stated briefly and clearly. It must also be supported by evidence or legal argument to show that it is well taken. The burden of supporting a special plea by a preponderance of proof rests on the accused. Both sides should be heard and the proceedings and arguments under the plea in trial by general or special court-martial recorded. The accused may make several special pleas to any charge or specification.

(b) When a special plea to the jurisdiction or in bar of trial as to all the charges and specifications has been sustained by a court, the record of the proceedings as far as had will be forwarded to the reviewing authority with a statement of reasons which, in the opinion of the court, sustain its action. If the reviewing authority is in disagreement with the court in respect of the validity of the plea, the proceedings will be returned by him to the court, with reasons for such disagreement and with instructions to the court to reconvene and reconsider its action. To the extent that such pleas present issues of law, the court properly defers to the views of the reviewing authority. The order returning the proceedings for reconsideration should direct the court, upon vacating its prior action, to proceed with the trial of the case. If the reviewing authority approves the action of the court in sustaining such pleas his action will be indorsed on the proceedings and published in the final review of the case.

(c) If the charge and specification to which a special plea has been sustained are not capable of amendment and there are other charges and specifications in the case, the trial may proceed on the other charges and specifications. (G. O. 28, W. D., 1905.)

(d) When all the special pleas to a given charge or specification are overruled, the accused must plead to the general issue as to that charge or specification.

154. Pleas to the General Issue. (a) Usually the plea of the accused is "guilty" or "not guilty" to each charge and specification; or, guilty to a specification excepting certain words, and to the excepted words not guilty; or, as when charged with an offense which includes a lesser one of a kindred nature, guilty to the specification except certain words, substituting therefor certain others, to the excepted words "not guilty," to the substituted words "guilty," and to the charge not guilty, but guilty of the lesser included offense.

(b) A court-martial is authorized, in any case, in its discretion, to permit an accused to withdraw a plea of not guilty and substitute one of guilty, and vice versa, or to withdraw either of these general pleas and substitute a special plea. And wherever the accused applies to be allowed to change or modify his plea, the court should, in general, consent, provided the application is made in good faith and not for the purpose of delay.

(c) A plea of guilty does not necessarily exclude the taking of evidence, on behalf of either the accused or the prosecution, or at the request of the court. In cases where the punishment is discretionary a full knowledge of the circum-

stances attending the offense is essential to the court in measuring the punishment, and to the reviewing authority in acting on the sentence. In cases where the punishment is mandatory, a full knowledge of the attendant circumstances is necessary to the reviewing authority to enable him to comprehend the entire case and correctly judge whether the sentence should be approved or disapproved or clemency granted. The court should therefore take evidence after a plea of guilty, except when the specification is so descriptive as to disclose all the circumstances of mitigation or aggravation. When evidence is taken after a plea of "guilty," the witnesses may be cross-examined, evidence may be produced to rebut their testimony, and the court may be addressed by the prosecution or defense on the merits of the evidence and in extenuation of the offense or in mitigation of punishment. After a plea of guilty the accused will always be given an opportunity to offer evidence in mitigation of the offense charged if he desires to do so.

(d) In each case tried by a general court-martial in which the accused enters a plea of guilty in whole or in part as to any charge or specification the president of the court shall explain to him as to that part:

First. The various elements which constitute the offense charged, as set forth in Chapter XVII, defining the punitive articles of war; and

Second. The maximum punishment which may be adjudged by the court for the offense to which he has pleaded guilty.

The accused will then be asked whether he fully understands that by pleading guilty to such a charge or specification he admits having committed all the elements of the crime or offense charged and that he may be punished as stated. If he replies in the affirmative, the plea of guilty will stand; otherwise a plea of not guilty will be entered. The explanation of the president and the reply of the accused thereto shall appear in the record. The same rule will apply in cases tried by special court-martial when the evidence heard is made of record.

(e) When the accused pleads "guilty," and, without any evidence being introduced, makes a statement inconsistent with his plea, the statement and plea will be considered together, and if guilt is not conclusively admitted the court will direct the entry of a plea of "not guilty" and proceed to try the case on the general issue thus made. The most frequent instances of inconsistency are in cases involving a specific intent, as in desertion, larceny, etc. In such cases, where after a plea of guilty the accused makes a statement, the latter should be carefully scrutinized by the court, and if in the case of desertion in any part there is a statement that the accused had no intention of remaining away, that he expected to return when he had earned some money, or that when arrested he was on his way back to his organization, etc.; or, in the case of larceny, that he intended to return the property alleged to have been stolen, etc., the court should direct the entry of a plea of "not guilty," but the criminality of an intent once formed is not affected by a subsequent change of intent.

(f) A plea of "guilty without criminality" is irregular and contradictory. (Winthrop, p. 414.) It is practically equivalent to a plea of "not guilty" and the court and judge advocate should proceed as if that plea were entered. Unless a plea of guilty is unqualified the prosecution must prove all allegations that are not specifically admitted by the accused.

(g) Insanity at the time of the commission of the acts charged is a defense which may be properly made under a plea of not guilty. Insanity at the time of arraignment, or at a later stage of the trial, is a proper ground for the arrest of further proceedings on the charges. (See par. 219.)

SECTION III.

REFUSAL TO PLEAD.

155. Action. When the accused, arraigned before a court-martial, from obstinacy and deliberate design stands mute or answers foreign to the purpose, the court may proceed to trial and judgment as if he had pleaded not guilty. (A. W. 21.) If the court finds that the failure to plead is the result of insanity, it will proceed as indicated in Section II, paragraph 154 (g), *supra*.

SECTION IV.

MOTIONS.

156. Motion to Sever. A motion to sever is a motion by one of two or more joint accused to be tried separately from the other or others. It will regularly be made at the arraignment. Except where the essence of the charge is combination between the parties (as in mutiny), the motion may properly be granted for good cause shown. The more common grounds of motions for severance are that the mover desires to avail himself on his trial of the testimony of one or more of his co-accused, or of the testimony of the wife of one, or that the defenses of the other accused are antagonistic to his own, or that the evidence as to them will in some manner prejudice his defense. This motion has rarely been presented to the court in our military practice. Where the prosecution desires to use one of two or more joint accused as a witness against another or others, the practice is not to move to sever, but, by order of the convening authority, to withdraw charges as to such one. (See Winthrop, p. 379, and authorities there quoted.)

157. Motion to Elect. The prosecution is at liberty to charge an act under two or more forms, where it is doubtful under which it will more properly be brought by the testimony. In the military practice the accused is not entitled to call upon the prosecution to "elect" under which charge it will proceed in such, or indeed in any, case. (Digest, p. 504, V, F.)

158. Nolle Prosequi. A nolle prosequi is a declaration of record on the part of the prosecution that it withdraws a charge or specification from the investigation and will not pursue the same further at the present trial. This authority can only be exercised by the superior who, as the representative of the United States, ordered the court, and in a proper case he may, on his own initiative or on application duly made to him, instruct the judge advocate to enter a nolle prosequi. The principal grounds for this proceeding when duly authorized will be—

(a) The fact that the charge or specification is discovered to be substantially defective and insufficient in law, or

(b) That it is ascertained that the allegations can not be proved, or

(c) That the testimony available is not sufficient to sustain them, or

(d) That the criminality of one of the accused, where there are several, can not be established, or

(e) That it is proposed to use one of the accused as a witness.

The withdrawal of such a charge or specification is not in itself equivalent to an acquittal or to a grant of pardon and can not be so pleaded. It simply removes from the pending case a particular charge or specification without prejudice to its being subsequently renewed in its original or a revised form. In court-martial practice when authorized by the appointing authority a nolle prosequi may be entered either before or after arraignment and plea. If after arraignment it is found that a charge or specification can not be sustained, or

it is determined for other reasons that the same shall not be pursued, while it would be legal to enter a *nolle prosequi* thereto, it will be the preferable course, as well as most just to the accused, not to do so, but to allow the accused to be formally acquitted thereon at the finding. (See Winthrop, pp. 369-371.)

CHAPTER X. COURTS-MARTIAL—WITNESSES AND DEPOSITIONS.

SECTION I.

ATTENDANCE OF WITNESSES.

159. Process to Obtain Witnesses. Every judge advocate of a general or special court-martial, and every summary court-martial, shall have power to issue the like process to compel witnesses to appear and testify which courts of the United States, having criminal jurisdiction, may lawfully issue; but such process shall run to any part of the United States, its Territories, and possessions. (A. W. 22.) The authority to issue such process is in terms vested solely in the judge advocate of a general or special court-martial and in a summary court-martial, and it is by him alone that the process can be initiated. The judge advocate, however, will sometimes properly consult the court as to the desirability of resorting to an attachment; especially where any considerable time may be required for the service and return of the same, and an unusual adjournment may thus be necessitated. He will also properly resort to it whenever the court in its desire to secure the best or material evidence not otherwise procurable calls upon him for the purpose. (Winthrop, p. 298.)

[Note: 1. For power to issue process to secure the attendance and testimony of witnesses before courts-martial in the National Guard, not in the service of the United States, see sec. 108, act of June 3, 1916, 39 Stat., 209, Appendix 2. 2. Wherever in this section reference is made to issue of such process by a judge advocate, a summary court-martial will be understood to be included.]

160. Service of Subpœna. A subpœna for the attendance of a civilian witness is issued in duplicate. It may be legally served by either a person in the military service or a civilian. Usually, service is made by an officer or non-commissioned officer. Service is made by personal delivery of one of the copies to the witness. The proof of service is made by indorsing on the remaining copy a sworn statement that service was made. (For service by mail and acceptance of same, see par. 164, below.) After making service a copy of the subpœna will be promptly returned to the judge advocate of the court, with the proof of service. If the witness can not be found, the judge advocate should be promptly so informed. A judge advocate can not subpœna a civilian witness to appear before himself for preliminary examination.

[Note: For form of subpœna and proof of service, see Appendix 13.]

161. Summoning of Witnesses. The judge advocate will summon the necessary witnesses for the trial, but will not summon witnesses at the expense of the Government without the order of the court, unless satisfied that their testimony is material and necessary. In order that the accused may not be denied a full opportunity to make his defense any witness requested by him is usually summoned. But a reasonable discretion should be exercised where the summoning of the number of witnesses requested by the defense would result in an unreasonable inconvenience or expense to the Government. In such instances the judge advocate should ascertain whether the testimony required of the witness is not merely cumulative, or as to an unimportant point that one

witness would be sufficient to render conclusive, or as to which the judge advocate would be willing to admit the facts expected from the witness's testimony.

162. Advance Notice to Witnesses. The judge advocate will endeavor to issue subpoenas to civilian witnesses and to make request for the attendance of military witnesses at such time as will give each witness at least 24 hours' notice before starting to attend the meeting of the court.

163. Attendance of Military Witnesses. The attendance of persons in the military service stationed at the place of meeting of the court, or so near that no expense of transportation will be involved, will ordinarily be obtained by informal notice served by the judge advocate on the person concerned that his attendance as a witness is desired. If for any reason formal notice is required, the judge advocate will request the proper commanding officer to order him to attend; but if mileage is involved, the department commander or other proper superior will be requested to issue the necessary order. Fees will not be paid to military witnesses on the active list, and they are entitled only to the mileage allowances due them under their travel orders. The attendance as witnesses of persons on the retired list (not assigned to active duty) should be obtained in the same manner, and they are entitled to the same fees and mileage as civilian witness not in the Government employ. No travel order will be issued in such cases.

164. Procedure to Secure Attendance of Civilian Witness. Unless he has reason to believe that a formal service of subpoena will be required, the judge advocate will endeavor to secure the attendance of a civilian witness by correspondence with him, sending him duplicate subpoena properly filled out, with a request to accept service on one by signing the printed statement, "I hereby accept service of the above subpoena," and to return same to the judge advocate, for which purpose a return addressed penalty envelope should be inclosed. Ordinarily there will be no difficulty in securing the voluntary attendance of a civilian witness if he is informed that his fees and mileage will not be reduced by reason of his voluntary attendance, and that a voucher for his fees and mileage going to and returning from the place of the sitting of the court-martial will be delivered to him promptly on being discharged from attendance on the court. If such informal methods are ineffective, formal duplicate subpoena will be issued by the judge advocate with a view to service on the witness. If the witness is at or near the post where the court is sitting, the service will be by the judge advocate or by some person designated by him. If the witness is not at or near the post where the court is sitting, but is at or near another military post, command, or detachment, the judge advocate will send the duplicate subpoena direct to the commanding officer of such post, command, or detachment, requesting service of the same. Upon receipt of the request the officer receiving it will serve the subpoena or cause it to be served. The service will be made without delay, and the retained copy of the subpoena, with proof of service indorsed on it, will be sent at once direct to the judge advocate. If in any instance travel is necessary to serve the subpoena, a request will promptly be made by the commanding officer of the post, command, or detachment, on the proper authority for travel orders. If the witness does not reside near a post, command, or detachment, the subpoena will be sent direct to the department or other proper commander requesting service of the same.

165. When Accused Must be Confronted With Witness. Depositions can not be introduced by the prosecution in capital cases. (See A. W. 25, Chap. XI, Evidence, and Chap. IV, Sec. III.) In such cases, therefore, as well as in others in which the judge advocate believes that the interests of justice demand that the accused be confronted by a witness against him, or believes that for any reason a witness should testify in the presence of the court, he will take the necessary steps to secure the attendance of such witness or witnesses.

166. Procedure to Obtain Books, Documents, or Papers. If a civilian has in his possession a book, document, or paper desired to be introduced in evidence, a subpoena duces tecum will be prepared and issued by the judge advocate, directing the person to appear in court and to bring with him such book, document, or paper, which should be described in sufficient detail to enable it to be readily identified.

[Note: For form, see Appendix 13.]

167. Civilian Witness in Confinement. The testimony of a witness who is in confinement in the hands of the civil authorities will ordinarily be obtained by means of a deposition (A. W. 25), but if for any reason it is necessary that such a witness testify in court, an endeavor should be made by the judge advocate to make arrangements with the civil authorities to obtain his appearance.

168. Warrant of Attachment. In view of the provisions of A. W. 23 providing for the punishment on information before a district court of the United States or in a court of original criminal jurisdiction in any of the territorial possessions of the United States of a civilian who willfully neglects or refuses, after he has been duly subpoenaed, to appear as a witness before any military court, commission, court of inquiry, or board, circumstances requiring the issue of a warrant of attachment will be very rare. (For form, see Appendix 14.) Whenever it becomes necessary to issue a warrant of attachment, the judge advocate or summary court-martial will direct or deliver it for execution to an officer designated by the department commander for the purpose. (12 Op. Atty. Gen., 501.) As the arrest of a person under a warrant of attachment involves depriving him of his liberty, the authority for such action may be inquired into by a writ of habeas corpus. For this reason the officer executing the warrant of attachment should be provided with the following papers to enable him to make a full return in case a writ of habeas corpus is served upon him:

(a) A copy of the charges in the case, sworn to be a full and true copy of the original by the judge advocate of the court (or summary court-martial).

(b) A copy of the order appointing the court-martial, sworn to be a full and true copy of the original by the judge advocate of the court (or summary court-martial).

(c) The original subpoena, showing proof of service of same.

(d) An affidavit of the judge advocate or summary court-martial that the person being attached is a material witness in the case; that he has failed and neglected to appear, although sufficient time has elapsed for that purpose; and that no valid excuse has been offered for such failure to appear.

(e) The original warrant of attachment.

In executing such process it is lawful to use only such force as may be necessary to bring the witness before the court. Wherever force is actually required the post commander nearest the residence of the witness will furnish a military detail sufficient to execute the process.

169. Habeas Corpus Proceedings in Connection With Attachments. (a) If, in executing a warrant of attachment, the officer detailed for that purpose should be served with a writ of habeas corpus from any United States court, or by a United States judge, for the production of the witness, the writ will be promptly obeyed, and the person alleged to be illegally restrained of his liberty will be taken before the court from which the writ has issued, and a return made setting forth the reasons for his restraint. The officer upon whom such a writ is served will at once report, by telegraph, the fact of such service direct to The Adjutant General of the Army and to the commanding general of the department. (See Appendix 15, Form A.)

(b) If, however, the writ of habeas corpus is issued by any State court (or a State judge) it will be the officer's duty to make respectful return, in writing,

informing the court that he holds the person named in the writ by authority of the United States pursuant to a warrant of attachment issued under section 3 of the act of Congress approved August 29, 1916 (A. W. 22), by a judge advocate of a lawfully convened general or special court-martial (or by a summary court-martial), and that the Supreme Court of the United States has decided that State courts and judges are without jurisdiction in such cases. (See Appendix 15, Form B.) After having made the above return to a writ issued by a State court or judge, it is the duty of the officer to hold the prisoner in custody under his warrant of attachment, and to refuse obedience to the mandate or process of any government except that of the United States. Consequently, it is his duty not to take the prisoner, nor suffer him to be taken, before a State judge or court upon a writ of habeas corpus issued under State authority.

170. Punishment for Refusal to Appear or Testify. Although the attendance of a witness as above described can be enforced, there is no power in a court-martial itself to compel a witness to testify or to punish him for not testifying. The only procedure is that provided in A. W. 23, as follows:

Every person not subject to military law, who being duly subpoenaed to appear as a witness before (a) any military court, commission, court of inquiry, or board, or (b) any officer, military or civil, designated to take a deposition to be read in evidence before such court, commission, court of inquiry, or board, willfully (a) neglects or refuses to appear, or (b) refuses to qualify as a witness, or to testify, or (c) produce documentary evidence which such person may have been legally subpoenaed to produce, shall be deemed guilty of a misdemeanor, for which such person shall be punished on information in the district court of the United States, or in a court of original criminal jurisdiction in any of the Territorial possessions of the United States, jurisdiction being hereby conferred upon such courts for such purpose; and it shall be the duty of the United States district attorney or the officer prosecuting for the Government in any such court of original criminal jurisdiction, on the certification of the facts to him by the military court, commission, court of inquiry, or board, to file an information against and prosecute the person so offending, and the punishment of such person, on conviction, shall be a fine of not more than \$500, or imprisonment not to exceed six months, or both, at the discretion of the court: Provided, That the fees of such witness and his mileage, at the rates allowed to witnesses attending the courts of the United States, shall be duly paid or tendered said witness, such amounts to be paid out of the appropriation for the compensation of witnesses. (A. W. 23.)

[Note: If an officer who is charged with serving a subpoena pays the necessary fees and mileage to a witness, taking a receipt therefor, he is entitled to reimbursement. (Dec. Comp. Treas., Sept. 10, 1901, published in Cir. 38, A. G. O., 1901.)]

171. Same in Philippine Islands. Every person not belonging to the Army of the United States, who, in the Philippine Islands, being duly subpoenaed to appear therein as a witness before a general court-martial of said Army (or naval court), willfully neglects or refuses to appear, or refuses to qualify as a witness, or to testify, or produce documentary evidence, which such person may have been legally subpoenaed to produce, shall be punished by a fine of not more than \$500, United States currency, or imprisonment not to exceed six months, or both, at the discretion of the court, and it shall be the duty of the proper fiscal or prosecuting officer, on the certification of the facts to him by the general court-martial, to file in the proper court a complaint against and prosecute the person so offending: Provided, That \$1.50, United States currency, for each day's attendance, and 5 cents, United States currency, per mile for going

from his residence to the place of trial or hearing, and 5 cents per mile for returning, shall be duly tendered to said witness: Provided further, That no witness shall be compelled to incriminate himself or to answer any question which may tend to incriminate him. (Acts 1130 and 1243, P. I. Commission.) The provisions of this paragraph do not apply to witnesses before special and summary courts.

[Note: Employees of the civil government of the Philippine Islands, paid from insular funds of the islands, are held not to be in the employ of the United States. (Dec. Comp. Treas., Aug. 20, 1902, published in Cir. 45, A. G. O., 1902.)]

172. Tender of Fees Preliminary to Prosecution. In case a civilian witness is duly subpoenaed under the authority of A. W. 22 and willfully neglects or refuses to appear or refuses to qualify as a witness, or to testify or produce documentary evidence which he may have been legally subpoenaed to produce, he will at once be tendered or paid by the nearest quartermaster one day's fees and mileage for the journeys to and from the court, and will thereupon be again called upon to comply with the requirements of the law. Upon failing the second time to comply with the requirements of the law a complete report of the case will be made to the officer exercising general court-martial jurisdiction over the command with a view to presenting the facts to the Department of Justice for the punitive action contemplated in A. W. 23.

173. Contempts. (a) Authority to Punish. A court-martial may punish, at discretion, subject to the limitations contained in A. W. 14, any person who uses any menacing words, signs, or gestures in its presence, or who disturbs its proceedings by any riot or disorder. (A. W. 32.) The power to so punish is vested in general, special, and summary courts-martial. Punishments adjudged for contempt, like other punishments adjudged by courts-martial, require the approval of the reviewing authority in order to be effective.

(b) Persons Who May be Punished for Contempt. The words "any person," as used in A. W. 32, appear to include civilians as well as military persons. In view, however, of the embarrassment liable to attend the execution, through military machinery, of a punishment adjudged against a civilian for a contempt under the article, it would generally be advisable for the court to confine itself to causing the party to be removed as a disorderly person, and, in an aggravated instance, to procure a complaint to be lodged against him for breach of the public peace. (Winthrop, p. 462.)

(c) Direct and Constructive Contempts. A direct contempt is one committed in the presence or immediate proximity of a court while it is in session. An indirect or constructive contempt is one not so committed. The conduct described in A. W. 32 constitutes direct contempt. But conduct on the part of a person subject to military law and amounting to a constructive contempt may be punished like any other conduct that is prejudicial to good order and military discipline, by bringing the person to trial before another court on charges under A. W. 96.

(d) Procedure. Where a contempt within the description of A. W. 32 has been committed and the court deems it proper that the offender shall be punished, the proper course is to suspend the regular business and, after giving the party an opportunity to be heard in explanation, to proceed, if the explanation is insufficient, to impose a punishment, resuming thereupon the original proceedings. The action taken is properly summary, a formal trial not being called for. Close confinement in quarters or in the guardhouse during trial of the pending case or forfeiture of a reasonable amount of pay has been the more usual punishment. A full record of the proceeding is at once made, not separate from, but in and as a part of the regular record of the case on trial,

showing the occasion and circumstances of the contempt, the words or acts which constituted it, the excuse or statement, if any, of the party, the action taken by the court, its judgment and the disposition of the offender. (Winthrop, p. 469.) Instead of proceeding against a military person for contempt in the manner contemplated by this article, the alternative course may be pursued of bringing him to trial before a new court on a charge of a disorder under A. W. 96.

SECTION II.

DEPOSITIONS.

174. When Admissible. A duly authenticated deposition taken upon reasonable notice to the opposite party may be read in evidence before any military court or commission in any case not capital, or in any proceeding before a court of inquiry or a military board, if such deposition be taken when the witness resides, is found, or is about to go beyond the State, Territory, or District in which the court, commission, or board is ordered to sit, or beyond the distance of 100 miles from the place of trial or hearing, or when it appears to the satisfaction of the court, commission, board, or appointing authority that the witness, by reason of age, sickness, bodily infirmity, imprisonment, or other reasonable cause, is unable to appear and testify in person at the place of trial or hearing: Provided, That testimony by deposition may be adduced for the defense in capital cases. (A. W. 25.)

[Note: For form for interrogatories and depositions, see Appendix 12.]

175. Before Whom Taken. Depositions to be read in evidence before military courts, commissions, courts of inquiry, or military boards, or for other use in military administration, may be taken before and authenticated by any officer, military or civil, authorized by the laws of the United States or by the laws of the place where the deposition is taken to administer oaths. (A. W. 26.)

176. Interrogatories, How Submitted. The procedure for submitting interrogatories for a deposition is as follows:

(a) The party desiring the deposition submits to the opposite party the interrogatories which he wishes propounded to the person whose deposition he desires, and the opposite party then submits to him such cross-interrogatories, if any, as he may desire. Such additional direct and cross-interrogatories may be submitted as desired; or

(b) The party desiring the deposition submits to the court, military commission, or board the interrogatories which he wishes propounded to the person whose deposition he desires. The opposite party then submits to the court, military commission, or board such cross-interrogatories, if any, as he may desire. The court, military commission, or board then submits such additional interrogatories as they may deem proper and desirable, and such additional direct and cross-interrogatories may be submitted as are desired.

(c) Where the court, military commission, or board desires that the deposition of a particular person be obtained, it will cause interrogatories to be prepared accordingly. The prosecution and defense (or other party or parties in interest) then submit such interrogatories as they may desire. Such additional interrogatories may be included as are desired by the court, military commission or board, or by a party in interest.

177. Procedure to Obtain Deposition. (a) All the interrogatories to be propounded to the person are entered upon the form for interrogatories and deposition, and the trial judge advocate, summary court, or recorder will take appropriate steps to cause the desired deposition to be taken with the least practicable delay. In an ordinary case he will either send the interrogatories to the com-

manding officer of the post, recruiting station, or other military command at or nearest which the person whose deposition is desired is stationed, resides, or is understood to be, or will send them to some other responsible person, preferably a person competent to administer oaths, at or near the place at which the person whose deposition is desired is understood to be. In a proper case the interrogatories may be sent to the department or other superior commander or to the witness himself, and in any case they will, when necessary, be accompanied by a proper explanatory letter.

(b) When interrogatories are received by a commanding officer he will either take or cause to be taken the deposition thereon. He may send an intelligent enlisted man—preferably a noncommissioned officer, if available—to the necessary place for the purpose of obtaining the deposition, or he may properly arrange by mail or otherwise that the deposition be taken. The deposition will be taken with the least practicable delay, and when taken will be sent at once direct to the judge advocate of the court-martial trying the case or other proper person.

(c) If the witness whose deposition is desired is a civilian, the judge advocate or other proper person sending interrogatories as above will inclose with them a prepared voucher for the fees and mileage of the witness, leaving blank such spaces provided therein as it may be necessary to leave blank, accompanied by the required number of copies of the orders appointing the court, military commission, or board. The judge advocate, summary court, or recorder will also send with the interrogatories duplicate subpoena requiring the witness to appear in person at a time and place to be fixed by the officer, military or civil, who is to take the deposition. If the name of this officer is not known, the space provided for it will be left blank. If a military officer takes the deposition, he will complete the witness voucher, certify it, and transmit it to the nearest disbursing quartermaster for payment. When the deposition is to be taken by a civil officer he will be asked to obtain and furnish to the military officer, requested or designated to cause the deposition to be taken, the necessary data for the completion of the witness voucher, and the latter will complete the voucher, certify it, and transmit it to the nearest disbursing quartermaster for payment.

In the case of a military witness subpoena will not accompany the interrogatories, but the officer before whom the deposition is to be taken will take the necessary steps to have the witness appear at the proper time and place.

178. Tracing Delayed Depositions. Judge advocates will be prompt in preparing and forwarding interrogatories. If the deposition is not received within a reasonable time, a letter of inquiry will be sent; and, if a prompt explanation of the delay is not received, the department commander or other proper superior will be advised.

179. Designation of Deponent by Official Title. Where it is desired to take the deposition of some person holding a certain office or position, as, for instance, a troop commander, first sergeant, quartermaster sergeant, cashier of a bank, post exchange officer, etc., and the name of the person is unknown, interrogatories may be prepared in the usual way for submission to the person holding the office or position, without naming him, unless it shall appear that the accused will be prejudiced thereby.

180. Deponent's Answer to be Responsive. Before a witness gives his answers to the interrogatories they should be read and, if necessary, explained to him, or he should be permitted to read them over in order that his answers may be clear, full, and to the point. The person taking the deposition should not advise the witness how he should answer, but he should endeavor to see that the witness understands the questions, and what is desired to be brought out by them, and that his answers are clear, full, and to the point.

181. Fees for Taking Depositions. Civil officers before whom depositions are taken for use before courts-martial will be paid the fees allowed by the law of the place where the depositions are taken.

182. Taking Depositions in Foreign Country. If the evidence desired from a witness residing in a foreign country is necessary and material and is desired to be read before a court-martial, military commission, court of inquiry, or military board sitting within any of the States of the Union or the District of Columbia, interrogatories (accompanied by the necessary vouchers for fees and mileage) will ordinarily be forwarded through military channels to The Adjutant General of the Army. They will then be transmitted by the Secretary of War to the Secretary of State, with the request that they be sent to the proper consul of the United States and the deposition of the witness be taken. In the case of troops serving along the international boundaries, outside of the United States proper, or in foreign countries, the officer exercising general court-martial jurisdiction may, in his discretion, detail an officer to take the deposition of a civilian witness, or he may send the interrogatories direct to the consul of the United States nearest the place of residence of the witness with the request that the deposition be taken. In the latter case the interrogatories will be accompanied by the proper vouchers for the fees and mileage of the witness.

[Note: For use of depositions as evidence, see Chap. XI, Evidence.]

SECTION III.

FEES, MILEAGE, AND EXPENSES OF WITNESSES.

183. Officers and Soldiers, Active or Retired. Officers and soldiers on the active list required to attend a court-martial as witnesses are not entitled to receive mileage and fees like civilian witnesses but are entitled to such travel allowances as the law allows to officers and soldiers traveling under orders; but a retired officer, not assigned to active duty, or a retired soldier, is entitled to the per diem and mileage provided for civilian witnesses not in Government employ.

[Note: The fees, mileage, and expenses of persons in the military service or of civilians in the Government employ duly subpoenaed and appearing before civil courts, whether State or Federal, are payable by the civil authorities.]

184. Civilians in Government Employ. Civilians in the employ of the Government when traveling upon summons as witnesses before military courts are entitled to transportation in kind from their place of residence to the place where the court is in session and return. If no transportation be furnished, they are entitled to reimbursement of the cost of travel actually performed by the shortest usually traveled route, including transfers to and from railway stations, at rates not exceeding 50 cents for each transfer, and the cost of sleeping-car accommodations to which entitled or steamer berth when an extra charge is made therefor. They are also entitled to reimbursement of the actual cost of meals and rooms at a rate not exceeding \$3 per day for each day actually and unavoidably consumed in travel or in attendance upon the court under the order or summons. No allowance will be made to them when attendance upon court does not require them to leave their stations.

185. Civilians Not in Government Employ. A civilian, not in Government employ, duly summoned to appear as a witness before a military court, commission, or board or at a place where his deposition is to be taken for use before such court, commission, or board, will receive \$1.50 for each day of his actual attendance before such court, commission, or board or for the purpose of having his deposition taken, and 5 cents a mile for going from his place of

residence to the place of trial or of the taking of his deposition, and 5 cents a mile for returning, except as follows:

(a) In Porto Rico and Cuba he will receive \$1.50 a day while in attendance as above stated and 15 cents for each mile necessarily traveled over stage line or by private conveyance and 10 cents for each mile over any railway or steamship line.

(b) In Alaska, east of the one hundred and forty-first degree of west longitude, he will receive \$2 a day while in attendance as above stated and 10 cents a mile, and west of said degree \$4 a day and 15 cents a mile.

(c) In the States of Wyoming, Montana, Washington, Oregon, California, Nevada, Idaho, Colorado, Utah, New Mexico, and Arizona will receive \$3 a day for the time of actual attendance as above stated, and for the time necessarily occupied in going to and returning from the same, and 15 cents for each mile necessarily traveled over any stage line or by private conveyance and 5 cents for each mile by any railway or steamship.

[Note: 1. Travel must be estimated by the shortest usually traveled route—by established lines of railroad, stage, or steamer—the time occupied to be determined by the official schedules, reasonable allowance being made for unavoidable detention.

2. These rates apply to the Philippine Islands. (See Cir. 45, A. G. O., 1902.)

3. A civilian not in Government employ, when furnished transportation on transport or other Government conveyance, is entitled to 57.142 per cent of 5 cents per mile (equal to 2.857 cents per mile). (Comp. Dec., Aug. 20, 1902, published in Cir. 45, A. G. O., 1902.)]

186. Payment for Return Journey. The charges for return journeys of witnesses will be made upon the basis of the actual charges allowed for travel to the place of giving testimony, and the entire account thus completed will be paid upon discharge from attendance, without waiting for completion of return travel.

187. Contents of Vouchers. The items of expenditure authorized for civilian witnesses will be set forth in detail and made a part of each voucher for reimbursement. No other items will be allowed.

The certificate of the judge advocate, or other officer, will be evidence of the fact and period of attendance, and will be made upon the voucher.

When payment is made under the provisions of paragraph 184, the correctness of the items will be attested by the affidavit of the witness, to be made, when practicable, before the officer who certifies the voucher.

188. Witness in Several Trials on Same Day. A civilian attending as a witness in several court-martial trials on the same day is entitled to a separate fee for attendance in each case (Dig. Dec. Comp., 1894 to 1902, p. 476), but will receive mileage in only one case.

189. Voucher to be Delivered to Witness. A civilian witness not in Government employ who appears to testify is entitled, upon his discharge from attendance, to receive from the judge advocate, if any (or summary court, recorder of court of inquiry or board, etc.), his witness voucher properly filled out. If not practicable to deliver to the witness his voucher at that time his address will be obtained and his witness voucher will be promptly forwarded to the nearest disbursing quartermaster. To entitle a witness to the payment of fees and mileage it is not essential that he should produce a subpoena.

190. Lost Voucher. Where the voucher of a witness has been lost, a new voucher may be issued by the judge advocate upon a satisfactory showing of such loss, supported by affidavit. The new voucher should be so noted as to indicate its character and should be forwarded to the Quartermaster General for settlement.

191. Fees for Service of Subpœnas. There is no fee or compensation fixed by statute or regulation for the service of subpœnas to secure the attendance of witnesses before military courts. Ordinarily service will be made by an officer or soldier, but if service by a civilian is deemed by the judge advocate or department commander to be preferable, the services of a civilian may be used, and the fees and mileage allowed by law in that locality for similar services may be paid by a quartermaster from the appropriation "for expenses of courts-martial, etc."

192. Employment of Experts. When the employment of an expert is necessary during a trial by court-martial the necessity for such employment should be made to appear by a resolution of the court. This resolution will be forwarded by the judge advocate, in advance of the employment, to the Secretary of War through the authority appointing the court, with a request for authority to employ the expert and for a decision as to the compensation to be paid him. The request should, if practicable, state the compensation that is recommended by the judge advocate. The compensation of the expert, including the compensation for photographs that may be necessary in connection with his testimony, will be paid out of the appropriation "for expenses of courts-martial, etc."

[Note: Where, in advance of trial, the judge advocate knows that the employment of an expert will be necessary, he should, without delay, apply through the appointing authority to the Secretary of War for authority to employ the expert, stating the necessity therefor and probable cost thereof.]

193. Expenses of Courts-martial, Etc., How Payable. The fees of civilian witnesses, the mileage of both civil and military witnesses, the legal fee of the proper official for certified copy of a marriage certificate, the expense of procuring a transcript of a stenographer's notes of testimony taken before a United States commissioner, the fees of a notary for swearing a witness, and the expenses (including railway fare and hotel bills) of a United States consul stationed in a foreign country in taking depositions, when such items are incurred in connection with a trial before a court-martial or military commission, or investigation before a court of inquiry, are paid by the Quartermaster Corps out of the annual appropriation "for expenses of courts-martial, etc." If no quartermaster be present at the place where the court is sitting the vouchers may be transmitted direct to any quartermaster. Such vouchers are not transferable.

[Note: Blank vouchers may be procured from any disbursing quartermaster.]

CHAPTER XI.

COURTS-MARTIAL—EVIDENCE.

(Revised and approved by Professor Wigmore.)

SECTION I.

INTRODUCTORY PROVISIONS.

194. General Remarks. The oath taken by members of general and special courts require them to try and determine "according to evidence" the matter before them. A summary court, although it does not take such an oath, will also determine the matter before it solely on the evidence in the case, and no evidence would be admissible before a summary court that is not admissible before general and special courts. The evidence thus referred to, according to which the court must decide the case, means all the matters of fact which

the court permits to be introduced, or of which it takes judicial notice, with a view to prove or disprove the charges. Every item of this evidence must be introduced in open court, and it would be seriously irregular and improper for any member of the court to convey to other members, or to consider himself, any personal information that he possessed as to the merits of the case or the character of the accused, without stating it in open court and, if a witness for the prosecution, retiring as a member of the court, as provided in A. W. 8. But while their knowledge of the facts must come to them from the evidence, the members are expected to utilize their common sense, their knowledge of human nature and the ways of the world in weighing the evidence and arriving at a finding. In the light of all the circumstances of the case they should consider the inherent probability or improbability of the evidence given by the several witnesses, and with this in mind the court may properly believe one witness and disbelieve several whose testimony is in conflict with that of the one.

The methods which are employed by courts of justice to ascertain the facts—that is, the truth—respecting any past transaction closely resemble those resorted to by an individual for a similar purpose. If A desires to ascertain whether a particular act did or did not take place, he addresses himself to those who were in a situation to witness the occurrence itself, and so endeavors to obtain from each person present his version of the occurrence. From the testimony thus obtained he forms his conclusion as to whether or not the act took place. In the course of his investigation, however, he finds that all who were present and witnessed the occurrence as bystanders do not give testimony of equal importance or value. Some having greater powers of observation or better memories than others give in consequence more valuable testimony. Some of the witnesses, being children or persons of weak or unsound mind, are without the requisite mental capacity to observe facts or to appreciate their relations to each other; others, by reason of their bad character, are not regarded as worthy of belief by their fellow citizens; still others were insane or quite under the influence of intoxicating liquor at the time of the occurrence, and so were incapacitated from observing. A, therefore, rejects some of the statements as entirely untrustworthy; to others he attaches weight in proportion to their worthiness of belief, and so endeavors to reach a conclusion as to the truth of the occurrence or event which was the original subject of his inquiry. (Davis, p. 244.)

195. The Issues. It is well to understand, in the beginning of this consideration of the rules of evidence, the purpose for which the evidence is to be introduced in the manner prescribed and laid down by the rules. The purpose is to elucidate and settle the issues raised in the case and to confine, under a well devised and developed system of limitations that experience has shown to best conserve the interests of all concerned, the evidence to such issues.

In every criminal case the burden is on the prosecution to prove, by relevant evidence, (a) that the offense charged was really committed, (b) that the accused committed it, and (c) that the accused had the requisite criminal intent at the time. These three facts broadly constitute the issues in the case. Incidental issues will be formed by the necessity for proof of the essentials—that is, the gist—of an offense and as to character. Not only the allegations set out in the charges and specifications, but the component parts of such allegations as well, raise the issues to be decided. For instance, in a case of larceny, where it is charged that the accused “did take, steal, and carry away” certain articles of value, the component parts of the allegation not specifically set out are that such articles were taken (a) fraudulently and (b) with the felonious intent of depriving the owner of them.

196. Analysis of Evidence by Judge Advocate and Counsel. The ends of justice and saving of time of all concerned imperatively demand careful analysis by both judge advocate and counsel for accused of the evidence requisite for proof of and defense against the offenses charged. As a prerequisite to such analysis the law as to the offenses charged should be studied with a view to determining the essential elements of the offense; that is, the things that must be proved by the judge advocate in order to justify a conviction and those that must be proved by the defense to disprove or place in reasonable doubt the proof offered by the prosecution. In other words, the prosecution and defense should limit the proffer of testimony to that which is relevant to these issues, and these only, and should prepare the case with only that in view. The essentials or gist of the offense (see Chap. XVII) should be so clearly defined in the preparation of the case that both the judge advocate and counsel for accused may be ready, by appropriate objections before the court, to limit the introduction of evidence to relevant matter only, bearing in mind that only the essentials of the offense must be proved and that what may be properly considered surplusage may be disregarded.

Before trial an examination of all the sources of the evidence to be submitted should be made by the judge advocate and counsel for accused and a determination as to the order in which it will be introduced should be reached. The case should be presented in sequence of events as nearly as possible, just as a story would be told by one party who had seen everything to which the different witnesses will testify. When several offenses are charged, especially if unrelated, the evidence should be directed to the development of their proof in the order charged, so that neither the court nor the accused may be in doubt at any time as to the specific offense to which the testimony being given refers. Counsel for accused should adhere to the same principle in presenting evidence for the defense.

197. Duties of Court—Opening Statements. If the court will augment the preparation invoked in the preceding paragraph by constantly bearing in mind what the issues are and holding judge advocate and counsel strictly to them, it will tend to the expedition of business, the securing of justice, and the conservation of the interests of all concerned. The court should have before it as a guide, always by reference to this manual in each case, the following essential considerations as to any evidence that may be tendered: (1) That it is relevant to the issue; (2) that it is not within the rule rejecting hearsay evidence; (3) that, if it is a confession or admission, it is legally admissible; (4) that where documents are used the original should be obtained (except when a copy is admissible) and that the genuineness should be verified; (5) that any witnesses called are legally competent to give evidence; (6) that the examination of witnesses is fairly and properly conducted. (British Manual.)

Further reference will always be had to the paragraph of the manual that sets out the gist of the offenses charged (see Chap. XVII), and this will be read to the court in each case by the judge advocate immediately after the accused has pleaded to the charges and specifications.

It will be appropriate in all cases—and in an important or complicated case it will be required by the court—for the judge advocate, before proceeding with the introduction of evidence, to make a brief statement of “the nature of the issues to be tried and what he expects to prove” (1 Thompson on Trials, 246) to sustain them. Counsel for the accused may also make an opening statement as to his defense, either just following the statement of the judge advocate or just after the judge advocate has rested his case, as counsel deems better, but the latter course is customary. It would be highly reprehensible

for either judge advocate or counsel to get before the court in such opening statement, as a probable means of influencing its judgment, matters as to which no evidence is intended to be offered or as to which it is known that the evidence to be offered is clearly inadmissible, just as it would be so reprehensible for either to suggest for the same purpose, by questions propounded to a witness, matters known not to exist or that the rules of evidence clearly make inadmissible.

198. Rules of Evidence for Courts-Martial. Prior to the act of August 29, 1916 (A. W., 38), courts-martial followed in general the rules of evidence, including the rules as to competency of witnesses to testify, that are applied by Federal courts in criminal cases. These consisted of the rules of the common law as they existed in the several States at the adoption of the Federal Constitution in 1789, as modified from time to time by subsequent acts of Congress. But courts-martial were, however, not required by express statute to follow these rules, and have always been allowed to pursue a more liberal course in regard to the admission of testimony than do, habitually, the civil tribunals. Their purpose was to do justice; and if the effect of a technical rule was found to be to exclude material facts or otherwise obstruct a full investigation, it was deemed that the rule may and should be departed from. Proper occasions, however, for such departures were regarded as exceptional and unfrequent. (Winthrop, 473.) It was believed that "courts-martial had much better err on the side of liberality toward a prisoner than, by endeavoring to solve nice and technical refinements of the laws of evidence, assume the risk of injuriously denying him a proper latitude for defense." (G. C. M. O. 32, 1872; see 3 Greenleaf, secs. 469, 476.) And now, by the provisions of the act of August 29, 1916 (38 A. W.):

The President may, by regulations which he may modify from time to time, prescribe the procedure, including modes of proof, in cases before courts-martial, courts of inquiry, military commissions, and other military tribunals: Provided, That nothing contrary to or inconsistent with these articles shall be so prescribed: Provided further, That all rules made in pursuance of this article shall be laid before the Congress annually.

The modes of proof, therefore, including the rules of admissibility for witnesses and other evidence, are now by express congressional enactment placed under the authority of Executive regulation; and the rules laid down in this Manual have the force of such regulation. They therefore form the only binding rules, except such rules of evidence as are expressly prescribed (1) in the Articles of War; (2) in the Federal Constitution; and (3) in such Federal statutes as expressly mention courts-martial.

199. Rules, Where Found. The common-law rules, with their legislative modifications, will be found in the various textbooks on the subject of evidence. These rules have been the subject of much interpretation by the courts, which will be found in the published decisions of such courts. While resort to textbooks and decisions will sometimes be necessary in the trial of an especially difficult case, it is the purpose of this chapter to state the rules of evidence applicable to trials by courts-martial in sufficient fullness to cover the field in practically all cases. Where the rule herein laid down is clear it should be taken as law (subject to the discretionary relaxation noted in par. 198), unless modified by Federal statute or some decision of the Federal courts made since the date of the publication of the Manual.

Where, in the preparation of a case, the judge advocate or counsel finds that the rules laid down in this chapter are not sufficiently specific clearly to settle a specially important question as to the competency of a witness to testify or

as to the admissibility of evidence intended to be introduced or the exclusion of such as the nature of the case or other information indicates will be offered, he should secure in advance of the trial and have with him in court authorities to sustain his contentions for such admission or exclusion.

But it should be kept in mind that the use of such authorities is merely to inform the court of the reason of a rule or the good sense and fairness of a proposed ruling, and not to control the decision of the court with binding effect. This caution rests on the two grounds of principle: First, because the State decisions and statutes, and the writers of treatises, never have had any binding effect on courts-martial, the Federal statutes and decisions being the only ones that are entitled to such effect; and, secondly, because since the Federal statute of August 29, 1916 (A. W., 38), the modes of proof in courts-martial are governed by regulations issued by presidential order, as explained in par. 198.

200. Rules of Evidence to be Applied Irrespective of Rank. The rules of evidence should be applied by military courts irrespective of the rank of the person to be affected. Thus a witness for the prosecution, whatever be his rank or office, may always be asked on cross-examination whether he has not expressed animosity toward the accused, as well as whether he has not on a previous occasion made a statement contradictory to or materially different from that embraced in his testimony. Such questions are admissible by the established law of evidence and imply no disrespect to the witness, nor can the witness properly decline to answer them on the ground that it is disrespectful to him thus to attempt to discredit him. (Digest, p. 529, XI, A, 3.)

201. Protection of Witnesses. It is the duty of the court to protect every witness from irrelevant, insulting, or improper questions; from harsh or insulting treatment; and from unnecessary inquiry into his private affairs. The court must forbid any question which appears to be intended merely to insult or annoy a witness, or which, though proper in itself, appears to be needlessly offensive in form. (Proposed codification, N. Y. Rules.)

202. Evidence Must be Material and Relevant. Evidence to be admissible must be not only material but relevant to the issues in the case. Evidence is not material when the fact which it aims to prove is not a part of the issues in the case. Evidence is not relevant when, though the fact which it aims to prove is material, yet the evidence itself is too remote or far-fetched to have any probative value for that purpose. Where evidence is apparently irrelevant it may, however, be admitted provisionally upon a statement of the judge advocate or counsel that other facts to be proved will show its relevancy, but the court should afterwards exclude it, if its relevancy is not shown. Indirect evidence is known as circumstantial evidence, and signifies merely any and all evidence which is not testimonial; i.e., the assertion of a witness or other person. For example, on a charge of larceny of a wallet, the statement of a witness that he saw the accused take the wallet from the owner's overcoat is testimonial evidence; the finding of the wallet hidden in the blanket belonging to the accused is circumstantial evidence. Obviously, a fact constituting circumstantial evidence must itself usually be proved in its turn by testimonial evidence; for example, the finding of the wallet as indicated above would be evidenced by a sergeant's testimony that he searched the accused's blanket and found the wallet.

Testimonial evidence is thus classed by itself, because the weight to be given to testimony is subject to a group of considerations which affect all human assertions alike.

SECTION II.

CIRCUMSTANTIAL EVIDENCE.

203. Circumstantial Evidence. Circumstantial evidence is not resorted to because there is an absence of direct or testimonial evidence. It is introduced even when there is direct evidence; nor is it an inferior substitute for direct evidence. Circumstantial evidence may furnish a safe and satisfactory ground for belief, while on the other hand direct or testimonial evidence may leave the court in doubt. The proper effect of circumstantial as compared with direct evidence has been stated as follows:

When circumstances connect themselves closely with each other, when they form a large and strong body so as to carry conviction to the minds of a jury, it may be proof of a more satisfactory sort than that which is direct. In some lamentable instances it has been known that a short story has been got by heart by two or three witnesses; they have been consistent with themselves, they have been consistent with each other, swearing positively to a fact, which fact has turned out afterwards not to be true. It is almost impossible for a variety of witnesses, speaking to a variety of circumstances, so to concoct a story as to impose upon a jury by a fabrication of that sort, so that where it is cogent, strong, and powerful, where the witnesses do not contradict each other or do not contradict themselves, it may be evidence more satisfactory than even direct evidence, and there are more instances than one where that has been the case. (Wigmore, 26.) In a case depending upon circumstantial evidence the court, in order to convict, must find the circumstances to be satisfactorily proved as facts, and must also find that those facts clearly and unequivocally imply the guilt of the accused and can not reasonably be reconciled with any hypothesis of his innocence. (Davis, p. 265.)

204. Illustration of Difference Between Good and Bad Circumstantial Evidence. The accused is charged with stealing clothes from the locker of a comrade. The following circumstances are not admissible as circumstantial evidence:

- (1) The accused is very much disliked by other members of his company.
- (2) A number of thefts from comrades have taken place in the company, and the general belief in the company is that he was connected with them.
- (3) He was tried once before for larceny of clothes from a comrade and was convicted.
- (4) He is suspected of being a deserter from a foreign army.
- (5) He belongs to a race or enlisted in a locality that does not entertain very strict notions of right and wrong as to the manner of acquiring possession of property.

But the following series of circumstances should be admitted in evidence:

- (1) The clothes were taken while the company was at drill, and there was no one known to have been in the room where the locker was.
- (2) The accused was not at drill, but was detailed as kitchen police that day.
- (3) He was absent from his duty as kitchen police a short while during the time when the clothes disappeared.
- (4) One of the articles stolen was found in the locker of the accused.
- (5) The accused was known to be without money the day before the larceny, and that evening left the post with a bundle under his arm and was seen to enter a certain house and the same night had money in his possession.
- (6) Upon the house being searched next day most of the missing clothes were found there.
- (7) The person found in the house identified the accused as the one from whom he had purchased the missing clothes.

205. Evidence of Character of Accused and of His Services. In trials by court-martial the good character of the accused, as evidenced by his reputation, may become of importance in four classes of cases: First, when the evidence of guilt is not strong, evidence of the good reputation of the accused will strengthen the presumption of innocence; second, when the punishment is discretionary such evidence may be introduced with a view to inducing the court to impose a milder sentence in the case of a plea of guilty or a conviction; third, when the punishment is mandatory such evidence may be introduced with a view to inducing the court to recommend clemency; fourth, in any case such evidence may be introduced with a view to inducing the reviewing authority to extend clemency. An accused may also introduce evidence of his character and services. In any such case, if the accused offers evidence as to character, record, or services, as shown by statement of service or otherwise, the prosecution may rebut such evidence. (See 1, 2, 4, and 5, par. 204, p. 1342, for illustrations of what may not be used in rebuttal to evidence bad character.) Evidence as to the bad character of an accused, offered by the prosecution or at the solicitation of the court prior to the introduction by the accused of evidence as to his good character, is inadmissible. Not even the fact that before the introduction of such evidence the accused consented to its introduction will make it any the less irregular. If, however, the accused takes the witness stand his character for veracity as a witness may be attacked as in the case of any other witness.

206. Motive, Etc. Motive or lack of motive as impelling the accused toward or against the act charged or that class of acts often throws a flood of light upon the issue as to guilt or innocence. So important has it been deemed for the ascertainment of truth that it has invoked exceptions to the character rule. Thus the doing of another criminal act, not a part of the issue, while not admissible as evidence of the doing of the criminal act charged, or of the bad moral character of the accused, is admissible when offered for the specific purpose of evidencing design, plan, motive, identity, knowledge, or other relevant facts distinct from moral character. (Wigmore's P. C. 64, 65.)

Illustrations. (1) In a trial for arson of a barn, the defendant's attempt on two former occasions to burn houses in other parts of the town is not admissible, unless for the purpose of evidencing intent or motive.

(2) On a charge of murder by poison, the defendant's murders of other members of the same family by poison, if admissible to show motive or intent, are not excluded because they are criminal acts and might cause undue prejudice. (Wigmore's P. C. 64, 65.)

(3) The declarations, threats—especially his other similar criminal acts—of the accused are admissible.

(4) When the accused is charged with having knowingly committed an offense or having knowledge of the essence of the offense, prior similar acts that would probably have led to some knowledge or warning would be admissible.

SECTION III.

TESTIMONIAL EVIDENCE.

207. Testimonial Evidence. Testimonial evidence is the statement of some person offered as evidencing the fact asserted by it. For example, a statement that a rifle was discharged at a certain hour and place is testimonial evidence that it was so discharged.

Such statements may be made either in court or out of court. If made in court as a witness, then the witness must be "competent." If made out of

court, then even if he is competent, the statement is not admissible, because the hearsay rule forbids.

The competency of the witness is therefore the important thing to determine before admitting testimonial evidence.

208. Competency Rule in General. The modern tendency, as evidenced to a great extent by statutes of different States, and to a limited extent by Federal statutes, is to recognize practically no grounds for incompetency, but to admit the material and relevant testimony of a witness offered by either side and leave his credit to be estimated according to all the circumstances.

Among the few common-law grounds of incompetency (see par. 198) now remaining in some States, but no longer to be recognized in courts-martial, are (1) conviction of felony and of misdemeanors involving dishonesty ("crimen falsi"), especially perjury; (2) relationship, as wife or husband of the accused. (See pars. 211 and 213.)

209. Competency of Witness. The competency of a witness depends upon several elements, which may be divided thus: (1) His general moral and mental capacity; (2) his special expertness in subjects on which expertness is required; (3) his knowledge of the specific facts on which he testifies.

210. General Capacity of Witness. The general capacity of an adult witness is always presumed; i.e., the party disputing it must always prove to the court the specific ground of incapacity or else the witness should be allowed to testify. The admissibility of children as witnesses is not regulated by their age, but by their apparent sense and understanding. Children, therefore, of any age, may be examined, if capable of distinguishing between good and evil, but always under oath.

There are very few grounds of incapacity to-day recognized by the law.

211. Moral Incapacity of Witness. Moral incapacity was recognized in the common-law rule that rendered incompetent as a witness any person convicted of treason, felony, or the crimen falsi.

But this incapacity has been abolished in almost all States, except that several retain it with a restriction to convictions for perjury. In courts-martial, conviction of any offense does not disqualify a witness. But it may, of course, be shown to diminish his credit. (See Credibility of witnesses, Sec. VI, post.)

212. Mental Incapacity of Witness. Mental incapacity is a disqualification, but only to a limited extent, as follows: Insanity or intoxication may disqualify, but only to the extent to which they affect the subject of the testimony. For example, a religious hallucination as to angels saving a man from bullets does not disqualify the person from testifying as to the time of lighting a camp fire or the persons on duty at a certain post. Intoxication would disqualify only if it was so complete as to render the person senseless at the time of the event to be testified to.

213. Interest or Bias. Interest or bias does not disqualify; i.e., the fact that a person owes a party money or has a property interest with or against a party, does not disqualify him from testifying for or against that party. A person who is a relative or an avowed enemy of the accused is not disqualified from testifying for or against the accused. The weight of such testimony when admitted is a different matter. (See Credibility of witnesses, Sec. VI, post.)

Marital relationship was a disqualification at common law. Except in certain cases, husband or wife could not testify either for or against one another. This rule has been abolished in most States. In courts-martial the rule is as follows:

(1) Wife or husband of an accused may testify on behalf of the accused without restriction.

(2) Wife or husband of an accused may not be called to testify against the

accused without the consent of both accused and witness, unless on a charge of an offense committed by the accused against the witness.

(3) Wife or husband of any person may not testify to confidential communications of the other, unless the other give consent.

The last two rules are rules of privilege, and are more fully stated under "Privilege."

214. Where Accused is Witness. It was provided by act of Congress of March 16, 1878 (20 Stat., 30), that in trials by courts-martial and courts of inquiry as well as by United States courts and Territorial courts, the accused "shall at his own request, but not otherwise, be a competent witness," and that "his failure to make such request shall not create any presumption against him." An accused person thus may, at his option, take the stand as a witness, but in so doing he occupies no exceptional status and becomes subject to cross-examination like any other witness. The same rules as to the admissibility of evidence, privilege of the witness, impeaching of his credit, etc., will apply to him as to any other witness, and the only noticeable difference between his examination and that of other witnesses will be that he will in general, naturally and properly, be exposed to a more searching cross-examination. (Winthrop, 508.) So far as the latitude of the cross-examination is discretionary with the court, a greater latitude may properly be allowed in his cross-examination than in that of other witnesses (*id.*, 545), but, like them, he may not be cross-examined beyond the field of his direct examination, except to test his credibility as a witness. Where he is charged with a series of offenses and, taking the stand in his own defense, testifies as to a part of them only, he can not be cross-examined as to the others.

215. Procedure Where Accused Fails to Testify or Make a Statement. In each case tried by a general court-martial in which the accused does not testify or make any statement in his own behalf, it shall appear on record that the president of the court explained to the accused that he may testify in his own behalf if he so desire, or may make an unsworn statement to the court in denial, in explanation, or in extenuation of the offense with which he stands charged. The explanation by the president and the reply of the accused thereto shall appear upon the record of trial. The same rule will apply in cases tried by special court-martial when the evidence heard is made of record.

216. Effect of Turning State's Evidence. The fact that an accomplice turns state's evidence does not make him immune from trial, unless immunity has been promised him by the authority competent to order his trial. But, if an accomplice goes on the stand and makes a full and frank statement of the circumstances of the offense, it is customary to pardon his offense, or impose upon him a milder punishment than upon his accomplices.

217. Competency of Accused When Testifying Against an Accomplice. The rule of the common law was that an accused person was incompetent to testify for or against his accomplices. This rule is nullified by the act making the accused a competent witness when testifying at his own request. The rule now is that when an accused chooses to testify he may do so, and that it does not matter whether his testimony is for or against himself or for or against his codefendant. (Wolfson v. U. S., 101 Fed. Rep., 436.)

218. Expert Capacity. On most matters, the ordinary experience of any adult qualifies him to observe and testify. Hence, all persons are ordinarily qualified to testify on ordinary matter. But, when the subject is one upon which special experience is required, it will not be presumed that a witness possesses such special experience, for ordinarily he does not. Hence, a witness called upon such a subject must be shown to possess such special experience; he is therefore called an "expert" on that subject. A person may be an expert

on one subject, but not on another. Hence, whenever such a topic calls for testimony, the witness's special experience in it must first be shown. Whether a piece of leather has been recently tanned; whether a stain is human blood or animal blood, are instances of topics which might well require experts, if important to the issue.

In applying this rule, pedantry would be out of place. Experts on all subjects are seldom within reach of a court-martial, and liberality of application is a necessity. Good sense and ordinary caution will determine whether an expert is needful for accurate discovery of the truth. For example, an expert in alcohol would hardly be needed to testify to whether the contents of a certain bottle were sufficiently alcoholic to be intoxicating, but in a homicide case, where the cause of death was disputed, obviously a medical man's testimony should be secured.

219. Insanity of Accused. Where the existence of mental disease or derangement on the part of the accused, either at the time of the trial or at the time of the commission of the alleged wrongful act, becomes an issue in the trial of the case, the court will stop its proceedings and immediately report the fact to the convening authority. The convening authority will forthwith order a board of medical officers to take the accused under their personal observation for such length of time as may be sufficient to determine the nature and extent of the disease or derangement, if any, and to extend their examination, in a case of any doubt, to written inquiries directed to probation officers, physicians, clergymen, school and prison authorities, mayors, postmasters, etc., for the purpose of fully developing, from any trustworthy sources, the question as to any mental, moral, or physical defects of childhood, or later, that may throw light upon the question as to whether the accused at the time of the wrongful act had the necessary criminal mind to commit the wrongful act charged. Where the information from any source indicates the absence of insanity, the accused will be entitled to cross-examine the party giving such information. Such information and its source will be brought to the attention of the judge advocate, who will confer with the counsel for the accused for the purpose of securing the presence of the informant for cross-examination before the court, or his deposition if he is not available to testify.

The medical board will make a written circumstantial report as to the character of their observations, attach thereto such written evidence as may have been considered, and state their opinion as a board, or individually if there is any difference of opinion, as to whether or not the accused had at the time of their report sufficient mental capacity to justify his being brought to trial, or had at the time of the wrongful act the necessary criminal mind to commit the wrongful act charged, and will further state their opinion, if it is found that the accused did not have the necessary criminal mind to commit the wrongful act charged, as to whether the accused would be now a menace to the public safety.

The medical report as a whole will be admissible in evidence, and when admitted the court will have called as a witness for the court at least one of the members of the board to be thoroughly examined, as if on cross-examination, by counsel for the accused, the judge advocate or the court, as to any feature of the report, and on request of the accused the remaining members of the board shall be called for cross-examination.

If insanity is indicated to either judge advocate or counsel for accused prior to the assembling of the court it would be appropriate for the judge advocate, at request of counsel for accused or of his own motion, to report such indications to the reviewing authority with the idea of obviating the necessity for

the assembling of the court until a medical board had been convened and reported as outlined above.

In any case where the convening authority accepts the finding of the board on the question as to necessary criminal mind and decides to withdraw the case from consideration of the court-martial it would accord with modern ideas of justice, if any doubt whatsoever existed as to the accused having committed the wrongful act charged against him, to grant, upon request of counsel or a member of the accused's family, a trial upon the charge with a view to relieving him, though insane, of the stigma attached to the accusation. In such instance the case should be proceeded with, and if the court determines that the accused committed the wrongful act charged but was insane at the time of its commission or at the time of trial the findings will be to that effect. And in any case where a finding by the court of "not guilty" would be based upon lack of criminal mind, the findings should be in accordance with those prescribed by the preceding sentence.

220. Testimonial Knowledge. A prime qualification in a witness is that he should speak only of what he has observed with his senses, or had an opportunity to observe. E.g., a witness on sentry post at night might testify that he heard three shots and saw two persons running in the distance, but should stop with telling what he heard and saw. To proceed further and state that the shots killed a mule and that the accused was one of the persons running may involve beliefs of his that are based on rumors and gossip picked up afterwards, beliefs for which he has no status as a witness. An important feature of correct trial methods is to summon every person who saw or heard anything relevant, but to require every such person to limit his testimony to what he himself saw or heard. In this way the court arrives (if the testimony be credited) at the basic circumstances on which the proof must be built up.

This rule also has, of course, its liberal side, based on practical experience. For example, if the issue be as to a stolen case of soap, and the quartermaster has an invoice showing 400 cases received, and he is asked how many are remaining in stock, it is not necessary that he should personally count every case; it might suffice if he ticked off 39 large bales of 10 cases, each intact, and then found a bale of 9 with 1 missing.

This fundamental principle of requiring personal knowledge (or opportunity to observe) leads up to the hearsay rule, applicable to statements made by persons not in court. The hearsay rule signifies that when a witness testifies not to what he himself saw or heard but to what he heard some one else say, his testimony on that point shall be rejected, and the person who said it shall be produced in the court to testify, the object being to get at the first-hand source of knowledge. Experience shows again and again that when that other person is produced either what he actually said was something very different or else when cross-examined he turns out to have only a scanty trustworthiness. For example, if the sentry in the above instance testifies that he did not identify the person running, but afterwards in barracks Sergt. S said that it was X, the court would exclude what Sergt. S said, would summon S to testify in person, and then it might appear that all Sergt. S knows about it is that X came into barracks half an hour later looking as if he were out of breath, and this might be connected up with an errand on which X had been sent, by testimony of his captain. The hearsay rule, therefore, is a corollary of the principle that a witness must testify from what he has himself seen and heard, and not from what another person has told him or written to him.

221. Hearsay Evidence. The hearsay rule is subject to some well-established exceptions; most of them are based on the general principle that there is an unavoidable necessity for using the hearsay, because the person is deceased or

for some other reason can not be secured as a witness. These exceptions are now settled, however, into fixed rules, irrespective of the above principle.

Nevertheless, in courts-martial the liberal principle, now adopted in one or two States, may well be followed in extreme cases, viz., wherever the person whose statement is desired to be offered (whether written or oral) is deceased at the time of the trial, and was a person having personal knowledge of the facts, his statement may be admitted, in the discretion of the court. The following are familiar instances of hearsay in court-martial cases:

(1) A soldier is being tried for desertion. Pvt. A is able to testify that Pvt. B told Pvt. A that the accused told Pvt. B that he (the accused) intended to desert at the first opportunity. Such testimony from Pvt. A would be hearsay and would be inadmissible.

(2) A soldier is being tried for larceny of clothes from a locker. Pvt. A is able to testify that Pvt. B told Pvt. A that he (Pvt. B) about the time the clothes were stolen saw the accused leave the quarters with a bundle resembling clothes. Such testimony from Pvt. A would be hearsay and would be inadmissible.

(3) A soldier is being tried for selling clothing. Policeman A is able to testify that, while on duty as policeman, he saw the accused with a bundle under his arm go into a shop, that he (the policeman) entered the shop and the accused ran away and the policeman was unable to catch him. The policeman the next day asked the proprietor of the shop what the accused was doing there, and the proprietor replied that the accused sold him some clothes issued by the Government and that he paid the accused \$2.50 for them. The testimony of the policeman as to the reply of the proprietor would be hearsay and would be inadmissible. The fact that the policeman was acting in the line of his duty at the time the proprietor made the statement would not render the evidence admissible.

In the foregoing instances the fact that the accused said he intended to desert, that the accused left the quarters with a bundle, and that the accused sold the proprietor the clothes, constitute most important evidence and can be proved in the first two instances by Pvt. B, and in the third instance by the proprietor, but they can not be proved by hearsay evidence.

If evidence is hearsay it does not become admissible because it was made to an officer in the course of an official investigation. For instance, in illustration (1), if Pvt. B had made his statement to Capt. C in the course of an official investigation by Capt. C, the statement would still be hearsay and inadmissible.

Official statements and opinions as to either guilt or innocence expressed by an officer; as, for instance, a company, regimental, or department commander, or by a staff officer, in an indorsement, is not admissible in evidence by reason of its official character or the rank or position of the officer making it, as it would be hearsay. Nor is such a statement or opinion evidence because it is among papers referred to the trial judge advocate with the charges. It would be irregular to permit such statements or opinions to come to the attention of the court. If they do become known to the court they should, of course, not be considered in arriving at a finding or sentence.

222. Dying Declarations. On trials for murder and manslaughter, the law recognizes an exception to the rule rejecting hearsay by allowing the dying declarations of the victim of the crime, in regard to the circumstances which produced his condition, and especially as to the person by whom the violence was committed, to be detailed in evidence by one who heard them. The reason for admitting such declarations where the victim believes death is impending is that his belief is equal to the sanctity of an oath in causing him to tell the truth. It is no objection to their admissibility that they were brought out

in answer to leading questions or upon urgent solicitations addressed to him by any person or persons; and if, instead of speaking, he answered the questions by intelligible signs these signs may equally be testified to. Dying declarations are admissible as well in favor of the accused as against him. It is to be remarked that evidence of dying declarations made as such usually are under circumstances of mental and physical depreciation and without being subjected to the ordinary legal tests are generally to be received with great caution. (Winthrop, p. 493.)

223. Res Gestæ. Another exception to the hearsay rule consists of the inculpatory or exculpatory declarations or statements that constitute part of the *res gestæ*. By the *res gestæ* is meant the circumstances and occurrences substantially contemporaneous with the facts at issue that explain and elucidate the character and quality of such facts. Such are threats or declarations of the accused in connection with his commission of the crime that indicate his intent or knowledge; declarations or exclamations of a party injured that go to indicate the nature of the violence and the parties responsible; language of accomplices; cries of bystanders; facts, circumstances, and declarations showing premeditation and preparation for the crime. All such may be established by the testimony of persons who heard the utterances, etc. All such declarations and statements must be made so near in time to the principal transaction as to preclude the idea of deliberate design or afterthought in making them, but it is not essential that they should have been made in the presence or hearing of the accused. Nor does it matter that the party making them would be incompetent to testify in the case. For instance, the statements of a wife under such circumstances would be admissible against her husband. Where the crime committed is the culmination of a series of acts, such as in riots, etc., the *res gestæ* rule applies to all acts and declarations of the rioters and of bystanders that would tend to indicate purpose, motive, etc.

For instance, the exclamation of a bystander who was witnessing the building of barricades in a street: "My God, they are getting ready to resist the police!" would be admissible as tending to indicate the purpose of that transaction where the killing of certain of the police resulted from a fire directed from such barricades, though the killing did not occur until the next day. The *res gestæ* is considered as an act connected with or an incident of a main transaction, and not as testimony, and, as soon as it assumes the character of a narration, rather than a spontaneous exclamation that there is no probable ground for belief was inspired by a desire to influence the case, it is inadmissible as falling under the hearsay rule. The application of the rule of *res gestæ* is not limited strictly to circumstances and occurrences contemporaneous with the principal facts at issue nor with the transactions leading up to the principal facts, but would extend to a case of identification, as when, for instance, a party who has seen the commission of a crime and afterwards sees the accused and spontaneously identifies him by some such exclamation as "There's the man that did the killing," although such statement as to identification may have been made days after the principal act was committed. The following examples illustrate what constitute the *res gestæ*:

Where the accused is charged with sleeping on post, and it appears that the officer of the day or corporal of the guard, in searching for the accused, found him sitting down with his rifle across his knees and his chin on his chest, what they did and said to each other and to the accused, and the accused to them, in what led up to and immediately followed their efforts to ascertain whether or not he was asleep, all constitute parts of the *res gestæ*.

Where a soldier is charged with murder, manslaughter, or assault, and the party against whom the violence is offered is another soldier, and the wife of

the former, while walking with the latter, exclaims, "Run! here comes my jealous husband, and he will kill you!" her exclamations would be admitted as part of the *res gestæ*. If the soldier had then fled to his house pursued by her husband, and she had followed to deter him from injuring the other party and later had run from the house shouting, "My husband is killing Jones!" or "has just killed Jones!" her exclamations would be admissible as constituting part of the *res gestæ*. If a party in the next room had heard a shot and then a voice that he recognized as Pvt. Jones's say, "You shot me for revenge and nothing else," the declaration would be considered as a part of the *res gestæ*.

A liberal use of this exception may well be made.

224. Evidence of Conspirators and Accomplices. In cases where several persons join with a common design in committing an offense all acts and statements of each of them made in furtherance of the offense are admissible against each of the others. Only where the statements of such conspirator fall within the rule laid down for admission of evidence as a part of the *res gestæ* could such statements be admissible for the defense. The declaration of a conspirator, however, made after the common design is accomplished or abandoned, is not admissible against the others. Such accomplishment or abandonment, however, should be considered as extending to any acts and statements in furtherance of an escape. It is immaterial whether such acts or statements were made in the presence or hearing of the other parties. They are binding upon all parties if they are in furtherance of the common design. Foundation must first be laid by either direct or circumstantial evidence sufficient to establish *prima facie* the fact of conspiracy between the parties, unless the judge advocate states that the conspiracy will later appear from evidence to be adduced. While in Federal courts and courts-martial corroboration of the testimony of a coconspirator, or accomplice, need not be required, yet from the character of the associations formed the uncorroborated testimony of a coconspirator, or accomplice, should be received with great caution.

225. Confessions. Another exception to the rule excluding hearsay evidence is the rule that admits testimony as to confessions of guilt made by the accused. The most common form of confession is that contained in the plea of guilty made by the accused in open court in answer to a charge. This is not the kind of confession referred to as constituting an exception to the hearsay rule. The confessions referred to are those made out of court, and to be admissible must be offered in their entirety and not merely the parts disadvantageous to the accused. Before a confession of the accused not made in open court can be testified to the following foundations must be laid by the judge advocate.

(a) There must be corroborating evidence, either direct or circumstantial, outside of the confession itself, that the crime charged has been committed. This is what is technically known as the rule requiring proof of the *corpus delicti*; that is, some proof of the fact that the crime charged has probably been committed by some one, so that there will be some corroboration of the confession. It is not requisite that this outside evidence constituting proof of the *corpus delicti* shall be sufficient to convince the court beyond a reasonable doubt of the guilt of the accused, nor need it cover every element contained in the charge. For instance, where desertion is charged proof of absence without leave would be considered as proving the *corpus delicti*; where the charge is that a sentinel had left his post before being regularly relieved it would be sufficient to prove that he was not on his post during his period of duty; where a homicide is charged the proof of the death of the person charged to have been killed amounts to proof of the *corpus delicti*; and in cases of larceny and

selling clothing the fact that the property alleged to have been stolen or sold was missing is sufficient proof.

(b) It must be affirmatively shown that the confession was entirely voluntary on the part of the accused. A confession is, in a legal sense, "voluntary" when it is not induced or materially influenced by hope of release or other benefit or fear of punishment or injury inspired by one in authority, or, more specifically, where it is not induced or influenced by words or acts, such as promises, assurances, threats, harsh treatment, or the like, on the part of an official or other person competent to effectuate what is promised, threatened, etc., or at least believed to be thus competent by the party confessing. And the reason of the rule is that where the confession is not thus voluntary there is always ground to believe that it may not be true. (Winthrop, p. 496.) In military cases, in view of the authority and influence of superior rank, confessions made by inferiors, especially when ignorant or inexperienced and held in confinement or close arrest, should be regarded as incompetent unless very clearly shown not to have been unduly influenced. Statements, by way of confession, made by an inferior under charges to a commanding officer, judge advocate, or other superior whom the accused could reasonably believe capable of making good his words upon even a slight assurance of relief or benefit by such superior should not in general be admitted. Thus in a case where a confession was made to his captain by a soldier upon being told by the former that "matters would be easier for him," or "as easy as possible," if he confessed, such confession was held not to have been voluntary and therefore improperly admitted. And it has been similarly ruled in cases of confessions made by soldiers upon assurances being held out or intimidation resorted to by non-commissioned officers. (Winthrop, p. 498.) But confessions made by private soldiers to officers or noncommissioned officers, though not shown to have been made under the influence of promises or threats, etc., should, yet, in view of the military relations of the parties, be received with caution. Of course, the above principles apply to a written confession as well as to a verbal one. In some cases before courts-martial it appears that the accused has signed a paper confessing his guilt, stating in the paper that he confesses freely without hope of reward or fear of punishment, etc. Such statements are not conclusive that the confession was voluntary. Evidence may be introduced. If the evidence shows the statement was not in fact voluntary, it should not be considered by the court.

Considering, however, the relation that exists between officers and enlisted men and between an investigating officer and a person whose conduct is being investigated, and the obligation devolving upon an investigating officer to warn the person investigated that he need not answer any question that might tend to incriminate him, confessions made by soldiers to officers or by persons under investigation to investigating officers should not be received unless it is shown that the accused was warned that his confession might be used against him or it is shown clearly in some other manner that the confession was entirely voluntary.

In view of the peculiar conditions of mind and body under which accused persons are often placed when making confessions, of the liability to mistake on the part of the witnesses who repeat them when oral, and of the tendency of these latter to exaggerate through a zeal for conviction, evidence of confessions, unless corroborated by other reliable evidence, is in general to be received with caution. Where, however, a confession is explicit and deliberate as well as voluntary, and, if oral, is proved by a witness or witnesses by whom it has not been misunderstood and is not misrepresented, it is indeed one of the strongest forms of proof known to the law. (Winthrop, p. 499.)

Courts should bear in mind that mere silence on the part of an accused when questioned as to his supposed offense is not to be treated as a confession.

Although the confession, because not voluntary, is inadmissible, yet any information given in the confession that leads to the discovery of relevant facts will not render testimony of such facts inadmissible, and it may be further shown, by way of corroboration of such facts, that the discovery was either wholly or partially due to the information thus obtained.

226. Admissions Against Interest. Somewhat connected with the subject of confessions is that of declarations or admissions against one's own interest. This constitutes another exception to the rule excluding hearsay. In many instances the accused, after the commission of an offense, makes statements which fall short of a full confession of guilt but do constitute important admissions as to his connection with the offense. The rule is that such admissions if against his own interest may be admitted in evidence. For instance, in a case of homicide in a dance hall, if the accused when arrested made the statement that he was in the hall when the homicide took place, such a statement is admissible as against his interest.

Admissions against penal interests of parties other than the accused or those connected with him in the commission of the crime charged, are not admissible as evidence. Such persons ought to be summoned as witnesses and examined as to such supposed admissions or confessions.

227. Privileged Communications. A privileged communication is one that relates to matters occurring during a confidential relation, which it is the public policy to protect. A witness can decline to answer a question touching such a communication. The confidential relations that were protected at common law and which are met with in court-martial practice are the following:

State Secrets. Communications made by informants to public officers engaged in the discovery of crime are privileged. The deliberations of courts and of grand and petit juries are privileged, but the results of their deliberations are not privileged. Diplomatic correspondence, and, in general, all oral or written official communications which, in the opinion of the President, would be detrimental to the public interests, and official communications between the heads of the departments of the Government and their subordinate officers are privileged. Were it otherwise it would be impossible for such superiors to administer effectually the public affairs with which they are intrusted.

Husband and Wife. Communications between husband and wife are privileged.

Attorney and Client. The testimony of the attorney, his clerk, interpreter, stenographer, agent, or other employee as to communications between the client and the attorney, made while the relation of attorney and client existed and in connection with the matter for which the attorney was engaged, will not be received by a court, unless such communications clearly contemplate the commission of a crime; i.e., perjury, subornation of perjury, etc. Of course, communications prior to or subsequent to the relation are not privileged. The client, but not the attorney, may waive this privilege.

Police Secrets. The privilege that extends to communications made by informants to public officers engaged in the discovery of crime should be given a common-sense interpretation. The public interests would ordinarily be prejudiced by reason of the disclosure of such communications in a case—and this might very reasonably occur where, for instance, the admission of such communications would disclose the identity of parties employed for the detection of criminals or would endanger the party who made such communication, or would injuriously affect the chances of securing such agents for the detection of crime in the future. But the material interests of the accused to vindicate

his innocence should not be allowed to suffer by reason of the exclusion of such evidence.

The purpose of the privilege, extended to communications between husband and wife and attorney and client, which grows out of a recognition of the public advantage that accrues from encouraging free communication in such circumstances, is not disregarded by allowing outside parties who overhear such privileged communications to testify to what they have overheard. It would not be permitted, however, for one of the minor children of the parents, who might reasonably be presumed by the parents not to understand what they were talking about, to testify to communications overheard by such child.

228. Privilege of Wife and Husband to Testify. At common law the early rule was that neither husband nor wife is competent as a witness against the other, but later admitted an exception in a case of bodily injury inflicted by one of them upon the other.

Certain departures have been made from the common-law rule by Federal statutes and decisions of the courts which, giving consideration to the reasons—i.e., the necessities of justice that demand relaxation of the rule in cases of bodily injury—have extended the field of instances to which the necessities of justice must necessarily apply.

In any prosecution for bigamy, polygamy, or unlawful cohabitation under any statute of the United States, the lawful husband or wife of the accused shall be a competent witness, and may be called, but shall not be compelled to testify in such proceedings, and shall not be compelled to testify * * * without the consent of the husband or wife, as the case may be. (Act of Mar. 3, 1887, 24 Stat., 635.) A married woman is excluded as a witness from motives of public policy. (*Lucas v. Brooks*, 18 Wall., 436, 453.)

Whenever, therefore, the policy or necessity of admitting her as a witness against her husband is sufficiently strong to overbalance the principle of public policy, upon which the general rule of exclusion is based, she ought to be received as a witness. (*People v. Mercein*, 8 Paige (N. Y.), 47.) And so the wife should be permitted to testify against the husband whenever she is the particular individual directly injured by the crime committed by her husband and the facts are peculiarly within her knowledge and impossible or difficult of proof by any witness other than the wife. (*State (Mo.) v. Bean*, 78 S. W., 640.) It would therefore be appropriate in such cases against a husband as bodily injury of any character inflicted by him upon her, bigamy, polygamy, or unlawful cohabitation, abandonment of wife and children, or failure to support them, for the wife to be permitted to testify against her husband.

The principle enunciated above as to permission of the wife to testify should be extended to a husband in analogous cases.

229. Telegrams Not Privileged. Neither private telegrams nor the information regarding them that comes to the knowledge of telegraph operators, either military or civil, are privileged. Telegraph operators, both military and civil, may be subpoenaed to testify before a court-martial as to private telegrams, and private telegrams may be brought before a court-martial by the usual process.

230. Confidential Papers. The reports of special inspections by the Inspector General's Department are confidential documents and the testimony taken is considered a part and parcel of such reports. There is no law or regulation which requires copies of the evidence contained in these confidential reports to be furnished to officers whose conduct has been under investigation. So also the reports of the Judge Advocate General to the Secretary of War have always been regarded as confidential communications and it has not been the practice to furnish copies of them to parties outside the department in the absence of

special authority from the Secretary of War. If the prosecution has had access to any such document, fairness requires that the accused should have equal access to it.

231. Communication from Officers or Soldiers to Medical Officers Not Privileged. It is the duty of medical officers of the Army to attend officers and soldiers when sick, to make the annual physical examination of officers, and examine recruits for enlistment, and they may be specially directed to observe an officer or soldier or specially to examine or attend them; such observations, examination, or attendance would be official and the information acquired would be official. While the ethics of the medical profession forbid them to divulge to unauthorized persons the information thus obtained and statements thus made to them, such information and statements do not possess the character of privileged communications. If the medical officer, when called as a witness before a court-martial, refuses to testify to such matters, he is subject to charges under A. W. 96.

232. Communications Between Civilian Physicians and Patients Not Privileged. Neither are the communications between civilian physician and patient privileged, and the refusal of a physician to testify to such communications would subject him to the prosecution provided by A. W. 23.

233. Compulsory Self-crimination Prohibited. The fifth amendment to the Constitution of the United States provides that in a criminal case the person shall not be compelled "to be a witness against himself." The principle embodied in this provision applies to trials by courts-martial and is not limited to the person on trial, but extends to any person who may be called as a witness. A. W. 24, in furtherance of this principle, provides that no witness before a military court, commission, court of inquiry, or board, or before any officer, military or civil, designated to take a deposition to be read in evidence before a military court, commission, court of inquiry, or board, shall be compelled to incriminate himself or to answer any questions which may tend to incriminate or degrade him.

The constitutional guaranty contained in the fifth amendment is predicated upon the "well established and universally accepted maxim of the common law that a witness shall not be compelled to answer any question that tends to criminate him or to expose him to criminal prosecution or to a penalty" (Rice, p. 298), nor to answer any question not material to the issue that may tend to degrade him. It must be noted that this rule draws a distinction between questions that tend to criminate and those that tend to degrade, the protection extending in the first instance against questions whether material or not, while in the second instance it extends only to questions which are not material to the issue. And this is not limited to the main issues in the case; for instance, "as the credibility of a witness is always an issue, he must, therefore, answer questions which are no other way material than as affecting his credibility." (Roscoe, p. 149.)

(a) Rule as to Questions Tending to Degrade. Where common-law rules have been written into our Constitution and laws they have been given the construction that attach to them under common-law practice, and so the provisions of A. W. 24 must be presumed to have been declaratory of the common-law protection afforded witnesses and, as to questions tending to "degrade," must be accepted with the distinction drawn by the common law—that is, as extending only to questions, not material to the issue, that tend to "degrade."

(b) Where Privilege as to Self-crimination Ceases. As in the following cases the witness would not be liable to the law's punishment, his privilege as to self-incrimination ceases:

Conviction and the suffering of the punishment; acquittal, or other former

jeopardy; abolition of the general crime, subsequent to its commission (provided the rule of criminal law thereby exonerates prior offenders); lapse of time barring prosecution of the particular offense; executive pardon for the particular offense; statutory amnesty, before or after the act, for the particular criminal act or for the offender. (Wigmore, p. 3163.)

234. Privilege Against Self-crimination is a Personal One. The privilege of a witness to refuse to respond to a question, the answer to which may incriminate him, is a personal one, which the witness may exercise or waive as he may see fit. It is not for the judge advocate or accused to object to the question or to check the witness, or for the court to exclude the question or direct the witness not to answer. Where it appears that the witness is ignorant of his rights and that the answer to a question might incriminate him, the president of the court will inform him of his right to decline to make any answer which might tend to incriminate him.

235. Procedure Where Alleged Incriminating Question is Asked. Where the court overrules an objection made by a witness that the answer to a question will incriminate him the witness should answer the question. If he is a person subject to military law and refuses to answer, charges may be preferred against him under A. W. 96. If he is a civilian witness the facts should be certified to the United States district attorney by the court with a view to his prosecution as provided in A. W. 23. (See A. W. 23 as to other tribunals and agencies.) In any case of refusal to answer a question after the court has held it to be a proper one, the refusal may be commented on by the judge advocate or counsel in his remarks to the court.

As to civilians, as well as those in the military service, the national-defense act (sec. 108, Act June 3, 1916, 39 Stat., 209) provides that presidents of courts-martial and summary court officers of the National Guard, not in the service of the United States, shall have power "to issue subpoenas and subpoenas duces tecum and to enforce by attachment attendance of witnesses and production of books and papers and to sentence for refusal to be sworn or to answer as provided in actions before civil courts." In such cases the punishment would be for contempt of court.

236. Not Self-crimination to Require Accused to Submit to Physical Examination. "The prohibition of the fifth amendment against compelling a man to give evidence against himself is a prohibition of the use of physical or moral compulsion to extort communications from him and not an exclusion of his body as evidence when it is material." (Holt v. U. S., 218 U. S., 245.) In addition to this rule of general application in the Federal courts it has been decided that:

When a person enlists in the military service he waives or surrenders, during the period of his enlistment, some of the rights which he possessed as a citizen. He does this without compulsion, the surrender resulting from his voluntary enlistment in the military service. (U. S. v. Grimley, 137 U. S., 147.)

Among other incidents of the military status to which he voluntarily submits himself is that of physical examination by proper military authority such, for example, as is required by regulation when he enlists in the military establishment, at which time his finger and thumb prints are taken, and any marks or scars which appear on any part of his body are made the subject of official record on a card provided for that purpose by The Adjutant General, and the right to impose, and the corresponding duty to submit to, a proper physical examination, at the discretion and upon the order of a competent military superior, continues to exist so long as he remains in the military service in the operation of his contract of enlistment.

The following are illustrations of what might be required without violating the privilege contained in the fifth amendment:

(a) The admission of testimony as to marks and scars found upon the person of a defendant, in a criminal prosecution, during a forcible examination of him with a view to ascertaining his identity for the purpose of arresting him, is not prohibited. (*O'Brien v. Indiana*, L. R. A., Book 9, 1890, p. 323; see also 12 Cyc., 401.)

(b) Upon the trial, a question was raised as to the identity of the defendant. One witness testified that he knew the defendant, and knew that he had tattoo marks (a female head and bust) on his right forearm. The court thereupon compelled the defendant, against his objection, to exhibit his arm, in such a manner as to show the marks to the jury. (*State v. Ah Chuey*, alias Sam Good, 14 Nev., 79.)

(c) An officer also of the Army was ordered to a place for identification by civilian witnesses in relation to charges which were pending against the officer, and it was held that such an order would not be in violation of the officer's privilege, as it called for no testimonial communication from him.

It follows that it would be appropriate for the court to order the accused to remove his clothing for the purpose of examination by the court or by a surgeon who would later testify as to the results of his examination and, upon refusal to obey the order, might have his clothing removed by force. The accused might likewise be compelled to try on clothing or shoes or place his bare foot in tracks, etc., but where resort to extreme force would be necessary to compel compliance in the presence of the court it would comport more with the dignity of the court to have a surgeon make the examination out of the presence of the court and testify as to the result of the examination, or to advise the accused as to the purpose of the examination and to warn him that his refusal to obey would be considered as an admission on his part of what was sought to be ascertained by the examination. This conclusion would be quite within legal bounds as to presumption of facts.

237. Manner of Proving Contents of Writing. A writing is the best evidence of its own contents and must be introduced to prove its contents. But if it has been lost or destroyed or it is otherwise satisfactorily shown that the writing can not be produced, then the contents may be proved by a copy or by oral testimony of witnesses who have seen the writing. Under this rule if it is desired to prove the contents of a private letter or other unofficial paper, or an official paper such as a pay voucher, written claim against the Government, pay roll or muster roll, company morning report, enlistment paper, etc., the strict and formal method of doing so is to prove by proper evidence that the writing is in fact what it purports to be, and then introduce in evidence the original or a properly authenticated copy.

In order to prove that a writing is what it purports to be, in case of a private letter, the person who received the letter should testify that he received it and he should identify it. Then it should be proved that the signature is in the handwriting of the purported writer of the letter. But in proving the genuineness of letters the rule is that the arrival by mail of a reply purporting to be from the addressee of a prior letter duly addressed and mailed, is sufficient evidence of the genuineness of the reply to justify its introduction in evidence. A similar rule prevails as to telegrams purporting to be from the addressee of a prior telegram or telephone message.

If the writing is an official document such as a pay voucher, the person having official custody should produce it in court and testify that he is the custodian of the writing and that it is the pay voucher of the person whose name is signed. The signature to the voucher should be proved to be genuine if that is not

admitted. In court-martial practice the opposing party usually admits a public document without requiring such strict proof. The entries in pay vouchers, muster and pay rolls, company morning reports, and other public records used in the Army, are open to inspection by both parties, and contain numerous entries not pertaining to the case being tried. It is the practice, in the absence of an objection, to prove their contents by the oral testimony of a witness, usually the custodian, reading the material matter in court.

When the original consists of numerous writings which can not conveniently be examined by the court, and the fact to be proved is the general result of the whole collection, and that result is capable of being ascertained by calculation, the calculation may be made by some competent person and the result of the calculation testified to by him, as, for instance, if the fact to be proved is the balance shown by account books. In such case the opposite party should have access to the books and papers from which the calculation is made.

It is customary for the party introducing a writing in evidence to read it to the court. But unless the court directs it to be read at once it may be read at any time.

SECTION IV.

DOCUMENTS.

238. Public Records. An important exception to the rule that the contents of a writing must be proved by the writing itself is in the case of public records required to be preserved on file in a public office, in which case duly authenticated copies may be admitted in evidence equally with originals without first proving that the originals have been lost, destroyed, or their absence accounted for in some other way. This exception is made necessary by the inconvenience to the public business that would result if such records were removed. The following order covers this exception so far as concerns records and papers in the War Department and its bureaus and in military offices:

Copies of any records or papers in the War Department, in any of its bureaus, or in an office of any of the supply departments; or at the headquarters of an army, field army, division, brigade, or regiment; or of a territorial division, territorial department, or post, if authenticated by the impressed stamp of the bureau, office, or headquarters having custody of the originals (for example, "The Adjutant General's Office, official copy"), may be admitted in evidence equally with the originals thereof before any military court, commission, or board, or in any administrative matter under the War Department. (G. O. 16, W. D., 1912.)

239. Certain Official Writings Are Evidence of Facts Recited Therein. Where the law requires that the evidence of certain facts and events shall be recorded in certain writings, the original writing containing this evidence is competent, i.e., prima facie evidence of the facts and events recorded in it. For instance, the original of an enlistment paper, the physical examination paper, outline figure card and finger-print card, and the original morning report sheet are competent evidence of the facts recited in them. By authority of the War Department order, properly authenticated copies of these papers may be admitted in evidence equally with the original. (See par. 238.) A descriptive and assignment card, however, is not an original paper. All the information it contains is compiled from other original sources, and therefore it is not evidence of the facts recited in it.

240. Comparison of Handwriting. The common-law rule of evidence would not permit a comparison of handwriting unless the writing to be used as a standard was properly in the case for other purposes than mere comparison.

This rule was changed by act of Congress approved February 26, 1913 (37 Stat., 683), which provides—

That in any proceeding before a court or judicial officer of the United States where the genuineness of the handwriting of any person may be involved, any admitted or proved handwriting of such person shall be competent evidence as a basis for comparison by witnesses, or by the jury, court, or officer conducting such proceeding to prove or disprove such genuineness.

But before admitting such specimens of handwriting, satisfactory evidence should be offered as to the genuineness of the same.

The rule prescribed by Congress will govern in courts-martial procedure.

241. Use of Memoranda. Memoranda may be used to aid the memory or to supply facts once known but now forgotten. Memoranda are therefore of two sorts: First, if the witness does not actually remember the facts but relies on the memorandum exclusively (as in the case of a bookkeeper using an old account book), then the witness must be able to guarantee that the record accurately represented his knowledge and recollection at the time of its making, but it is not necessary that he should himself have made the record if he can state from his present recollection that it was correct when made and the entries must have been made at or near the time, and the recollection at such time must have been fresh as to the facts recorded. Second, if the witness can actually remember the facts and merely needs the memorandum to stimulate or revive his memory, or a part of it, then the above limitations do not strictly apply. But the court should see to it that no attempt is made to use such a paper to impose a false memory on the court under guise of refreshing it.

The memorandum to be used must always, on demand, be shown to the opponent for purposes of inspection and cross-examination, and fairness and justice require that where a memorandum is consulted before trial for refreshing a witness's recollection, statement should be made by the judge advocate or counsel to that effect, and the memorandum should be brought into court by the side whose witness has so consulted it.

242. Memorandum as Evidence. Where a memorandum does not serve to refresh the recollection of the witness, but he can state that it was made when his memory was fresh and can give the guaranty of accuracy and recollection called for by the preceding section, the memorandum itself will be admissible. Where the witness's certainty rests on his usual habit or course of business in making memoranda or records, it is sufficient.

243. Memorandum for Refreshing Recollection. Where a witness states that the memorandum to be used refreshes his recollection to the extent of his now remembering the data contained therein, the common rule is to have him testify as to such facts without admitting in evidence the memorandum itself.

244. Books of Account. Entries in books of account, where such books are proven to have been kept in the regular course of business, and the entrant is dead, insane, out of the jurisdiction of the court, or otherwise unavailable to testify, are admissible as evidence. Also the lack of an entry in a series of written entries is admissible as an implied statement that no events occurred of the kind that would have been recorded.

Where the entrant is available to testify in court, books of account will be used, just as memoranda are used for the purpose of refreshing the recollection of the witness, and may be introduced in evidence in connection with his testimony.

Where the entrant only records an oral report or written memorandum made in the regular course of business by another person or persons, such other person or persons, if available, must be called to testify.

The original document of entry must be produced or accounted for. Where

a composite entry is used, the extent to which intermediate memoranda must be produced depends on the circumstances of each case. As between ledger and daybook or other kinds, the book required is that which contains the first regular and collected record of the transactions. (Wigmore, sec. 1530.)

245. Maps, Photographs, Etc. Maps, photographs, sketches, etc., as to localities, wounds, etc., are admissible as evidence when properly verified by the party that made them or when coming from official sources that are a guaranty of truthfulness and accuracy. This character of evidence is capable of gross misrepresentation of facts and should be carefully scrutinized. Finger prints, upon such verification or guaranty, are admissible.

SECTION V.

EXAMINATION OF WITNESSES.

246. Witnesses Examined Apart From Each Other. Witnesses, after having been first sworn as provided in par. 134, are usually examined apart from each other, no witness being allowed to be present during the examination of another who is called before him. But this rule is not inflexible; it is in practice subject to the discretion of the court, nor is it ever so rigidly observed as to exclude the testimony of a person because he has been present at the examination of other witnesses.

247. Objections to Competency; When Made. Any objection to the witness's competency should be made before he is sworn. If his incompetency should later appear, however, a valid objection should be sustained.

248. Number of Witnesses Required. Though there are occasional dangers in trusting to a single witness, the testimony of a single qualified witness to the facts in issue would suffice to sustain a conviction, except as to (1) treason, where there must be two witnesses testifying credibly to the same overt act, or (2) perjury, where there must be either (a) a second witness to the falsity alleged or (b) a corroboration of a single witness by some other form of evidence. The rule as to perjury does not apply, however, where the falsity can be inferred from a contradictory statement made by the accused. (Wigmore's P. C., 338, 339.) For instance, where a person is charged with a perjury as to facts directly disproved by documentary or written testimony springing from himself, with circumstances showing the corrupt intent; in cases where the perjury charged is contradicted by a public record, proved to have been well known to the defendant when he took the oath; and in cases where the false swearing can be proved by his own letters relating to the fact sworn to, or by other written testimony existing and being found in the possession of a defendant and which has been treated by him as containing the evidence of the fact recited in it. (U. S. v. Wood, 14 Pet., 430.)

(See par. 224 as to corroboration of an accomplice and see par. 225 as to corroboration of a confession.)

249. Order of Examination of Witnesses. While the proper and usual order and sequence of examination of witnesses contemplates that the witnesses for the prosecution shall be called first and then the witnesses for the accused, and afterwards the witnesses for the prosecution in rebuttal of testimony brought out by the accused, and then the witnesses for the accused in rebuttal of those last introduced by the prosecution, and then witnesses by the court; and that the method of examining each witness shall be direct examination, cross-examination, redirect examination, recross-examination, and examination by the court, the court may, in the interest of truth and justice, call or recall witnesses, or permit their recall at any stage of the proceedings; it

may permit material testimony to be introduced by either party quite out of its regular order and place, or permit a case once closed by either or both sides to be reopened for the introduction of testimony previously omitted, if convinced that such testimony is so material that its omission would leave the investigation incomplete. In all such cases both parties must be present, and any testimony thus received would be subject to cross-examination and rebuttal by the party to whom it may be adverse.

250. Direct Examination. The first question to be asked each witness, whether called for the prosecution or defense or by the court, will be, whether he knows the accused and if he does to state who he is. This question is always asked by the judge advocate. The accused having been identified the examination of the witness is continued by the person calling him. All questions and answers are recorded in full, and as far as possible in the exact language of the witness. If an objection is made to a question, the reason for the objection will be stated.

251. Cross-examination. In general the cross-examination must be limited to matters brought out by the direct examination of the witness, but in the discretion of the court exceptions may be made to this rule. As it is the purpose of the cross-examination to test the credibility of the witness it is permissible to investigate the situation of the witness with respect to the parties and to the subject of the litigation, his interest, his motives, inclinations, and prejudices, his means of obtaining a correct and certain knowledge of the facts to which he bears testimony, the manner in which he has used those means, his powers of discernment, memory, and description. Leading questions may be freely used on cross-examination. (Davis, p. 285.)

252. Redirect and Recross-examination. Ordinarily the redirect examination will be confined to matters brought out on the cross-examination, and the recross-examination will be confined to matters brought out on the redirect examination. But in these matters the court, in the interest of truth and justice, should be liberal in relaxing the rule.

253. Examination by the Court. The court or a member may ask questions of a witness when it is apparent that the examination of the witness already made has failed to bring out matters material to the issues, and for the same reasons a witness may be recalled or a new witness summoned by the court.

254. Leading Questions. Leading questions, that is, questions which suggest the answer it is desired the witness shall make, or which, embodying a material fact, are susceptible of being answered by a simple yes or no, should not be asked. For example, "Did you not see the accused leave his quarters with a bundle under his arm?" is a leading question. In such case the question should be "Did you see the accused?" If the answer is in the affirmative, add "What was he doing?" Again, for example, the question, "Did you hear the accused say he did not intend to come back?" would be leading. The proper form of the question should be: "Did the accused say anything?" If the answer is in the affirmative, add "State what he said." So, where a knife is introduced in evidence a witness should not be asked whether that is the knife he saw the accused stab Pvt. A with, but he should be asked whether he recognizes the knife, and if he does, where he saw it and what was done with it, etc. The following are the exceptions to the rule that leading questions will not be asked:

(1) Leading questions may be asked on cross-examination.

(2) To abridge the proceedings, the witness may be led at once to points on which he is to testify, and the admitted facts in the case may be recapitulated to him. The rule is therefore not applicable to that part of the examination of a witness which is merely introductory. For example, in a desertion case where the accused admits that on a certain day at a certain place he

was apprehended as a deserter by a policeman, the latter when on the stand may have his attention directed at once to the occasion by such a question as whether at a certain time and place he arrested the accused as a deserter. The witness having answered the question in the affirmative, in the next question he might properly be asked to state the details connected with the arrest. So in a case of disobedience of orders where there is no dispute that the alleged disobedience took place at a certain time and place and that it involved certain persons, the witness might properly be asked whether he was present at the place where and time when the accused was placed in arrest by a certain officer for not carrying out a certain order. The witness having answered in the affirmative, he may be asked to state all the circumstances.

(3) When the witness appears to be hostile to the party calling him or is manifestly unwilling to give evidence.

(4) When there is an erroneous statement in the testimony of the witness, evidently caused by want of recollection, which a suggestion may assist, as, for instance, where he misstates a date or an hour.

(5) Where, from the nature of the case, the mind of the witness can not be directed to the subject of the inquiry without a particular specification of it, as where he is called to contradict another witness who has testified that the accused made a certain statement on a certain occasion in the hearing of a number of soldiers, each of them may be asked whether he heard the accused make the statement.

The court, in its discretion, would be justified in allowing liberal departures from the rule.

255. Recalling of Witnesses. Where a witness is recalled to the witness stand he will not be sworn again, but will be reminded that he has been sworn in the case and is still under oath. A failure to so remind him, however, does not affect the validity of the trial and will not be ground for rejecting the testimony.

SECTION VI.

CREDIBILITY OF WITNESSES.

256. What Credibility Consists In. The credibility of a witness is his worthiness of belief, and is determined by his character, by the acuteness of his powers of observation, the accuracy and retentiveness of his memory, by his general manner in giving evidence, his relation to the matter in issue, his appearance and deportment, prejudices, by his general reputation for truth and veracity in the community where he lives, by comparison of his testimony with other statements made by him out of court, by comparison of his testimony with that of others, etc. From all these the court will draw its own conclusions as to the credibility of the witness, attaching only such weight to his evidence as all the facts seem to warrant. There may even be cases in which the court will reject all the testimony of a witness. This may be for any of the reasons set forth above. No statement will be made by the court of the weight given to any testimony or the amount rejected, except as it may desire to inform the reviewing authority of the reasons which have led to its findings.

257. Proof of Character by General Reputation. Where impeachment of a witness for bad character is undertaken it must be limited to proof of his general reputation for truth and veracity in the community in which he lives. For a military man this would mean the reputation that he bore amongst the members of his regiment or company, or amongst those stationed at a post, and, if stationed at or near a town, amongst the residents of the town. Personal observation as to his character is not admissible.

258. Conviction of Crime. Evidence of the conviction of any crime, even by a foreign tribunal and whether felony or misdemeanor, is admissible for the purpose of diminishing the credit due to his testimony. (1 Greenleaf, sec. 376.) It is allowable to ask a witness on cross-examination whether he has ever been convicted of a crime, but if he denies it, proof may only be made by copy of the record of his conviction.

259. Self-contradiction. Proof may be offered of inconsistent statements made by the witness on specific facts, but on collateral facts the inconsistency can not be evidenced by calling other witnesses to testify to his self-contradictory assertion.

Where, on cross-examination, a witness is questioned as to his self-contradictory statements, his attention should be called to the time, place, and surrounding circumstances and to the person to whom he is assumed to have made the contradictory statements.

Where the contradictory statement is contained in a writing, it need not be shown to the witness before questioning him about it.

260. Prejudice, Bias, Etc. Prejudice, bias, relationship, etc., may be shown to diminish the credibility of the witness, either by the testimony of other witnesses or by cross-examination of the witness himself. Such matters are never regarded as collateral.

261. Credibility of Accused as a Witness. If the accused testifies, his credibility as a witness may be attacked on any of the grounds stated in the preceding paragraphs.

262. Proof of Contradictory Statements Out of Court. The strict rule is that, before testimony can be admitted to prove that a witness has made out of court statements that are in conflict with his testimony in court, a foundation therefor must be laid by asking the witness on cross-examination whether he has not made on a certain occasion at a certain time or under certain circumstances the alleged contradictory statement. If the witness admits making such a contradictory statement he will be permitted to explain it. If he denies making it, evidence may be introduced to prove it.

SECTION VII.

DEPOSITIONS AND FORMER TESTIMONY.

263. Depositions Admissible. Depositions taken under the provision of A. W. 25 and 26 "may be read in evidence before any military court or commission in any case not capital or in any proceeding before a court of inquiry or a military court."

264. Depositions for Defense in Capital Cases. Deposition testimony may be adduced for the defense in capital cases. (A. W. 26.) Where the defense calls for such testimony in capital cases the witnesses may be cross-examined as fully as witnesses in a case not capital.

265. Objections as to Competency of Witness and Admissibility of Evidence. The same rules as to competency of witnesses and admissibility of evidence apply in the taking of evidence by deposition that apply in the examination of a witness before the court, except that a wider latitude than usual should be allowed as to leading questions.

If the interrogatories and cross-interrogatories for depositions are prepared for acceptance by the court, in open session, objection to the competency of the deponent, if grounds of objection are known at the time, as well as objections to questions, should be raised at such session, and ordinarily be passed upon by the court at that time. The court should, however, in the interests of justice,

entertain such objections when the depositions are offered in evidence, but might in a proper case call upon judge advocate or counsel for explanation as to why they had failed to make the objection at the proper time.

If the interrogatories and cross-interrogatories are agreed upon by both parties in advance of the assembling of the court—and this is the usual practice—objections to questions and to the admissibility of evidence will be made when the depositions are offered in evidence.

266. Examination of Deposition by Counsel. Upon receipt of the deposition the judge advocate will advise the accused or his counsel of that fact and will give them an opportunity to examine the deposition before the trial.

267. Reading of Depositions. Ordinarily depositions will be read to the court by the party in whose behalf they are taken, but if the accused is not represented by counsel the judge advocate will read to the court the deposition taken on his behalf, unless the accused requests to read them. After being read to the court a deposition will be properly marked for identification purposes and attached to the record, and the record will show that it has been introduced and read to the court.

268. Miscellaneous Provisions as to Depositions. The party at whose instance a deposition has been taken should not be permitted to introduce only such parts of the deposition as are favorable to him or as he may elect to use; he must offer the deposition in evidence as a whole or not offer it at all. If the party at whose instance a deposition has been taken decides not to put it in, it may be put in evidence by the other party.

269. Affidavits Not Admissible. Affidavits taken without notice and not as depositions under the provisions of A. W. 25 and 26 are in no case admissible as evidence unless expressly consented to by the judge advocate and the accused with full knowledge of his rights.

270. Certificate of Discharge. The "certificate of discharge" may be used by the defense, either before or after the findings, for proof of good character.

271. Statement of Service. The statement of service and number of previous convictions of the accused, as found in the upper quarter of the front page of the charge sheet, will not be permitted to be seen or examined by members of the general or special court-martial trying a soldier until after they have reached their findings. In the event of conviction the accused, if a soldier, will be asked whether such statement of service is correct, and such statement will be examined and considered by the court for the purpose of determining proper punishment in view of length of service.

The statement of service may be used by the defense, either before or after the findings, for proof of good character.

272. Former Testimony Before Court of Inquiry. The record of the proceedings of a court of inquiry may be read in evidence before any court-martial or military commission in any case not capital nor extending to the dismissal of an officer, and may also be read in evidence in any proceeding before a court of inquiry or a military board: Provided, That such evidence may be adduced by the defense in capital cases or cases extending to the dismissal of an officer. (A. W. 27.)

The ends of justice would require that the reasonable tests for admissibility laid down in par. 275, as to examination and cross-examination on the same issues and as to correctness and completeness of the record where former testimony before civil courts and courts-martial is offered, should be applied as to the admission of the record of a court of inquiry.

273. Evidence of Pardon. When a special plea in bar of trial, based on a pardon, is offered by the defense, the best evidence of such pardon, if in the nature of an individual pardon, will be the document signed by the President

himself, and, if in the nature of a general amnesty, by an official copy of the proclamation or order publishing such amnesty. If such document or order is not sufficiently explicit to determine whether or not the offense for which the accused is on trial is the same as that covered by the pardon, then other evidence must be introduced to fill the gap. Where the pardon is in the nature of a constructive pardon, the evidence will be of such facts and circumstances as it is contended constitute such pardon.

274. Evidence of Former Trial by Court-martial or Civil Court. Where a plea in bar of trial, based on a former trial by court-martial for the same offense, and conviction or acquittal of the same is offered for the defense, the best evidence of such conviction or acquittal will be the order of the reviewing authority publishing the case. Where such order is not sufficiently explicit to determine whether or not the offense for which the accused is on trial is the same as that the conviction or acquittal of which he pleads in bar, then the original court-martial record should be offered in evidence.

Where a plea in bar is on a former trial and conviction or acquittal by a Federal court—the action of a State or any other than a Federal court does not operate as a bar to second trial—the best evidence of such conviction or acquittal will be a duly certified copy of the indictment and findings and conviction or acquittal, given by the public officer whose duty it is to keep the original.

275. Former Testimony in Civil Courts and Courts-martial. Where a witness, who has testified in either a Federal or State court at a former trial on the same issues raised in the case on trial and was fully examined and cross-examined, is dead or is beyond the reach of the process of the court and his personal attendance can not be secured, then the stenographic report of his testimony, if proven to be correct and complete by the person by whom it was reported, will be admissible and may very properly be accorded the same weight as a deposition duly taken on notice. (Chicago, St. P., M. & O. Ry. Co. v. Myers, 80 Fed. Rep., 361, 365.) Ordinarily, however, this situation should be met by the judge advocate and counsel for accused procuring in advance of trial a transcript of the stenographer's notes, duly sworn to by him as correct and complete, and submitting it to the opposite party for his inspection. If acknowledged to be correct and complete, then such transcript will be received in evidence.

Where the testimony desired is of a witness who had testified in a former trial by court-martial, all conditions being approximately the same as those cited in the first paragraph of this section, the original court-martial record itself will be admissible, and the stenographic reporter will only be called where a question is raised as to the correctness or completeness of the recorded testimony.

SECTION VIII.

PRESUMPTIONS.

276. Presumptions. Presumptions constitute a large part of the law of evidence. They are of two kinds—presumptions of law and presumptions of fact.

277. Presumptions of Law. Broadly speaking, a presumption of law is a rule of law that when certain circumstances exist the court must presume certain other circumstances. Presumptions of law are divided into conclusive and disputable presumptions. In case of a conclusive presumption of law the presumption can not be contradicted. For example, all residents of a country are conclusively presumed to know its laws. This presumption is in force in the practice of courts-martial so far as concerns offenses that constitute civil crimes. (As to the modification of the rule as regards knowledge of the

Articles of War in case of recruits, see par. 282; as to intent, par. 281; as to ignorance of law, par. 282.) In case of a disputable presumption of law, the presumption can be contradicted. For example, it is presumed that a sane person intends the natural and probable consequences of his acts; a person is presumed to be innocent until proven guilty; all persons are presumed to be sane; persons acting as public officers are presumed to be legally in office and to properly perform their duties; and malice is presumed from the use of a deadly weapon. Evidence may be introduced to rebut such presumptions.

278. Presumptions of Fact. Presumptions of fact are nothing more than logical inferences, from facts already proved, as to the existence of other facts. This kind of a presumption is not made as a rule of law but as a matter of human reason. All evidence in a case, except that which directly proves the allegations in the specifications, leads at once to presumptions of fact. Such presumptions are the basis of all circumstantial evidence. (See par. 204.) It is in making such presumptions that the members of the court should especially exercise their common sense and their knowledge of human nature and the ways of the world. Facts in evidence showing a motive or absence of motive on the part of the accused, preparations or the absence of preparations for the commission of crime, a failure to account for suspicious circumstances, acts showing a criminal consciousness (as concealment, disguise, or flight), the suppression of evidence, the possession of weapons or instruments that might have been used in the commission of the offense, the possession soon after larceny or embezzlement of the articles stolen or embezzled, are a proper basis for presumptions of fact.

Also where the existence at one time of a certain condition or state of things of a continuing nature is shown, the general presumption arises that such condition or state continues to exist, until the contrary is shown, so long as is usual with conditions or things of that particular nature. For example, there is a presumption of continuance as to one's residence until a change is shown, also that one holding an office continues to hold it until the end of the term for which appointed or elected and that personal habits have not changed. There is a presumption of fact from the regular course of business in the Post Office Department that a letter when properly deposited in a post-office box or in the place in which letters for mailing are usually deposited, postage prepaid, is received by the addressee. The presumption with regard to the delivery of letters duly posted has been extended and applied to the delivery of telegrams deposited with a telegraph company for transmission; but delivery of the message to the telegraph company must of course be shown. There is also a presumption of fact that persons of the same name are the same person. The strength of this presumption will of course depend upon how common the name is and other circumstances.

279. Prima Facie Evidence. Prima facie evidence is that which suffices for the proof of a particular fact until contradicted and overcome by other evidence. In other words, prima facie evidence justifies the court in finding the facts presumed, but in view of the doctrine of reasonable doubt that always inures to the benefit of the accused from a consideration of all of the evidence presented the court is not required to find the facts presumed. The court may decide, for instance, that the prima facie evidence presented does not outweigh the presumption of innocence.

280. Intent in Connection With Crimes. In respect to the element of intent, crimes are distinguished as follows: Those in which a distinct and specific intent, independent of the mere act, is essential to constitute the offense, as murder, larceny, burglary, desertion, and mutiny; and those in which the act is the principal feature, the existence of the wrongful intent being simply infer-

able therefrom, as rape, perjury, sleeping on post, drunkenness on duty, neglect of duty. In cases of the former class the characteristic intent must be established affirmatively as a separate fact; in the latter class of cases it is only necessary to prove the unlawful act, for every man is presumed in law to have intended to do what he actually does; and the burden of proof is upon him to show the contrary. (Winthrop, p. 475.)

281. Intent in Military Cases. Military offenses being created by statute, the peculiar statutory intent described in the article, if there be one, must be alleged in the specification. The enlistments prohibited in A. W. 54, for example, must have been "knowingly" made in order to constitute an offense under the statute. It is similarly essential to some of the offenses described in A. W. 55, 56, and 57 that they be "knowingly" committed; offenses under A. W. 83 and 84 must have been committed "willfully" or "through neglect"; an officer quitting his post on tender of resignation must do so "with intent to absent himself permanently therefrom" to be triable for the offense described in A. W. 28; and an officer who refuses or "willfully neglects" to deliver an offender to the civil authorities upon application duly made by such authorities subjects himself by such refusal or willful neglect to the penalties set forth in A. W. 74. (Davis, 642.) In some instances, however, as in the offenses described in A. W. 61 and 86, no statutory intent is set forth in the article, and none need be alleged in the specifications. In other cases, while no intent is embodied in the article, a particular intent is necessary to the completeness of the offense, and though not set forth in the specification must be established in evidence. Such is the case with respect to the offense of desertion, the intent being not to return. But whether the intent that is presumed from the commission of an unlawful act or the specific one that must be proved raises a point in issue the accused in his defense may prove there was actually no intent. If the accused can substantiate such a defense, he must be acquitted or the grade of the offense reduced, as, for instance, from assault with intent to kill to assault. The usual defenses of this character in military practice are ignorance of military law, ignorance of fact, drunkenness, and insanity.

282. Ignorance of Law. Every person is usually presumed to know the provisions of Federal, State, and municipal law applicable to the community in which he lives, and a person subject to military law is presumed, in addition thereto, to know the statute law as particularly applicable to the Army, as well as Army regulations, the different manuals, orders, and circulars issued for the information and government of the Army. This really means that on grounds of public policy a person is responsible whether he knows the law or not. His ignorance is immaterial.

An exception may sometimes be made where enlisted men are charged with the knowledge of the Articles of War. This exception would be based primarily upon the fact that A. W. 110 makes it one of the features of enlistments into the military service that certain of the "Articles of War shall be read to every enlisted man at the time of, or within six days after, his enlistment." A. W. 109 enjoins that he shall take an enlistment oath in which, among other things, he swears that he will observe and obey military orders "according to the rules and Articles of War." While in the case of an old or reenlisted soldier, or one who had been for a considerable period in the service and had had a sufficient opportunity to inform himself as to the provisions of the code, a failure to have complied with the injunction of this article could scarcely constitute a defense, such failure might perhaps have this effect, or should usually at least act as an extenuation in the case of a recruit, especially one imperfectly

acquainted with the English language. In such a case it would certainly be admissible for the accused to show the fact, and if the offense charged was one of the criminality of which he could not, in his ignorance of military law, have been aware, or the gravity of which he could not have appreciated, the omission of the reading of the articles upon his enlistment would properly be regarded by the court, if not as a defense, certainly as a palliation of his misconduct. (Winthrop, p. 438.)

283. Ignorance of Fact. It is generally laid down that ignorance of fact excuses crime. But this must be an honest or innocent ignorance and not an ignorance which is the result of carelessness or fault. The theory, of course, is that where a bona fide ignorance of fact exists there would be an absence of the requisite wrongful intent. The general rule applies equally to military cases, and the ignorance, to constitute a defense therein, must appear not to have proceeded from any want of vigilance, or from failure to make the inquiries or obtain the information reasonably called for by the obligations and usages of the service. Thus a soldier who neglects to report for guard or other duty because ignorant of the fact that he has been duly detailed therefor is not guilty of a breach of A. W. 61 unless his ignorance is a result of his own neglect or wrongdoing (Winthrop, p. 436); and if the soldier should disobey an order given to him by an officer in civilian clothing without the officer having first stated to the soldier that he was an officer, where the soldier did not know that he was an officer nor have reason to believe that he was an officer, then his ignorance would be excuse for his act of disobedience which might otherwise have been a very serious offense. Of course, a soldier is presumed—it is his duty—to know the officers of his command where reasonable time and opportunity after joining the command are shown to have existed for this purpose.

[Note: See Insanity of accused, par. 219.]

284. Evidence of Desertion. Absence without leave is usually proved by the evidence of an officer or noncommissioned officer of the company of the accused to the effect that he was absent from his organization without authority for a certain period, but if such witnesses are not available it may be proved by the entries on the muster rolls. In making the latter kind of proof, that portion of the muster roll relating to the accused, or a copy of it certified by the officer having official custody thereof, showing the accused was absent without leave, beginning a certain date, and (if such is the case) was dropped as a deserter, should be attached to the proceedings as an exhibit. But the muster roll, even though it refers to the accused as a "deserter," is not complete evidence of desertion; it is evidence only of absence without leave, and it is still necessary for the judge advocate to prove an intent to remain permanently absent; that is, to desert.

The condition of absence without leave having once been shown to exist will be presumed to continue in the absence of evidence to the contrary until the accused came again under military control. It is therefore necessary to prove only that the accused went absent without leave a certain date and came under military control a certain date. During the intermediate time it is presumed he was absent without leave.

If the condition of absence without leave is much prolonged, and there is no satisfactory explanation of it, the court may be justified in presuming from that alone an intent to remain permanently absent. The presumption of such intent will be strengthened by such circumstances as that the accused attempted to dispose of his uniform or other property; that substantially all his clothes were

missing from his locker when his absence was discovered; that his civilian clothes were missing; that he attempted to board a train that took him away from his station; that he purchased a ticket for a distant point or was arrested or surrendered at a considerable distance from his station; that while absent he was in the neighborhood of military posts and did not surrender to the military authorities; that he was dissatisfied in his company or with the military service; that he had made remarks indicating an intention to desert the service; that he was under charges or had escaped from confinement at the time he absented himself; that just previous to absenting himself he stole or took without authority money, civilian clothes, or other property that would assist him in getting away, etc.

On the other hand, such incidents are not always inconsistent with a guilt of mere absence without leave. They should be carefully weighed by the court. Previous excellent and long service, the fact that none of the property of the accused was missing from his locker, and the fact that he was under the influence of intoxicating liquor or drugs when he absented himself, and that he continued for some time under their influence, etc., are incidents going to show there was not an intent to remain permanently absent.

The fact that a reward has been paid for the apprehension of the accused as a deserter neither proves nor disproves an intent to desert. So also the opinions of witnesses as to whether the accused intended to desert and statements from them that the accused is a "deserter" or "deserted" are not only incompetent, but are valueless for any purpose to prove desertion.

(a) Statutory Rules of Evidence. A. W. 28 provides that it shall be sufficient proof of the offense of desertion by an officer that, having tendered his resignation and prior to due notice of the acceptance of the same, he quits his post or proper duties without leave and with intent to absent himself permanently therefrom. And similarly in the case of a soldier, A. W. 29 provides that it shall be sufficient proof of desertion in his case when it is proved that, without having first received a regular discharge, he again enlists in the Army or in the militia when in the service of the United States, or in the Navy or Marine Corps of the United States, or in any foreign army; and shall be further proof of fraudulent enlistment where the enlistment is in one of the forces of the United States mentioned above.

285. Drunkenness as Showing Absence of Intent. It is a general rule of law that voluntary drunkenness is not an excuse for crime committed in that condition. But the question whether or not the accused was drunk at the time of the commission of the criminal act may be material as going to indicate what species or kind of offense was actually committed. Thus, there are crimes which can be consummated only where a peculiar and distinctive intent or a conscious deliberation or premeditation has concurred with the act which could not well be possessed or entertained by an intoxicated person. In such cases evidence of the drunken condition of the party at the time of the commission of the alleged crime is held admissible, not to excuse or extenuate the act as such, but to aid in determining whether, in view of the state of his mind, such act amounted to the specific crime charged or which of two or more crimes similar but distinguished in degree it really was in law. Thus, in cases of such offenses as larceny, robbery, burglary, and passing counterfeit money, which require for their commission a certain specific intent, evidence of drunkenness is admissible as indicating whether the offender was capable of entertaining this intent or whether his act was anything more than a mere battery, trespass, or mistake. So, upon an indictment for murder, testimony as to the drunkenness

of the accused at the time of the killing may ordinarily be admitted as indicating a mental excitement, confusion, or unconsciousness incompatible under the circumstances of the case with premeditation or a deliberate intent to take life and as reducing the crime to the grade of manslaughter. On the other hand, where, to constitute the legal crime, there is required no peculiar intent—no wrongful intent other than that inferable from the act itself—as in cases of assault and battery, rape, or arson, evidence that the offender was intoxicated would, strictly, not be admissible in defense. (Winthrop, p. 440.)

Where drunkenness is pleaded as an excuse for crime such excuse should be received with caution. Drunkenness is easily simulated. It is sometimes resorted to for the purpose of stimulating the nerves to the point of committing the act. Where premeditation and intent first exist, followed by voluntary drunkenness and the commission of the crime during such state of drunkenness, the necessary intent to commit the crime will be presumed, whatever the state of drunkenness at the time of its commission may have been.

286. Drunkenness in Military Cases. In military cases, the fact of the drunkenness of the accused, as indicating his state of mind at the time of the alleged offense, whether it may be considered as properly affecting the issue to be tried, or only the measure of punishment to be adjudged in the event of conviction, is in practice always admitted in evidence. And where a deliberate purpose or specific intent is necessary to constitute the offense, as in cases of disobedience of orders in violation of A. W. 64, desertion, mutiny, cowardice, or fraud in violation of A. W. 94, the drunkenness, if clearly shown in evidence to have been such as to have incapacitated the party from entertaining such purpose or intent, will ordinarily be treated as constituting a legal defense to the specific act charged.

In such cases, however, if the drunken act has involved a disorder or neglect of duty prejudicial to good order and military discipline the accused may be convicted of that offense under A. W. 96. (Winthrop, p. 441.)

287. Proof of Drunkenness. Upon a trial for drunkenness it is not essential to confine the testimony to a description of the conduct and demeanor of the accused, but it is admissible to ask a witness directly if the accused "was drunk," or for a witness to state that the accused "was drunk," on the occasion or under the circumstances charged. Such a statement is not viewed by the authorities as of the class of expressions of opinion which are properly ruled out on objection unless given by experts, but as a mere statement of a matter of observation, palpable to persons in general, and so, proper to be given by any witness as a fact in his knowledge. It is preferable that all witnesses introduced to prove drunkenness should describe the conduct and demeanor of the accused in addition to giving their opinion as to whether the accused was drunk.

288. Reasonable Doubt and Burden of Proof. In order to convict, the court must be satisfied, beyond a reasonable doubt, that the accused is guilty as charged.

By "reasonable doubt" is intended not fanciful or ingenious doubt or conjecture but substantial, honest, conscientious doubt suggested by the material evidence in the case. It is an honest, substantial misgiving, generated by insufficiency of proof. It is not a captious doubt, nor a doubt suggested by the ingenuity of counsel or jury and unwarranted by the testimony; nor is it a doubt born of a merciful inclination to permit the defendant to escape conviction, nor prompted by sympathy for him or those connected with him. The meaning of the rule is that the proof must be such as to exclude not every hypothesis or possibility of innocence, but any fair and rational hypothesis

except that of guilt; what is required being not an absolute or mathematical but a moral certainty. A court-martial which acquits because, upon the evidence, the accused may possibly be innocent falls as far short of appreciating the proper amount of proof required in a criminal trial as does a court which convicts because the accused is probably guilty. (Winthrop, p. 476.)

In trials before courts-martial the prosecution has upon it the burden of proving the guilt of the accused beyond a reasonable doubt, and, whatever the defense of the accused may be, this burden never changes. After the evidence is all in the court must be convinced beyond a reasonable doubt of every element necessary to constitute the offense in order to justify it in convicting the accused of the offense charged.

In collateral issues arising in the course of the trial as to the competency of witnesses, the admissibility of testimony, and the like, the burden of proof rests upon the party who alleges incompetency or objects to the admission of particular testimony. (Davis, p. 267.)

SECTION IX.

JUDICIAL NOTICE.

289. Judicial Notice. Courts will recognize the existence and truth of certain matters bearing upon the issue before them of their own motion and without requiring the production of evidence. Such acceptance is known as "taking judicial notice" of them. This is done as to all matters of law and all facts which are so notorious as to need no evidence. To the former class belong the laws which the court applies in the decision of the cases before it, including the Constitution, laws, and treaties of the United States, those of the State in which it sits, the common law, and the law of nations. They also take notice of the great seal of the United States, those of the several States, the seal of courts of record, notaries public, etc. Under the latter head they will take judicial notice of the ordinary divisions of time, of calendar and lunar months, of weeks and days, and of the hours of the day; of astronomical and physical facts; of the laws of nature, including their ordinary operations and consequences; of the Government of the United States and those of the several States and their heads; of war and peace; and of the great facts of history as recorded in the works of writers of standard authority. So in addition all courts-martial will take judicial notice of the organization of the Army, the statutes relating to the Army, the Army Regulations, the contents of the several manuals issued, the existence and situation of military departments, reservations, and posts, and the stations of troops as published to the Army, the fact that an officer belongs to a certain organization, etc. General and special orders, general court-martial orders, and bulletins of the War Department and the headquarters of the several military departments may ordinarily be proved by printed official copies in the usual form. A court-martial will in general properly take judicial notice of the printed order as genuine and correct. A court-martial, however, should not in general accept in evidence, if objected to, a printed or written order which has not been made public to the Army without some proof of its genuineness and official character. Special and summary courts will take judicial notice of the published orders of the regimental and post commander. Where the price of an article furnished by the Government is published to the Army in orders, bulletins, or price lists, it will not be necessary to prove the price, as the court will take judicial notice of it.

It is proper, although not necessary, for the judge advocate to state to the court that the price as set out in the charges is the same as that fixed by the order, bulletin, or price list. If the court is uncertain as to the fact which it is called upon to notice judicially, it may refer to any person or to any document or book of reference to satisfy itself with regard thereto, or it may refuse to take judicial notice of the fact unless and until the party calling upon it to do so shall produce such document or book of reference.

CHAPTER XII.

COURTS-MARTIAL—CONCLUDING INCIDENTS OF THE TRIAL.

SECTION I.

STATEMENTS AND ARGUMENTS.

290. Scope of Statement. After the introduction of evidence has been completed the accused, personally or by counsel, and whether or not he has testified as a witness, may make an unsworn verbal or written statement as to the case. If the statement is in writing it should be signed by the accused, or by counsel in his behalf, and appended to the record. The statement may consist of a brief summary or version of the evidence, with such explanation or allegation of motive, excuse, matter of extenuation, etc., as the party may desire to offer, or it may embrace, with the facts, a presentation also of the law of the case and an argument both upon the facts and the law. (Winthrop, p. 450.) Such statement is not testimony and, therefore, is not subject to cross-examination, but as a personal defense or argument, however, it may and properly should be taken into consideration by the court. (Digest, p. 506, V, H, 1.)

291. Freedom of Expression. A large freedom of expression in his statement to the court is allowable to an accused, especially in his comments upon the evidence. So, an accused may be permitted to reflect within reasonable limits upon the apparent animus of his accuser or prosecutor, though a superior officer and of high rank. But an attack upon such a superior of a personal character and not apposite to the facts of the case is not legitimate; nor is language of marked disrespect employed toward the court. Matter of this description may indeed be required by the court to be omitted by the accused as a condition to his continuing his address or filing it with the record. (Digest, p. 506, V, H, 3.)

292. Admissions. While the statement proper can not, as previously stated, be regarded as evidence, and the accused is not in general to be held bound by the argumentative declarations it contains, yet if he clearly and unequivocally admits in his statement certain facts material to the prosecution, such may properly be viewed by the court and reviewing authority in the case. Such facts must, of course, not be inconsistent with the plea. But admissions of this sort can scarcely in any event constitute a sufficient basis for a conviction unless supported by material testimony on the trial.

[Note: See Chap. IX, par. 154, as to procedure where, after a plea of guilty, the accused makes a statement inconsistent with his plea.]

293. Arguments. After the accused has made a statement, if any, arguments

may be presented to the court by the judge advocate, the accused, and his counsel. The judge advocate has the right to make the opening and closing argument, but the court, in its discretion, may permit the defense to answer any new matter in the closing argument of the judge advocate.

SECTION II.

FINDINGS.

294. Voting. After the statements and arguments, if any are made, have been concluded the court will proceed to its judgment which consists of the findings and sentence. Members of a general or special court-martial, in giving their votes, shall begin with the junior in rank. (A. W. 31.) The votes of the members must be based upon and governed by the testimony in the case considered in connection with the plea. The charges and specifications are voted upon in the same order that is followed in arraigning the accused, the first specification to the first charge being voted upon, then the second, third, and thereafter in order, followed by a vote upon the charge itself; and so on with the other charges. A tie vote on a finding is a finding of not guilty.

[Note: For refusal to vote a member is chargeable under A. W. 96, see Chap. VII, par. 90.]

295. Majority Necessary to Convict—Exception. All convictions whether by general or special court-martial may be determined by a majority of the members present, except that no person shall by general court-martial be convicted of an offense for which the death penalty is made mandatory by law, unless by the concurrence of two-thirds of the members of said court-martial and for an offense in the Articles of War expressly made punishable by death. (A. W. 43.)

296. Reasonable Doubt. Where issues arise during the progress of a trial, as for instance as to the competency of members or witnesses, and evidence is taken, the question at issue is determined by preponderance of evidence; but in order to convict of the charges and specifications or any part of them the court must be satisfied of the guilt of the accused beyond a reasonable doubt.

[Note: For description of reasonable doubt, see Chap. XI, par. 288.]

297. General Principles Controlling Findings. The finding on the charge should be supported by the finding on the specification (or specifications), and the two findings should be consistent with each other. A finding of guilty on the charge would be quite inconsistent with a finding of not guilty on the specification. So a finding of guilty on a well-pleaded specification apposite to the charge, followed by a finding of not guilty either of the article charged or of some other proper article, would be an incongruous verdict. No matter how many specifications there may be, it requires a finding of guilty on but one specification (apposite to the charge) to support a similar finding upon the charge. (Digest, p. 536, XII, A, 2.) Evidence can not be taken after a finding has been reached.

298. Guilty of a Lesser Included Offense. If the evidence proves the commission of an offense which is included in that with which the accused is charged the court may except words of the specification, and if necessary substitute others instead, pronounce the innocence and guilt of the excepted and substituted words, respectively, and then find the accused either guilty of the charge or not guilty of the charge, but guilty of a violation of another proper article of war as the finding on the specification may require. Of this form of

verdict the most familiar is the finding of guilty of absence without leave under a charge of desertion. In such a case the court should find as follows where the charges are in the usual form:

Of the specification, guilty except the words "desert" and "in desertion," substituting therefor respectively the words "absent himself without leave from" and "without leave," of the excepted words not guilty, of the substituted words guilty.

Of the charge, not guilty but guilty of violation of the sixty-first article of war.

[Note: For a discussion of the incidental power of appointing and confirming the authorities to approve and confirm a finding of guilty of a lesser included offense see Chap. XVI, pars. 377 and 379.]

299. Guilty With Exceptions and Substitutions. It is a peculiarity of the finding at military law that a court-martial, where of opinion that any portion of the allegations in a specification is not proved, is authorized to find the accused guilty of a part of a specification only, excepting the remainder; or, in finding him guilty of the whole (or any part), to substitute correct words or allegations in the place of such as are shown by the evidence to be incorrect. And provided the exceptions or substitutions leave the specification still appropriate to the charge and legally sufficient thereunder, the court may then properly find the accused guilty of the charge in the usual manner. Familiar instances of the exercise of the authority to except and substitute in a finding of guilty occur in cases where, in the specification, the name or rank of the accused or some other person is erroneously designated, or there is an erroneous averment of time or place, or a mistaken date, or an incorrect statement as to amount, quantity, quality, or other particular, of funds or other property. But the authority to find guilty of a lesser included offense, or otherwise to make exceptions and substitutions in the findings, does not justify the conviction of the accused of an offense entirely separate and distinct in its nature from that charged, thus "selling" and "through neglect losing" property are separate offenses, though each is a violation of A. W. 84.

300. Substitution of General for Specific Article in the Charge. Another legal and now common form of finding is where an accused is charged with an offense, made punishable by an article of war other than the ninety-sixth (as for instance the ninety-fifth article), and the court is of the opinion that, while the material allegations in the specification are proved, they do not fully sustain the charge as laid, but do clearly constitute a violation of the ninety-sixth article of war. In this case the accused may properly be found guilty of the specification and not guilty of the charge, but guilty of "violation of the ninety-sixth article of war." It should be remembered, however, that the court can not in its findings legally substitute the ninety-sixth article of war for any other, unless the proof fails to substantiate the specification under the original charge.

301. Joint Charges. Where joint charges are tried, if one or more of the accused persons is acquitted and one or more is convicted, the findings should by proper exceptions eliminate the words showing that the acquitted person or persons was a joint participant in the offense, and should expressly acquit those persons whom it finds not guilty.

302. Reasons for Findings. A court-martial may spread upon the record of trial a brief statement of reasons upon which its findings are based. In many cases such a statement will aid the reviewing authority in determining the action to be taken by him.

303. Findings Where No Criminality is Involved. A finding of "guilty without criminality" is not consistent and should not be made. If the accused is found to have committed the act and done the things alleged in the specification, but without the guilty intent or knowledge essential to constitute the offense, the court should, as to the specification, find the accused "not guilty."

304. Findings Under Charge of Drunkenness. A person "under the influence of intoxicating liquor" or "intoxicated" is "drunk." Therefore, under the eighty-fifth article of war, in charging that the accused was found "drunk" the word "drunk" will be used. So in charging other offenses involving drunkenness no other word or phrase will be used as a substitute for "drunk." Under such charges the court should not in its findings substitute such phrases as "under the influence of intoxicating liquor" and "intoxicated" for "drunk."

305. Recording of Finding or Sentence by Reporter. A court-martial, member of court, or judge advocate can not, of course, lawfully communicate to a reporter or clerk, by allowing him to record the same or otherwise, the finding or sentence of the court. But the fact that the finding or sentence or both may have been made known to a reporter or clerk can not affect the legality of its proceedings or sentence. (Digest, p. 558, XIV, E, 7, g.)

SECTION III.

PREVIOUS CONVICTIONS.

306. Procedure as to Previous Convictions. Courts-martial will, in the case of a soldier, after a finding of guilty, be opened for the purpose of ascertaining whether evidence of previous convictions has been referred to the court by the appointing authority, and if so, of receiving it. The introduction and use of evidence of previous convictions will be limited to that pertaining to convictions by courts-martial of an offense or offenses committed by the accused during the current enlistment and within one year next preceding the commission of any of the offenses of which he stands convicted before the court. These convictions may be proved only by the records of previous trials and convictions or by duly authenticated copies of such records, or by duly authenticated copies of orders promulgating such trials and convictions. Copies of such records and orders promulgating such trials and convictions are duly authenticated through the impressed stamp of the bureau, office, or headquarters having custody of the original. The proper evidence of a previous conviction by summary court is a copy of the summary court record furnished to the company or other commander or one authenticated as an official copy by the signature of the commanding officer or his adjutant, or by the impressed stamp of the headquarters having custody of the original record and furnished for the purpose. In a trial by general court-martial, when the proof is the copy furnished to the company or other commander it will be returned to him and a certified copy of it attached to the record. The evidence of previous convictions referred to a special or summary court will, after trial, be returned to the appointing authority and will, after action by the latter on the case, be returned to the company or other command to which it pertains.

307. Character of Previous Convictions. By "previous conviction" is meant a previous conviction by a court-martial where the sentence has been approved by competent authority. A previous conviction by a civil or naval court, an acquittal, or an approved conviction by a court-martial that has been set aside as illegal is not a "previous conviction" as the phrase is used here. Previous

convictions are not limited to those for offenses similar to the one for which the accused is on trial. The object is to see if the accused is an old offender and therefore less entitled to leniency than if on trial for his first offense. This information might not be fully obtained if evidence of previous convictions of similar offenses only were laid before the court. The consideration of previous convictions has no bearing upon the question of guilt of the particular charge on trial, but only upon the amount and kind of punishment to be awarded. They are not considered until after the findings have been reached.

SECTION IV.

SENTENCES.

308. Voting. After the findings have been determined upon and resulted in a conviction upon the charge or some one at least of the charges when there are several, or in a conviction of a lesser offense included in the one charged, and, in the case of a soldier, the evidence of previous convictions, if any, have been introduced, the court proceeds to adjudge the sentence. In voting, the thirty-first article of war requires that the junior in rank shall vote first, and the votes are therefore taken in the inverse order of rank. Those members desiring to propose a sentence usually write it on a slip of paper and hand it to the president. The president reads the proposed sentences to the court and the members vote on them in order, beginning with the lightest, until a majority present, or, in cases where the death penalty is mandatory, two-thirds of the members of the general court-martial, agree upon a sentence. (See A. W. 43.) Even in a case where the punishment is fixed, as, for instance, under the eighty-second article where the punishment for lurking or acting as a spy is death, and under the ninety-fifth article where the punishment is dismissal, the members must by vote impose this punishment. All the members of the court, those who voted for an acquittal equally with those who voted for conviction, should vote for some sentence.

309. Mandatory and Discretionary Punishments. Punishment, under the Articles of War, is either mandatory, that is, a certain punishment is prescribed by the terms of the article, or is discretionary, that is, it is left to the discretion of the court-martial. If the punishment is prescribed in the article violated, any other punishment than that prescribed is illegal. For instance the punishment imposed by a court for a violation of the ninety-fifth article of war must be dismissal, it can not be less and it can not be more, though a conviction under other articles at the same trial might authorize the inclusion of other forms of punishment in the sentence. Before pronouncing sentence, the court should, therefore, examine the article violated to see what punishment may be legally awarded. As to discretionary punishments the President, by virtue of an act of Congress, has by executive order prescribed maximum limits of punishment for certain offenses when committed by soldiers. The latest order is found in Chapter XIII, par. 349. If the punishment is discretionary the court, before proceeding to award a punishment, will ascertain whether a limit is fixed in the order, and if no limit is fixed the court may impose any punishment that is sanctioned by the custom of the service.

[Note: See mandatory and discretionary punishment, Chap. IV, Sec. II, par. 40.]

310. Sentences for Officers. For officers the legal sentences by court-martial, depending on the nature of the offense, include death, dismissal with confine-

ment at hard labor, dismissal, loss of rank, suspension from rank, command, or duty, with or without loss of pay or part of pay, fine or forfeiture of pay, confinement to limits of post or reservation, reprimand, and admonition.

[Note: Immediately upon the promulgation of any sentence of court-martial in the case of a commissioned officer involving suspension from rank and command, confinement, reduction in lineal rank, or any other material change in the officer's status, the commander who has authority to approve such sentence and carry it into execution will advise The Adjutant General of the Army, by telegraph, of the sentence imposed as approved or mitigated and the date of promulgation thereof. (G. O. No. 6, War Dept., 1910.)]

311. Sentences for Soldiers. For soldiers, the legal sentences, depending on the nature of the offense and the jurisdiction of the court, include death, dishonorable discharge, confinement at hard labor, hard labor without confinement, forfeiture of pay, detention of pay, and reprimand; for noncommissioned officers, reduction to the ranks; for privates, first class, reduction to second-class privates and privates; for cooks of the Quartermaster Corps (where sentence is imposed by a general court-martial) reduction to the ranks; and for those holding a certificate of eligibility to promotion, deprivation of all rights and privileges arising from such a certificate.

[Note: 1. Confinement without hard labor should never be imposed. 2. For forms for sentences, see Appendix 9.]

312. Dismissal. Under the article of war which prescribes the sentence of dismissal upon conviction, no punishment in addition to dismissal is authorized. Therefore no punishment in addition to dismissal can legally be imposed upon conviction of an offense under the ninety-fifth article of war alone.

[Note: For statement by whom a sentence of dismissal or dishonorable discharge imposed by National Guard courts-martial, not in the service of the United States, must be approved, see sec. 107, act of June 3, 1916; 39 Stat., 166; Appendix 2, post.]

313. Loss of Rank. Loss of rank is accomplished by a sentence directing that an accused be placed at the foot of the list of officers of his grade and arm, or that he remain at the foot of such list until he shall have lost a certain number of files, or for a certain length of time, or that he lose a certain number of files, or that his name shall appear in the lineal list of officers of his arm next below that of a certain officer named.

314. Suspension From Rank. Suspension from rank includes suspension from command. It deprives an officer of the right to promotion to a vacancy in a higher grade occurring pending the term of suspension and which he would have been entitled to receive by virtue of seniority had he not been suspended. It does not, however, deprive the officer of the right to rise in files in his grade. Suspension from rank also makes an officer ineligible to sit upon a court-martial, court of inquiry, or military board, and deprives him of privileges that depend on rank, such as the selection of quarters.

315. Suspension From Command. This punishment merely deprives the officer of authority to exercise his proper military command and, consequently, of his right to give orders to or exact obedience from his juniors or perform any other duties that go with the exercise of command. It does not affect his right of promotion or any military rights or privileges other than those attaching to command. It is therefore not an appropriate punishment for a staff officer.

316. Suspension From Duty. Suspension from duty is practically equivalent to a sentence of suspension from command. It is appropriate in the case of an officer holding a position involving the performance of administrative duty,

as distinguished from actual military command, as in the case of officers of the staff.

317. Fine. A fine is distinguished from a forfeiture in that it is a punishment which imposes a pecuniary liability in general, not necessarily affecting pay. It is especially recognized as a form of punishment in the ninety-fourth article of war. It is usually accompanied in the sentence by a provision, in order to enforce collection, that the person fined shall be imprisoned until the fine is paid or until a fixed portion of time considered as an equivalent punishment has expired. Fines as well as forfeitures accrue to the United States and can not be imposed or collected for the benefit of any individual.

318. Reprimand. This sentence is usually awarded to officers only and for minor offenses where a mild penalty is to be inflicted. In general it is not appropriate for enlisted men, but is authorized in the cases of noncommissioned officers. The proper authority to administer the reprimand is the reviewing authority, and he may vary it in severity or mildness, according to his views of the case.

319. Confinement to Limits of Post or Reservation. This form of punishment is rather a deprivation of a privilege than confinement. Where it is imposed on an officer on duty with troops it is customary to so qualify it as to enable him to take part in maneuvers, practice marches, and perform other duties connected with his command.

320. Dishonorable Discharge. A dishonorable discharge can be imposed only pursuant to a sentence of a general court-martial. The discharge should be dated as of the day on which the order promulgating such approval is received at the post where the soldier is held. A sentence adjudging a dishonorable discharge to take effect at such period during a term of confinement as may be designated by the reviewing authority is illegal.

321. Suspension of Dishonorable Discharge. Members of a court-martial may properly recommend, in a communication made separately but forwarded to the reviewing authority with the record, that sentence of dishonorable discharge be suspended. (See par. 332.)

322. Confinement at Hard Labor. In the case of officers this punishment is imposed only in connection with a sentence of dismissal. Where "hard labor" is intended, it should be stated in the sentence, but the omission of these words will not prevent such punishment being required where it is authorized in the maximum-punishment order. (See A. W. 37.)

[Note: Chap. XVI, Sec. I, pars. 396-398, state the rules as to whether a post, the United States Disciplinary Barracks or one of its branches, or a penitentiary shall be designated as the place of confinement.]

323. Hard Labor Without Confinement. This punishment is regulated by the provisions of the Executive order fixing the maximum limits of punishment, Chapter XIII, Section VI, par. 349.

324. Forfeiture of Pay and Allowances. Pay and allowances can not be forfeited in a sentence by implication. If the court intends to forfeit pay or pay and allowances, the penalty of forfeiture should be adjudged in express terms in the sentence. No other punishment imposable by court-martial—not even a sentence of death, dismissal, suspension, dishonorable discharge, or imprisonment—involves of itself a forfeiture or deprivation of any part of the pay or allowances due the party at the time of the approval or taking effect of the sentence. It is not customary to provide in sentences for a forfeiture of allowances unless the sentence also imposes a dishonorable discharge and forfeiture of pay. A sentence of forfeiture of a certain number of days' pay, or two-thirds of a soldier's pay for a certain period, does not forfeit extra-duty pay. (Digest, p. 544, XII, B, 3, e (1); Bul. 18, War Dept., 1915, pp. 8, 9.)

325. Courts Can Not Stop Pay in Favor of Government or an Individual. A court-martial can direct a forfeiture only in favor of the United States, and can not assign the pay of a soldier to any other person; nor can a soldier be required to receipt for money paid without his consent. A sentence can not appropriate, or stop pay for the reimbursement or benefit of the Government or a Government agency, such as a company fund, post fund, hospital fund, nor of an individual civil or military, however justly the same may be due him, either for money borrowed, stolen, or embezzled by the accused or to satisfy any other pecuniary liability of the accused, whether in the nature of debt or damages. The "stoppage" of pay to reimburse the Government or a Government agency on account of losses for which officers and enlisted men are responsible is purely an administrative matter with which courts-martial have nothing to do. Sentences providing that a soldier shall be dishonorably discharged, forfeiting all pay and allowances due or to become due, "except such amounts as may be due the post exchange, Fort ———, and the company fund, Company ———, ——— Infantry," in no way hasten or facilitate the settlement of the debts due the exchange or company fund. Such matters in a sentence are mere surplusage.

326. Forfeiture of Deposits. Deposits of soldiers and interest thereon are forfeited by desertion, but the forfeiture can not be imposed by sentence of a court-martial. They are exempt from liability to meet a sentence of a court-martial imposing forfeiture of pay or allowances. A sentence that a soldier shall deposit a certain part of his pay is illegal. (Digest, p. 547, XII, B, 4, c.)

327. Reduction of Noncommissioned Officer. This punishment is regulated by the provisions of the Executive order fixing maximum limits of punishment, Chapter XIII, Section VI, par. 349.

328. Detention of Pay. This punishment was revived by the Executive order of September 5, 1914, fixing the maximum limits of punishment, and is regulated by the provisions of the Executive order contained in Chapter XIII, Section VI, par. 349.

329. When Reward for Apprehending Deserter Not to be Stopped. If a soldier be brought to trial under a charge of desertion and acquitted, or convicted of absence without leave only, any amount paid as a reward for his arrest will not be stopped against his pay, and a sentence providing for such a stoppage is not authorized.

330. Sentences of General Prisoners. Courts-martial in imposing sentences upon general prisoners are restricted to imposing additional confinement at hard labor to be served upon the completion or termination of their existing sentences, and will not interfere with the manner of executing such sentences by prescribing loss of good-conduct time, solitary confinement, or confinement on bread-and-water diet, leaving all such punishments to be imposed by the commanding officer as the ordinary means of enforcing discipline.

331. Reasons for Sentence. A court-martial may spread upon the record of trial a brief statement of reasons upon which its sentence is based. In many cases such a statement will aid the reviewing authority in determining the action to be taken by him.

332. Recommendations to Clemency. When a court-martial, or any member thereof, desires to submit a recommendation to clemency, including a recommendation for the suspension of the whole or of any part of the sentence imposed by the court, such recommendation will be signed by each member of the court desiring to participate therein. The communication carrying the recommendation will include a statement in succinct form of the reasons upon which the recommendation is based and will be appended to the record of trial. (See par. 357 (d).)

CHAPTER XIII. COURTS-MARTIAL—PUNISHMENTS.

SECTION I.

DISCIPLINARY POWER OF COMMANDING OFFICER.

333. Authority For. While courts-martial are the judicial machinery provided by law for the trial of military offenses, the law also recognizes that the legal power of command, when wisely and justly exercised to that end, is a powerful agency for the maintenance of discipline. Courts-martial and the disciplinary powers of commanding officers have their respective fields in which they most effectually function. The tendency, however, is to resort unnecessarily to courts-martial. To invoke court-martial jurisdiction rather than to exercise this power of command in matters to which it is peculiarly applicable and effective, is to choose the wrong instrument, disturb unnecessarily military functions, injure rather than maintain discipline, and fail to exercise an authority the use of which develops and increases the capacity for command.

Legal sanction is now given to the exercise of such disciplinary power by the following article of war:

"Art. 104. Under such regulations as the President may prescribe, and which he may from time to time revoke, alter, or add to, the commanding officer of any detachment, company, or higher command may, for minor offenses not denied by the accused, impose disciplinary punishments upon persons of his command without the intervention of a court-martial, unless the accused demands trial by court-martial.

"The disciplinary punishments authorized by this article may include admonition, reprimand, withholding of privileges, extra fatigue, and restriction to certain specified limits, but shall not include forfeiture of pay or confinement under guard. A person punished under authority of this article who deems his punishment unjust or disproportionate to the offense may, through the proper channel, appeal to the next superior authority, but may in the meantime be required to undergo the punishment adjudged. The commanding officer who imposes the punishment, his successor in command, and superior authority shall have power to mitigate or remit any unexecuted portion of the punishment. The imposition and enforcement of disciplinary punishment under authority of this article for any act or omission shall not be a bar to trial by court-martial for a crime or offense growing out of the same act or omission; but the fact that a disciplinary punishment has been enforced may be shown by the accused upon trial, and when so shown shall be considered in determining the measure of punishment to be adjudged in the event of a finding of guilty."

While commanding officers should always use their utmost influence to prevent breaches of discipline and compose conditions likely to give rise to such breaches, they should also impose and enforce the disciplinary punishment authorized by the above article. This authority, involving the power, judgment, and discretion of the commander, can not be delegated to or in any manner participated in by others, but must be exercised by the commander upon his own judgment and in strict compliance with the article and the regulations prescribed by the President pursuant thereto. Accordingly, the commanding officer of a detachment, company, or higher command will usually dispose of, and may award disciplinary punishment for, any offense committed by any enlisted man of his command which would ordinarily be

disposed of by summary court-martial, when the accused does not deny that he committed the offense and does not demand trial by court-martial before the commanding officer has made and announced his decision in the case.

334. Record of Punishment. For each punishment awarded, the commander will cause a brief record to be made showing—

(a) Name of accused.

(b) Brief statement of offense, including time and place.

(c) Statement as to whether or not accused demanded trial by court-martial. To be effective such demand must be made before award of punishment by commanding officer.

(d) Disposition of case, with date and punishment awarded, if any.

(e) Whether or not appeal was made to higher authority.

(f) Decision of higher authority on appeal.

(g) Whether or not accused was required to serve punishment pending appeal.

335. Appeals. If an appeal is made to the next superior authority it shall be in writing through the immediate commander awarding the punishment or his successor, who will immediately forward it to the superior with a copy of the record. An appeal shall consist of a brief statement signed by the accused, giving his reasons for regarding the punishment as unjust or disproportionate, and shall be accompanied by a like brief statement by the commander in support of the punishment awarded. The superior will, in passing upon the appeal, hear no witnesses and will consider no statements other than those forwarded with the appeal, but will be limited strictly to the consideration of the punishment awarded. He will be reluctant to disturb the award of punishment, but when justice clearly requires such action he may modify, set aside, or even increase the punishment awarded, but in no case will he award a different kind of punishment. After having considered the appeal he will return the record to the commanding officer from whom received, with a statement of his disposition of the case.

336. Not Limited to Soldiers. The power is not limited in its application, either in law or principle, to enlisted men, but may with propriety be applied as well to commissioned officers, especially those of junior grades. Obviously in the case of officers the occasion for such action will be less frequent, the variety of punishment available more restricted, and the selection of the most effectual punishment more perplexing, but when the best interests of discipline require such action it shall be taken with firmness and in no wise restrained by an unwarranted regard for the commissioned grade of the offender.

If the accused demands a court-martial, steps will promptly be taken to bring him to trial and notation of the demand will appear upon the charges.

SECTION II.

CONFINEMENT IN A PENITENTIARY.

337. When Authorized. The forty-second article of war follows the rules of the Federal Penal Code and practice respecting the imposition of penitentiary confinement in so far as they can be applied to court-martial procedure. Under the Federal Penal Code any offense is a felony which is punishable under the code or other statute of the United States by confinement in excess of one year. But no person may be confined in a penitentiary unless the punishment actually adjudged for an offense of which he has been convicted exceeds one year. Under civil procedure it is not permissible to join in a single indictment and trial offenses of a different nature. As a matter of practice,

also, confinement is never ordered to be executed in a penitentiary unless among the offenses upon which the sentence is awarded is found a felony; that is to say, an offense of a civil nature, separately punishable by confinement to exceed one year. The practical result is that no person is confined in a penitentiary unless both of the following conditions subsist:

(1) The confinement that could lawfully be awarded as punishment of some one of the offenses of which he stands convicted (if that conviction stood alone) would exceed one year.

(2) The confinement actually adjudged exceeds one year.

The ninety-third and ninety-sixth articles of war now confer upon courts-martial jurisdiction to try all crimes and offenses, not capital, of which persons subject to military law may be guilty. Under the military practice, dissimilar offenses may be joined in the same set of charges; convictions may be had on one set of charges joining crimes of a civil nature with purely military offenses, and a single sentence may be adjudged on all the convictions. Also, there are certain purely military offenses which are by statute made punishable by confinement in a penitentiary, regardless of the term of confinement imposed. Notwithstanding these departures from the practice of Federal courts, the jurisdiction granted to courts-martial to punish offenses of a civil nature ought not to be exercised with greater harshness than is practiced under the criminal jurisdiction of United States courts, and the analogies with the penal rules of those courts ought carefully to be maintained. The forty-second article of war and the following rules of practice which result from that article preserve these analogies as far as they can be preserved under court-martial procedure.

338. Classes of Sentences to be Executed in a Penitentiary. Sentences of the following classes may be executed in a penitentiary:

Class 1: Commutation of Death Sentence. Any confinement, whether more or less than a year, awarded by way of commutation of a death sentence, may be executed in a penitentiary; and this is true whether the offense for which the sentence of death was awarded was of a military or of a civil nature, and whether the sentence was awarded on conviction of a capital charge alone or on conviction on a capital charge coupled with conviction on other charges not capital.

Class 2: Military Offenses. A sentence of confinement awarded upon conviction of one or more of the military offenses enumerated in this class may be executed in a penitentiary, regardless of the length of the sentence imposed, but, in practice, a penitentiary should not be designated unless the confinement adjudged exceeds one year. However, if a conviction is had on several offenses, either military or civil in nature, one of which is included in this class, and the sentence adjudged on all the convictions together exceeds one year, the confinement may be executed in a penitentiary. The military offenses comprised in this class are:

- (a) Desertion in time of war.
- (b) Repeated desertion in time of peace.
- (c) Mutiny.

Class 3: Offenses of a Civil Nature. A sentence exceeding one year's confinement, awarded, either on conviction of any one or more of the several offenses of a civil nature described below, coupled with a conviction or convictions of one or more military offenses, may be executed in a penitentiary, if any one of the several offenses of a civil nature standing alone would be punishable by confinement exceeding one year by the limits of punishment order, or, if not covered by said order, then by the law denouncing the offense, or by any other Federal statute.

The civil offenses contemplated in class 3 are:

(a) An act or omission specified and denounced as an offense in the Penal Code of the United States.

(b) An act or omission specified and denounced as an offense in any other statute of the United States. This heading has reference particularly to penal provisions not properly separable from the administrative laws of the several branches and departments of government, and not included in the Penal Code. Such offenses will rarely be encountered in court-martial practice.

(c) An act or omission committed or omitted in any place over which the United States has exclusive jurisdiction as provided in the third paragraph of section 272, Penal Code of the United States, where such act is recognized as an offense by the law of the State, Territory, or District in which such place is situate, and when such act is not specifically denounced in the laws of Congress, but is adopted by section 289 of said code. Such offenses, known to local law and not specifically provided for by Federal law, will constitute a small class, infrequently encountered.

(d) An act or omission recognized as an offense at the common law as the same exists in the District of Columbia, wherever committed or omitted. The offenses under this head that may be encountered in court-martial practice include the offense of sodomy.

339. Authority for Penitentiary Sentence to be Cited. In each case tried by general court-martial in which a penitentiary is designated as the place of confinement of the person tried, the record of trial, when forwarded to the Judge Advocate General of the Army, will be accompanied by a signed statement indicating the law or laws authorizing the confinement in a penitentiary of the person sentenced.

In each case tried by general court-martial in which the confinement of the offender in a penitentiary is authorized by law, but in which a place other than a penitentiary is designated as the place of confinement, the record of trial, when forwarded to the Judge Advocate General of the Army, will be accompanied by a signed statement indicating the law authorizing the confinement in a penitentiary of the person sentenced and the reasons, briefly expressed, for designating a place other than a penitentiary, instead of a penitentiary, as the place of confinement in the particular case.

If the law relied upon as authorizing confinement in a penitentiary be a Federal statute an accurate citation will be regarded as sufficient to indicate the law, but if any other law is relied upon as authorizing such confinement, the law will be quoted in full in the required statement.

SECTION III.

WAR DEPARTMENT POLICY REGARDING PUNISHMENTS.

340. Desertion. The policy of the War Department respecting punishment for desertion was announced in General Orders, No. 77, War Department, June 10, 1911. Corrective confinement and forfeiture were suggested in cases of inexperienced soldiers who by surrender manifested a disposition to atone for their offenses. The number so punished and saved to the service has so increased each year that this policy has been enforced with fairly satisfactory results. In addition a limited number of this class of offenders has been restored to duty without trial under the provisions of A. R. 131.

Since that order was issued important changes have been introduced in our military penology. Purely military offenders serving sentences in the United States Disciplinary Barracks at Fort Leavenworth and its branches may

be restored to an honorable status and complete their enlistment. By the act of August 22, 1912 (37 Stat., 356), re-enlistment of this class of offenders is authorized with the approval, in each case, of the Secretary of War. Under the provisions of the act of April 27, 1914 (38 Stat., 354), dishonorable discharge may be suspended with a view to restoration to duty by remission thereof should the conduct of the offender warrant. There are now additional means of saving men to the colors—men whose offenses are thoughtless acts due to youth or inexperience or committed under some special stress, and for these reasons have in them less of the element of culpability. Supplementing these methods is the establishment of disciplinary organizations at the United States Disciplinary Barracks where the offenders of this class who desire re-enlistment or restoration may receive an intensive practical training to fit them for efficient service from the moment of rejoining. It is confidently believed that men restored in this way will make better soldiers than those restored by the old methods, viz., without trial under A. R. 131 or with trial and a short period of corrective punishment.

These old methods may be continued in the limited number of cases where there are good grounds for belief that a soldier restored by such methods will creditably complete his enlistment period, but all doubtful cases should be sent before a court competent to adjudge dishonorable discharge and the longer periods of confinement, to the end that advantage may be taken of the more effective methods of reformation and training by hard labor and intensive practical military instruction now provided at the United States Disciplinary Barracks. These periods of confinement are graduated so as to prevent inequalities of punishment for like degrees of culpability and are sufficient, it is believed, to meet the ends of punishment where restoration to duty is not in contemplation. Where restoration is in contemplation, as in case of purely military offenders, including deserters, the period of confinement imposed is, under the new policy, in practical effect the maximum of an indeterminate sentence. In other words, the period for which the offender is held depends entirely upon himself. With good conduct and proper progress toward reform evidencing efficiency in training and fitness to resume service relations the sentence of confinement terminates and the honorable status of duty with the colors is resumed.

While it is the effect of this policy to mitigate the condition of the peace deserter who desires to redeem his record and earn an honorable restoration to duty with the colors, it carries no substantial mitigation as to other classes of deserters. Experience has not thus far demonstrated the wisdom of any change in the policy of severe punishment for this latter class. An engagement for military service has little in common with an ordinary private contract for personal service, and the fact that an individual may abandon such a contract with only minor consequences to himself furnishes no suggestion that a corresponding rule may be properly adopted in the Army. Nor does the fact that the early requirement of the common law that a call to civil office or civil employment under the Government could not be disregarded by the citizen, nor the obligations of such office or employment be laid down at his will, no longer obtains, furnish any such suggestion. An engagement for military service creates a special status, and many obligations flow from that status which are not obligations of the citizen in the civil service of the Government or under a private contract for personal service. Other closely related considerations inherent in the nature of military service support this view. The Army is an emergent arm of the public service which the Nation holds ready for a time of great peril. Military service is an obligation which every citizen owes the Government. It is settled law that such service may be com-

pelled, if necessary, by draft. Nor is the obligation of the soldier who volunteers for a fixed period different from that of the drafted soldier. By his act of volunteering he consecrates himself to the military service. His engagement, supported by an oath of allegiance, is that the Nation may depend upon him for such service during the fixed period, whatever may be the emergency. When this engagement is breached a high obligation to the Nation is disregarded, a solemn oath of allegiance is violated, and the Government is defrauded in the amount of its outlay incident to inducting the soldier into the military service, training, clothing, and caring for him while he remains in that service, and transporting him to the station from which he deserts. Desertion is thus seen to be, not simply a breach of contract for personal service, but a grave crime against the Government; in time of war perhaps the gravest that a soldier can commit, and at such times punishable with death. These facts furnish ample justification for a continuance of the policy of severe punishment for the offense of desertion in time of peace, subject only to the qualification that it should not be severe to the degree of barring an honorable restoration to duty of the thoughtless, young, or inexperienced offenders who desert and who, on return, manifest a desire to atone for their desertions and qualify themselves in character and training for such restoration by service in the disciplinary battalions and companies now organized at the United States Disciplinary Barracks.

341. Segregation of Prisoners. It is the policy of the War Department to separate, so far as practicable, general prisoners convicted of offenses punishable by penitentiary confinement from general prisoners convicted of purely military offenses or of misdemeanors in connection with purely military offenses. In furtherance of this policy, reviewing authorities will designate a penitentiary as the place of confinement of general prisoners sentenced to be confined for more than one year according to the rules laid down in Section II, *supra*, except in individual cases in which the proved circumstances show that the holding of the prisoners so convicted in barracks associations with misdemeanants and military offenders will not be to the detriment of the latter. For general prisoners to be confined in penitentiaries, reviewing authorities in the United States, Canal Zone, Hawaii, or the Philippine Islands will designate the United States penitentiary at Leavenworth, Kan., as the place of confinement, except that such prisoners as are residents of Hawaii, Porto Rico, and the Canal Zone may be confined in local penitentiaries, and reviewing authorities in the Philippine Islands will designate the penitentiary at Bilibid, Manila, P. I., as the place of confinement for prisoners who are residents of the Philippine Islands.

342. Adaptation of Punishments. In cases where the punishment is discretionary the best interests of the service and of society demand thoughtful application of the following principles: That because of the effect of confinement upon the soldier's self-respect confinement is not to be ordered when the interests of the service permit it to be avoided; that a man against whom there is no evidence of previous convictions for the same or similar offenses should be punished less severely than one who has offended repeatedly; that the presence or absence of extenuating or aggravating circumstances should be taken into consideration in determining the measure of punishment in any case; that the maximum limits of punishment authorized are to be applied only in cases in which, from the nature and circumstances of the offense and the general conduct of the offender, severe punishment appears to be necessary to meet the ends of discipline; and that in adjudging punishment the court should take into consideration the individual characteristics of the accused, with a view to determining the nature of the punishment best suited to pro-

duce the desired results in the case in question, as the individual factor in one case may be such that punishment of one kind would serve the ends of discipline, while in another case punishment of a different kind would be required. As an instance of the necessity for adapting punishment to the particular case under consideration, it is to be noted that prior experience with detention of pay by sentence of court-martial indicates that this form of punishment, while not generally applicable, was nevertheless found to be an effective means of restraint and discipline for a considerable number of offenders.

343. Relative Severity of Punishments. The usual punishments imposed upon soldiers are the following, beginning with the least severe:

- (1) Detention of pay,
- (2) Forfeiture of pay,
- (3) Reduction,
- (4) Hard labor without confinement,
- (5) Confinement at hard labor, and
- (6) Dishonorable discharge.

In the absence of evidence of two or more previous convictions, a minor offense, the nature of which appears to demand punishment by hard labor, should ordinarily be punished by hard labor without confinement, rather than by confinement at hard labor. For offenses properly punishable by detention of pay, forfeiture of pay, reduction, or hard labor without confinement, those forms of punishment should, as a rule, be resorted to before confinement at hard labor is imposed.

SECTION IV.

PROHIBITED PUNISHMENTS.

344. By Statute. Punishment by flogging, or by branding, marking, or tattooing on the body is prohibited. (A. W. 41.)

345. By Custom and Regulations. Many punishments formerly sanctioned have now, under a more enlightened spirit of penology, become so obsolete as to be effectually prohibited by custom without the necessity of regulations; among these, are carrying a loaded knapsack, wearing irons (both handcuffs and leg irons—these are now used only in exceptional cases for the purpose of preventing escape and not as a punishment), shaving the head, placarding, pillory, stocks, and tying up by the thumbs. To impose military duty in any form as a punishment must tend to degrade it, to the prejudice of the best interests of the service; such punishments, therefore, as imposing tours of guard duty or requiring a soldier to sound all calls at the post for a certain period, are forbidden. Solitary confinement on a bread and water diet and the placing of a prisoner in irons are regarded as means of enforcing prison discipline. They will not be imposed as a punishment by a court-martial.

SECTION V.

DEATH—COWARDICE—FRAUD.

346. Death Penalty. No person shall, by general court-martial, be convicted of an offense for which the death penalty is made mandatory by law, nor sentenced to suffer death, except by the concurrence of two-thirds of the members of said court-martial and for an offense in these articles expressly made punishable by death. (A. W. 43.) A court-martial, in imposing the sentence of death, should not designate the time and place for its execution,

such designation not being within its province, but pertaining to that of the reviewing or confirming authority. If it does so designate, this part of the sentence may be disregarded, and a different time and place be fixed by the reviewing or confirming authority. (Digest, p. 165, XCVI, B.) If the designated day passes without execution, the same authority, or his superior, may name another day. Death by hanging is considered more ignominious than death by shooting and is the usual method of execution designated in the case of spies, of persons guilty of murder in connection with mutiny, or sometimes for desertion in the face of the enemy; but in case of a purely military offense, as sleeping on post, such sentence when imposed is usually "to be shot to death with musketry." Hanging is the proper method of executing a death sentence when imposed for violation of A. W. 92. For the sake of example and to deter others from committing like offenses the death sentence may, when deemed advisable, be executed in the presence of the troops of the command.

347. Cowardice—Fraud—Accessory Penalty. When an officer is dismissed from the service for cowardice or fraud, the crime, punishment, name, and place of abode of the delinquent shall be published in the newspapers in and about the camp and in the State from which the offender came or where he usually resides; and after such publication it shall be scandalous for an officer to associate with him. (A. W. 44.) The terms "cowardice" and "fraud" as employed in this article refer mainly to the offenses made punishable by A. W. 75 and 94. With these, however, may be regarded as included all offenses in which fraud or cowardice is necessarily involved, though the same be not expressed in terms in the charge or specification. (Digest, p. 166, C, A.) The publication throughout the United States in press dispatches of "the crime, punishment, name, and place of abode" of the accused is a sufficient compliance with the article. (See Digest, p. 167, C, B.)

SECTION VI.

MAXIMUM LIMITS.

348. By Whom Prescribed. Whenever the punishment for a crime or offense made punishable by these articles is left to the discretion of the court-martial, the punishment shall not, in time of peace, exceed such limit or limits as the President may from time to time prescribe. (A. W. 45.)

349. Executive Order. The following Executive order becomes operative on March 1, 1917, as to offenses committed on and after that date and as to criminal acts, committed prior to that date, whose maximum punishment was not prescribed in the Executive order of September 5, 1914. The Executive order of September 5, 1914, published in General Orders, No. 70, War Department, 1914, prescribing limits of punishment, remains operative as to offenses committed before March 1, 1917, except as to criminal acts whose maximum punishment has been decreased by this order, which will not be followed by severer punishment than is hereinafter prescribed.

EXECUTIVE ORDER.

Under authority of an act of Congress approved September 27, 1890 (26 Stat., 491), as re-enacted in article 45 of section 3 of an act of Congress approved August 29, 1916 (39 Stat., 657), the following maximum limits, in time of peace, of punishment of soldiers are prescribed:

ARTICLE I

1347

*Dra
Kunze
als die
Chargen
bestimmen
von ein
der auf
einen
ersten Teil
und
zweite
Teil*

20

5

...20

ARTICLE I—Continued.

| Article of war. | Offenses. | Punishments. | | | | | |
|-----------------|---|--|----------------------------|---------|-------|--|--------------------|
| | | Dis-honor-able dis-charge, forfeiture of all pay and allowances due and to become due. | Confinement at hard labor. | | | For-feiture of two-thirds pay per month. | For-feiture of pay |
| | | | Years. | Months. | Days. | Months. | Days. |
| 61 | Leaving without permission the properly appointed place of assembly for, or place for: Athletic exercise..... Drill..... Fatigue..... Field exercise..... Gallery practice..... Guard mounting..... Horse exercise..... Inspection..... Instruction..... Mustering..... Parade..... Prison guard..... Review..... School..... Stable duty..... Target practice..... Reveille or retreat roll call..... | | | | | | 5 |
| 62 | Using contemptuous or disrespectful words against the President, Vice President, etc. | Yes..... | 1 | | | | 2 |
| 63 | Behaving with disrespect toward his superior officer. | | | 6 | | 6 | |
| 65 | Attempting to strike or attempting otherwise to assault a noncommissioned officer in the execution of his office. | | | 6 | | 6 | |
| | Behaving in an insubordinate or disrespectful manner toward a noncommissioned officer in the execution of his office. | | | 2 | | 2 | |
| | Disobedience, willful, of the lawful order of a noncommissioned officer in the execution of his office. | | | 6 | | 6 | |
| | Striking or otherwise assaulting a noncommissioned officer in the execution of his office. | Yes..... | 1 | | | | |
| | Threatening to strike or otherwise assault, or using other threatening language toward a noncommissioned officer in the execution of his office. | | | 4 | | 4 | |
| | Using insulting language toward a noncommissioned officer in the execution of his office. | | | 2 | | 2 | |
| 68 | Drawing a weapon upon a noncommissioned officer quelling a quarrel, fray, or disorder. | Yes..... | 5 | | | | |
| | Refusing to obey a noncommissioned officer quelling a quarrel, fray, or disorder. | Yes..... | 2 | | | | |
| | Threatening a noncommissioned officer quelling a quarrel, fray, or disorder. | | | 6 | | 6 | |
| 69 | Breach of arrest. | | | 1 | | 1 | |
| | Escaping from confinement. | Yes..... | 1 | | | | |
| 73 | Releasing, without proper authority, a prisoner committed to his charge. | Yes..... | 1 | | | | |
| | Suffering a prisoner committed to his charge to escape: | | | | | | |
| | Through design..... | Yes..... | 1 | | | | |
| | Through neglect..... | | | 6 | | 6 | |
| 83 | Suffering, through neglect, military property to be damaged, lost, spoiled, or wrongfully disposed of: | | | | | | |
| | Of a value of \$20 or less..... | | | 3 | | 3 | |
| | Of a value of \$50 or less and more than \$20..... | | | 6 | | 6 | |
| | Of a value of more than \$50..... | Yes..... | 1 | | | | |

ARTICLE I—Continued.

| Article of war. | Offenses. | Punishments. | | | | |
|-----------------|--|---|----------------------------|---------|-------|---|
| | | Dis-honor-able dis-charge, forfeiture of all pay and allow-ances due and to become due. | Confinement at hard labor. | | | For- feiture of two-thirds pay per month. |
| | | | Years. | Months. | Days. | |
| 83 | Suffering, willfully, military property to be damaged, lost, spoiled, or wrongfully disposed of: | | | | | |
| | Of a value of \$20 or less..... | Yes..... | | 6 | | 6 |
| | Of value of \$50 or less and more than \$20..... | Yes..... | 2 | 6 | | |
| 84 | Of a value of more than \$50..... | Yes..... | | | | |
| | Injuring or losing, through neglect, horse, arms, ammunition, accouterments, equipment, clothing, or other property issued for use in military service, or items belonging to two or more of said classes: | | | | | |
| | Of a value of \$20 or less..... | | | 3 | | 3 |
| | Of value of \$50 or less and more than \$20..... | Yes..... | 1 | 6 | | 6 |
| | Of a value of more than \$50..... | | | | | |
| | Injuring or losing, willfully, horse, arms, ammunition, accouterments, equipment, clothing, or other property issued for use in the military service, or items belonging to two or more of said classes: | | | | | |
| | Of a value of \$20 or less..... | Yes..... | | 6 | | 6 |
| | Of value of \$50 or less and more than \$20..... | Yes..... | 2 | 6 | | |
| | Of a value of more than \$50..... | Yes..... | | | | |
| | Selling or otherwise wrongfully disposing of horse, arms, ammunition, accouterments, equipment, clothing, or other property issued for use in the military service, or items belonging to two or more of said classes: | | | | | |
| | Of a value of \$20 or less..... | Yes..... | | 6 | | |
| | Of value of \$50 or less and more than \$20..... | Yes..... | 1 | | | |
| | Of a value of more than \$50..... | Yes..... | 5 | | | |
| 85 | Found drunk: | | | | | |
| | At formation for or at— | | | | | |
| | Athletic exercise..... | | | | | |
| | Drill..... | | | | | |
| | Fatigue..... | | | | | |
| | Field exercise..... | | | | | |
| | Gallery practice..... | | | | | |
| | Guard mounting..... | | | | | |
| | Horse exercise..... | | | | | |
| | Inspection..... | | | | | 20 |
| | Instruction..... | | | | | |
| | March..... | | | | | |
| | Muster..... | | | | | |
| | Parade..... | | | | | |
| | Review..... | | | | | |
| | School..... | | | | | |
| | Stable duty..... | | | | | |
| | Target practice..... | | | | | |
| | Reveille or retreat roll call..... | | | | | 5 |
| | On guard..... | | | 6 | | 6 |
| | On duty as— | | | | | |
| | Barrack orderly..... | | | | | |
| | Company clerk..... | | | | | |
| | Cook..... | | | | | |
| | Dining room orderly..... | | | | | |
| | Farrier..... | | | | | |
| | Horseshoer..... | | | | | |
| | Kitchen police..... | | | | | |
| | Mechanic..... | | | | | 20 |
| | Mess sergeant..... | | | | | |
| | Noncommissioned officer in charge of quarters..... | | | | | |
| | Saddler..... | | | | | |
| | Stable sergeant..... | | | | | |
| | Supply sergeant..... | | | | | |
| | Wagoner..... | | | | | |

ARTICLE I—Continued.

| Article of war. | Offenses. | Punishments. | | | | | |
|-----------------|---|---|----------------------------|---------|-------|---|----------------------|
| | | Dis-honor-able dis-charge, forfeiture of all pay and allow-ances due and to become due. | Confinement at hard labor. | | | For- feiture of two-thirds pay per month. | For- feiture of pay. |
| | | | Years. | Months. | Days. | Months. | Days. |
| 86 | Found drunk on post, sentinel..... | Yes..... | | 6 | | | |
| | Leaving before regularly relieved from or sleeping on post, sentinel..... | Yes..... | 1 | 1 | | | |
| 90 | Using a provoking or reproachful speech or gesture to another..... | | | 3 | | 3 | |
| 93 | Arson..... | Yes..... | 20 | | | | |
| | Assault: | | | | | | |
| | With intent to do bodily harm..... | Yes..... | 5 | | | | |
| | With intent to commit any felony except murder or rape..... | Yes..... | 10 | | | | |
| | With intent to commit murder or rape..... | Yes..... | 20 | | | | |
| | Burglary..... | Yes..... | 10 | | | | |
| | Embezzlement or larceny: | | | | | | |
| | Of property of a value of \$20 or less..... | Yes..... | | 6 | | | |
| | Of property of a value of \$50 or less, and more than \$20..... | Yes..... | 1 | | | | |
| | Of property of a value of more than \$50..... | Yes..... | 5 | | | | |
| | Manslaughter: | | | | | | |
| | Involuntary, in the commission of an unlawful act not amounting to a felony, or in the commission of a lawful act which might produce death, in an unlawful manner, or without due caution or circumspec- tion..... | Yes..... | 3 | | | | |
| | Voluntary, upon a sudden quarrel or heat of passion..... | Yes..... | 10 | | | | |
| | Perjury..... | Yes..... | 5 | | | | |
| | Robbery..... | Yes..... | 10 | | | | |
| 94 | Forging or counterfeiting a signature, mak- ing a false oath, and offenses related to either of these..... | Yes..... | 5 | | | | |
| | Other cases: | | | | | | |
| | When the amount involved is \$50 or less..... | Yes..... | 1 | | | | |
| | When the amount involved is more than \$50..... | Yes..... | 5 | | | | |
| 96 | Abandoning guard, by member thereof.... | | | 6 | | 6 | |
| | Abusing a public animal..... | | | 3 | | 3 | |
| | Allowing a prisoner to receive or obtain intoxicating liquor..... | | | 3 | | 3 | |
| | Appearing in civilian clothing without authority..... | | | | | | 10 |
| | Appearing in unclean uniform, or not in prescribed uniform, or in uniform worn otherwise than in manner prescribed..... | | | 1 | | 1 | |
| | Assault..... | | | 3 | | 3 | |
| | Assault and battery..... | | | 6 | | 6 | |
| | Attempting to escape from confinement.... | Yes..... | | 6 | | 6 | |
| | Attempting to strike or attempting other- wise to assault a sentinel in the execution of his duty..... | | | 6 | | 6 | |
| | Behaving in an insubordinate or disrespect- ful manner toward a sentinel in the execution of his duty..... | | | 1 | | 1 | |
| | Breach of restriction (other than quaran- tine) to command, quarters, station, or camp..... | | | 1 | | 1 | |
| | Carrying a concealed weapon..... | | | 3 | | 3 | |
| | Committing a nuisance..... | | | 3 | | 3 | |
| | Concealing, destroying, mutilating, oblit- erating, or removing willfully and unlaw- fully a public record, or taking and carry- ing away a public record with intent to conceal, destroy, mutilate, obliterate, remove, or steal the same..... | Yes..... | 3 | | | | |
| | Conspiring to escape from confinement.... | Yes..... | | 6 | | | |
| | Destroying, willfully, public property: | | | | | | |
| | Of a value of \$20 or less..... | Yes..... | | 6 | | | |
| | Of a value of \$50 or less, and more than \$20..... | Yes..... | 1 | | | | |
| | Of a value of more than \$50..... | Yes..... | 5 | | | | |

ARTICLE I—Continued.

| Article of war. | Offenses. | Punishments. | | | | | |
|-----------------|--|---|----------------------------|---------|-------|---|----------------------|
| | | Dis-honor-able dis-charge, forfeiture of all pay and allow-ances due and to become due. | Confinement at hard labor. | | | For- feiture of two-thirds pay per month. | For- feiture of pay. |
| | | | Years. | Months. | Days. | Months. | Days. |
| 96 | Discharging, through carelessness, a firearm | Yes..... | 1 | 3 | | 3 | |
| | Disobedience, willful, of the lawful order of a sentinel in the execution of his duty. | Yes..... | 1 | | | | |
| | Disorderly in command, quarters, station, or camp | | | 1 | | 1 | |
| | Disorderly under such circumstances as to bring discredit upon the military service. | | | 4 | | 4 | |
| | Drinking liquor with prisoner | | | 2 | | 2 | |
| | Drunk and disorderly in command, quarters, station, or camp | | | 3 | | 3 | |
| | Drunk and disorderly under such circumstances as to bring discredit upon the military service. | | | 6 | | 6 | |
| | Drunk in command, quarters, station or camp. | | | | | | 15 |
| | Drunk under such circumstances as to bring discredit upon the military service. | | | 3 | | 3 | |
| | Drunk, prisoner found | | | 3 | | 3 | |
| | Failing to obey a lawful order: | | | | | | |
| | Of a superior officer | Yes..... | 1 | | | | |
| | Of a noncommissioned officer | | | 6 | | 6 | |
| | Of a sentinel | | | 6 | | 6 | |
| | Failing to pay a just debt under such circumstances as to bring discredit upon the military service. | Yes..... | | 6 | | | |
| | False official report or statement knowingly made: | | | | | | |
| | By a noncommissioned officer | | | 3 | | 3 | |
| | By any other soldier | | | 1 | | 1 | |
| | False swearing | Yes..... | 3 | | | | |
| | Forgery | Yes..... | 5 | | | | |
| | Gambling: | | | | | | |
| | By a noncommissioned officer with a person of lower military rank or grade. | | | | | 3 | |
| | In command, quarters, station or camp in violation of orders. | | | 2 | | 2 | |
| | Indecent exposure of person | | | 3 | | 3 | |
| | Introducing a habit-forming narcotic drug into command, quarters, station or camp: | | | | | | |
| | For sale | Yes..... | 2 | | | | |
| | All other cases | Yes..... | 1 | | | | |
| | Introducing intoxicating liquor into command, quarters, station or camp: | | | | | | |
| | For sale | | | 6 | | 6 | |
| | All other cases | | | 3 | | 3 | |
| | Loaning money, either as principal or agent, at an usurious rate of interest to another in the military service. | | | | | 3 | |
| | Loitering or sitting down on duty by sentinel. | | | 1 | | 1 | |
| | Obtaining money or other property under false pretences: | | | | | | |
| | When the amount obtained is \$20 or less. | Yes..... | | 6 | | | |
| | When the amount obtained is \$50 or less and more than \$20. | Yes..... | 1 | | | | |
| | When the amount obtained is more than \$50. | Yes..... | 5 | | | | |
| | Refusing to submit to medical or dental treatment. | Yes..... | | 6 | | | |
| | Refusing to submit to a surgical operation. | Yes..... | 1 | | | | |
| | Sodomy and other unnatural crimes | Yes..... | 5 | | | | |
| | Straggling | | | 3 | | 3 | |
| | Striking or otherwise assaulting a sentinel in the execution of his duty. | Yes..... | 1 | | | | |
| | Subornation of perjury | Yes..... | 5 | | | | |
| | Threatening to strike or otherwise assault or using other threatening language toward a sentinel in the execution of his duty. | | | 4 | | 4 | |

ARTICLE I—Continued.

| Article of war. | Offenses. | Punishments. | | | | | |
|-----------------|---|---|----------------------------|---------|-------|--|---------------------|
| | | Dis-honor-able dis-charge, forfeiture of all pay and allow-ances due and to become due. | Confinement at hard labor. | | | For-feiture of two-thirds pay per month. | For-feiture of pay. |
| | | | Years. | Months. | Days. | Months. | Days. |
| 96. | Unclean accouterment, arm, clothing, equipment, or other military property, found with. | ..... | ..... | 1 | ..... | 1 | ..... |
| | Using insulting language toward a sentinel in the execution of his duty. | ..... | ..... | 3 | ..... | 3 | ..... |
| | Uttering a forged instrument. | Yes..... | 5 | ..... | ..... | ..... | ..... |
| | Violation of condition of parole by general prisoner. | ..... | ..... | 3 | ..... | ..... | ..... |

ARTICLE II.

EQUIVALENTS.

Section 1. Subject to the limitations set forth elsewhere in this order, substitutions for punishments specified in Article I thereof are authorized at the discretion of the court, at the rates indicated in the following table of equivalents:

| Forfeiture. | Confinement at hard labor. | Detention. | Hard labor without confinement. |
|---------------|----------------------------|---------------|---------------------------------|
| 1 day's pay.. | 1 day..... | 1½ day's pay. | 1½ days. |

ARTICLE III.

GENERAL LIMITATIONS.

Section 1. A court shall not, by a single sentence which does not include dishonorable discharge, adjudge against a soldier:

(a) Forfeiture of pay at a rate greater than two-thirds of his pay per month.

(b) Forfeiture of pay in an amount greater than two-thirds of his pay for six months.

(c) Confinement at hard labor for a period greater than six months.

Sec. 2. A court shall not, by a single sentence, adjudge against a soldier:

(a) Detention of pay at a rate greater than two-thirds of his pay per month.

(b) Detention of pay in an amount greater than two-thirds of his pay for three months.

(c) Hard labor without confinement for a period greater than three months.

ARTICLE IV.

NONCOMMISSIONED OFFICERS.

Section 1. A court shall not, unless they in the same sentence adjudge reduction to the ranks, adjudge against a noncommissioned officer confinement at hard labor, nor hard labor without confinement.

Sec. 2. A court may, upon his conviction of an offense or offenses for which they may adjudge confinement at hard labor for a period of five or more days, authorized substitution considered, adjudge, in addition to the punishments otherwise authorized, reduction against a noncommissioned officer or against a private, first class.

ARTICLE V.

PREVIOUS CONVICTIONS.

Section 1. A general or special court shall, upon conviction of a soldier, be opened and shall thereupon ascertain whether there is evidence of a previous conviction or convictions, which has been referred to the court by the convening authority, and, if there be such evidence, shall receive it.

Sec. 2. A court may, under the authority contained in section 1 of this article, receive evidence only of convictions by court-martial of an offense or offenses committed by the accused during his current enlistment and within one year next preceding the commission by him of an offense of which he stands convicted before the court. These convictions may be proved only by the records of the trials in which they were had, or by duly authenticated copies of such records, or by duly authenticated copies of orders promulgating such trials and convictions.

ARTICLE VI.

DISHONORABLE DISCHARGE.

Section 1. A court may, upon his conviction of an offense or offenses for none of which dishonorable discharge and forfeiture of all pay and allowances due and to become due is, in Article I of this order or by the custom of the service, authorized, upon proof of five or more previous convictions, adjudge against a soldier, in addition to the confinement at hard labor without substitution authorized in said article or by the custom of the service for the offense or offenses of which he is convicted, dishonorable discharge and forfeiture of all pay and allowances due and to become due, and, in any such case in which such confinement so authorized is less than three months, a court may adjudge, in addition to such discharge and forfeiture, confinement at hard labor for three months.

Sec. 2. A court may, upon his conviction upon one arraignment of two or more offenses for none of which dishonorable discharge, confinement at hard labor and forfeiture of all pay and allowances due and to become due is, in Article I of this order or by the custom of the service, authorized, but the aggregate term of confinement at hard labor for which, as authorized in said article or by the custom of the service, without substitution, equals or exceeds six months, adjudge against a soldier, in addition to the confinement at hard labor, without substitution, authorized in said article or by the custom of the service for the offense or offenses of which he is convicted, dishonorable discharge and forfeiture of all pay and allowances due and to become due.

ARTICLE VII.

EFFECT AND APPLICATION OF THIS ORDER.

Section 1. This order prescribes the maximum limit of punishment for each of the offenses therein specified, and thus indicates an appropriate punishment for an offense which is attended by aggravating circumstances, or after conviction of which there is received by the court evidence of several previous convictions. In other cases the punishment will be graded down according to the circumstances thereof.

Sec. 2. Offenses not herein provided for remain punishable as authorized by statute or the custom of the service, but, in cases for which maximum punishments are not prescribed, courts will be guided by limits of punishment prescribed for closely related offenses.

ARTICLE VIII.

ADMINISTRATIVE RULES.

Section 1. Hard labor without confinement, when imposed as a punishment, shall be performed in addition to other duties which fall to the soldier, and no soldier shall be excused or relieved from any military duty for the purpose of performing hard labor without confinement which has been imposed as a punishment, but a sentence imposing such punishment shall be considered as satisfied when the soldier shall have performed hard labor during available time in addition to performing his military duties.

Sec. 2. Pay detained pursuant to the sentence of a court-martial will be detained by the Government until the soldier is furloughed to the reserve, discharged from the service, or mustered out of active Federal service.

ARTICLE IX.

DATE ON WHICH OPERATIVE.

This order shall become operative on March 1, 1917, as to offenses committed on and after that date and as to criminal acts, committed prior to that date, whose maximum punishment was not prescribed in the Executive order of September 5, 1914. The Executive order of September 5, 1914, published in General Orders, No. 70, War Department, 1914, prescribing limits of punishment, shall remain operative as to offenses committed before March 1, 1917, except as to criminal acts whose maximum punishment has been decreased by this order, which will not be followed by severer punishment than is hereinbefore prescribed.

WOODROW WILSON.

THE WHITE HOUSE,
December 15, 1916.

[Note: Nothing in the foregoing Executive order is applicable to the National Guard not in the service of the United States. Sec. 102, act of June 3, 1916 (39 Stat., 208).]

CHAPTER XIV.

COURTS-MARTIAL—PROCEDURE OF SPECIAL AND SUMMARY COURTS AND PROCEDURE ON REVISION.

SECTION I.

SPECIAL COURTS-MARTIAL.

350. Procedure. The procedure of and before special courts-martial will, so far as practicable, be identical with that prescribed for general courts-martial.

SECTION II.

SUMMARY COURTS-MARTIAL.

351. Procedure. (a) The summary court will be opened at a stated hour daily, except Sundays, for the trial of such cases as have been properly referred to it for trial. Trials will be had on Sunday only when the exigencies of the service make it necessary.

(b) The summary court will at the beginning of each trial, in the order of such trial, give to and enter in the proper place on the charges in the case a serial number.

(c) The procedure of and before summary courts-martial will, so far as

practicable, be identical with that prescribed for general courts-martial. In the trial of a case the summary court represents both the Government and the accused. He will see to it that the interests of both are fully conserved.

(d) When the accused pleads guilty he will—

(1) Explain to him (a) the elements constituting the offense to which he has pleaded guilty, and (b) the maximum punishment therefor;

(2) Ask him whether he fully understands (a) that by pleading guilty thereto he admits all the elements of the crime or offense, and (b) that he may be punished as explained to him.

In any such case he will also, in the manner below stated, make such impartial investigation, if any, as the doing of justice may appear to require.

(e) In the absence of a plea of guilty he will make a full, thorough, and impartial investigation of both sides of the entire matter before him. On behalf of the Government he will obtain the attendance of, swear, and examine such witnesses, and will obtain such other evidence, documentary and other, as may tend or may appear likely to tend to establish the allegations before him against the accused. On behalf of the accused he will, in the absence of a plea of guilty, obtain the attendance of, swear, and examine such witnesses, and will obtain such other evidence, documentary and other, as may tend to disprove or negative guilt of such allegations, or explain the acts or omissions charged, or show extenuating circumstances or establish good character. He will permit the accused fully to examine all witnesses that appear, and will, to the fullest extent, aid him in making such examination. He will, in every proper way, encourage and aid the accused in making his defense. In all cases he will extend to the accused full opportunity to testify in his own behalf and to make a statement in denial, in explanation, or in extenuation, and will, before arriving at a finding, assure himself, by inquiry of the accused, that he has no further testimony to offer and no further statement to make.

(f) Having done so, he will, as soon as the trial is concluded, arrive at his findings and record them in the proper place on the charges.

(g) In the event of the conviction of a soldier he will consider the evidence of previous convictions, if any, referred to him.

(h) In any case of conviction he will, as soon as trial is concluded, impose sentence and record it in the proper place upon the charges.

(i) In the event of a finding of not guilty of all the charges and specifications he will record an acquittal instead of a sentence.

(k) Having recorded his findings and an acquittal or sentence, he will subscribe his name, rank and organization as summary court, and then without delay transmit the record of trial to the appointing authority.

SECTION III.

PROCEDURE ON REVISION.

352. Of General or Special Courts-Martial. The procedure of general or special courts-martial when reconvened for the purpose of revising their action or correcting their records will in general be as indicated by the form of record of proceedings on revision. (Appendix 6.) The members of the court who participated in the findings and sentence or acquittal, together with the judge advocate and assistant judge advocate, if any, will assemble and the court will meet. It is not ordinarily necessary or proper that the accused be present, but there may be rare cases in which he should be present. The judge advocate will read to the court the indorsement of the appointing authority returning the record and directing the reconvening, or, if the record of trial

by a special court-martial has been returned to him orally for revision, may state briefly to the court the views and desires of the appointing authority as communicated to him. The court is then closed, considers and takes action upon the matter before it, is opened, and adjourns. As the action so to be taken is entirely corrective, a case will not be reopened by the calling or recalling of witnesses or otherwise.

353. Of Summary Courts-Martial. What has been said in respect to the procedure on revision by general or special courts-martial will, so far as applicable, govern such procedure by summary courts-martial.

CHAPTER XV. COURTS-MARTIAL—RECORDS OF TRIAL.

SECTION I.

GENERAL COURTS-MARTIAL.

354. Record Required—How Authenticated. Each general court-martial shall keep a separate record of its proceedings in the trial of each case brought before it, and such record shall be authenticated by the signature of the president and the judge advocate, but in case the record can not be authenticated by the judge advocate, by reason of his death, disability, or absence, it shall be signed by the president and assistant judge advocate, if any; and if there be no assistant judge advocate, or in case of his death, disability, or absence, then by the president and one other member of the court. (A. W. 33.)

355. What the Record is and by Whom Prepared. The legal record of a court-martial is that record which is finally approved and adopted by the court as a body and authenticated by the signatures of its president and judge advocate. The record is prepared by the judge advocate under the direction of the court, but the court as a whole is responsible for it, and the instrument which it approves as such is its record, however the same may have been made up. It is immaterial to the sufficiency of a record whether the same was kept or written by the judge advocate or by a clerk or a reporter acting under his direction.

356. Separate Record. Where several cases are tried by the same court the record of each case should not only be complete and independent in itself and as much an entirety, both in form and in substance, as if it were the only case tried, but should contain all that is essential to an original and independent official paper, and should be so perfected as to leave no material detail to be supplied from any previous or other record. Where sentence is pronounced the record should contain everything necessary to sustain it in fact and in law.

357. Contents of Record. (a) In General. The record of proceedings of a general court-martial will in each case show that all statutory requirements incident to that case have been complied with; will state a complete history of the proceedings, regular and irregular, had in open court in that case; and will set forth the material conclusions arrived at in both open and closed sessions. The only acts of the court or members not properly stated or set forth in the record of trial are the discussions, votes, etc., had while the court was closed for deliberation upon some matter such as a challenge, an objection, findings, sentence, etc. Such discussions, etc., are no part of the formal record, and, as to votes and opinions of particular members, a statement of these is precluded by A. W. 19. It is, in fact, only the result of a deliberation in closed session that is to be entered upon the record.

(b) In Detail. The record of proceedings in each case will show, among other things, each in its proper place:

1. A brief of itself in the prescribed form.
2. An index of itself in the prescribed form.
3. Whether a carbon copy of the record of trial was prepared, and if so, the disposition made thereof.
4. The place and date of each meeting of the court.
5. The fact and hour of each meeting.
6. The number, date, and source of the order appointing the court and of each amendatory order, each stated at the proper place in the record of trial.
7. The fact of the presence and the name, rank, and organization of each member, judge advocate and assistant judge advocate present at the assembling of the court or at any proceedings in revision.
8. The fact of the presence and the name, rank, and organization of each new member, new judge advocate, or assistant judge advocate who begins to participate therein, together with citation of the authority for his so doing.
9. The fact of the absence and the name, rank, and organization of each member and the judge advocate or assistant judge advocate absent at the assembling of the court or at any proceedings in revision, together with a statement of the reason for such absence.
10. That the accused was given opportunity to introduce counsel, and the action thereon.
11. That the accused and his counsel, if any, were present during all the open sessions of the court in his case except during such proceedings in revision as did not so require.
12. The name of each person, if any, who acted as reporter during any part of the trial, and that each such person was sworn.
13. The name, rank, and organization of each member present who, during the trial, announced himself as, or was alleged to be, ineligible to sit as a member, together with the alleged reason for such ineligibility, and the action had thereon.
14. The name of each person, if any, who acted as interpreter during any part of the trial, and that each such person was sworn.
15. That the accused was informed of his right to demand a copy of the record of his trial, and was asked whether or not he desired a copy thereof, together with his answer thereto.
16. That the order appointing the court and each amendatory order was read to the accused in court and that he was given opportunity to challenge each member of the court who sat as such during any part of the trial in his case, and the action, if any, had thereon.
17. That each member of the court who sat as such during any part of the trial of the case and each judge advocate and assistant judge advocate who appeared before the court in the case was sworn.
18. The several charges and specifications upon which the accused was arraigned.
19. The name, rank, and organization of the officer who subscribed the charges.
20. The pleas of the accused to the several specifications and charges upon which he was arraigned.
21. That after a plea of guilty the president—
 - (a) Explained to the accused (1) the elements constituting the offense to which he had pleaded guilty; (2) the maximum punishment for such offense;
 - (b) Asked the accused whether he fully understood (1) that by pleading

guilty thereto he admitted all the elements of the crime or offense; (2) that he may be punished as explained to him.

22. The answer of the accused thereto and the action, if any, had thereon.

23. That the several witnesses, were sworn.

24. That each witness recalled to testify was cautioned, upon being so recalled, that he was still under oath.

25. That if the accused was sworn as a witness he was so sworn at his own request.

26. The questions propounded and the answers given by each of the several witnesses as nearly as possible in the language used.

27. That the accused was given full opportunity to examine each witness who gave testimony.

28. The fact of the introduction of each deposition and other paper received in evidence by the court, and that it is appended to the record properly marked.

29. The exact and entire text read by the prosecution or defense from any publication to the court, together with the title of the publication, the edition thereof, and the proper page number.

30. In a proper case, that the accused had no testimony, or no further testimony, to offer or no statement to make, or both.

31. That when the accused did not testify or make a statement the president explained to him in court that he might testify in his own behalf if he so desired, or make a statement in denial, in explanation, or in extenuation.

32. Each motion, objection, argument, statement, etc., made in open court and the action, if any, had thereon.

33. The fact of each closing of the court.

34. The fact of each opening of the court and that the accused and his counsel, if any, were present when the court was opened.

35. If a note was made of recess taken, that the members, the judge advocate, assistant judge advocate, the accused and his counsel, if any, and the reporter, if any, were present when the court again proceeded to business.

36. In a joint trial, that each and every one of the several accused was accorded each and every right and privilege he would enjoy if tried separately, and, as to each accused, proper findings and sentence or acquittal. (The end here sought, however, will so far as practicable be attained by the use of appropriate general language without unduly burdening the record with repetitions.)

37. The findings of each of the several specifications and charges not disposed of as a result of a special plea.

38. In case of the conviction of a soldier, that the court was opened for the purpose of receiving evidence of previous convictions, and its action.

39. In case of receipt by the court of evidence of previous convictions, that a copy of each is appended to the record, properly marked.

40. In case of the conviction of a soldier, that the accused was asked whether the evidence of previous convictions, if any, was correct and whether the statement of his service, as shown on the charge sheet, was correct, and his answers thereto.

41. The sentence, acquittal, or other action finally taken.

42. In case of conviction of an offense for which the death penalty is made mandatory by law, that two-thirds of the members of the court concurred in the finding.

43. In case of a sentence to suffer death, that two-thirds of the members of the court concurred in the sentence.

44. The adjournment.

45. That the judge advocate, or, in a proper case, the assistant judge advocate, subscribed each day's proceedings.

46. That the president and the judge advocate, or, in a proper case, the president and an assistant judge advocate, or, in a proper case, the president and one other member, subscribed the record. (In any case in which a person other than the judge advocate subscribes the record in lieu of the judge advocate, the facts which make such action necessary will appear.)

47. In case the judge advocate has recorded the findings and sentence with a typewriter, a certificate that he recorded the findings and sentence of the court.

(c) Record of Revision. Subject to the modifications indicated by the form for proceedings in revision, the foregoing will, so far as applicable, govern in respect to such proceedings.

(d) Clemency Recommendation. A recommendation to clemency will not be embodied in the record proper, but will be bound into the record immediately after the exhibits. (See par. 332.)

SECTION II.

SPECIAL COURTS-MARTIAL.

358. Form and Substance. (a) Except as otherwise indicated by the form for record of trial by special court, or elsewhere, the requirements in respect of the form and substance of such records are in general the same as for records of trial by general courts-martial.

(b) Neither oral testimony received by the court nor statements nor arguments made will be recorded unless herein specifically required or ordered by competent authority. (See par. 154 (d).)

(c) Documentary evidence received by the court, the originals of which can properly be appended to the record, such as depositions, certain letters, recommendations to clemency, and other similar papers, will be so appended.

(d) Neither the originals nor copies of writings, the originals of which can not properly be appended to the record, such as certificates of discharge, recommendations as to character, and similar papers, need be so appended.

(e) If a special plea is made, the record will set out in full the proceedings had thereon, including all testimony taken thereon and statements made relative thereto, as well as the disposition thereof made by the court.

(f) Evidence of previous convictions, if any, will not be appended to the record, but will be returned by the trial judge advocate with the record of trial to the appointing authority.

(g) No certificate that the judge advocate recorded typewritten findings or sentence is required.

(h) The record will, at the end, contain sufficient space for the action of the reviewing authority. If necessary for this purpose, an extra sheet will be included.

359. Number of Copies. One copy only of the record will be prepared.

360. Not Indexed. The record will not be indexed.

361. Briefed. The record will be briefed as prescribed for the record of a general court-martial.

362. Bound. The record will be securely bound. The method of binding is not prescribed, but it must be such as will securely fasten together all the leaves and parts that comprise the record. Easily removable clips or paper fasteners will not be used for this purpose.

SECTION III.

SUMMARY COURTS-MARTIAL.

363. Form and Substance. The requirements in respect of the form and substance of records of trial by summary court are indicated in the form for record of trial by summary court. The findings and sentence or acquittal only are required to be recorded and subscribed by the summary court as such. The action of the commanding officer on the record, with date and his signature, completes the record, except when approval by superior authority is required.

SECTION IV.

CORRECTION OF RECORDS OF TRIAL.

364. Records of General or Special Courts-Martial. A record of trial by general or special court-martial which by reason of omission, error, or other defect is substantially incomplete or incorrect, or which in the opinion of the appointing authority shows improper action by the court, may be returned by the appointing authority to the president of the court, directing that the court be reconvened for such action as may be appropriate. In any such case the defective part of the record will be left unchanged and without erasure or interlineation, and the record of proceedings in revision will show specifically, ordinarily by page and line, the part of the original record that is changed and the change made. (See par. 352.)

365. Records of Summary Courts-Martial. A record of trial by summary court which by reason of omission, error, or other defect, is substantially incomplete or incorrect, or which, in the opinion of the appointing authority, shows improper action by the court, may be returned by the appointing authority to the summary court for such action as may be appropriate. (See par. 353.)

SECTION V.

DISPOSITION OF RECORDS OF TRIAL.

366. By Trial Judge Advocate. (a) Original Record. The judge advocate of a court-martial shall, with such expedition as circumstances may permit, forward to the appointing authority, or to his successor in command, the original record of the proceedings of the court in the trial of each case. The record should be forwarded as an inclosure to an indorsement by the judge advocate, returning to the appointing authority the charges and other papers referred to him, and forwarding at the same time the required copy of the reporter's voucher. The original record of the proceedings of a general court-martial appointed by the President will be sent by the trial judge advocate directly to the Judge Advocate General of the Army.

(b) Carbon Copy. The judge advocate of a general court-martial shall, if the accused so desires, deliver to the accused, after it has been corrected, completed, and certified as a true copy except as to findings, sentence, and exhibits not copied, the carbon copy, when one is prepared, of the record of his trial.

367. By Appointing Authority. (a) Records of Trial by General Courts-martial. After having been acted upon by the officer appointing the court, or by the officer commanding for the time being, the record of each trial by general court-martial, with the decisions and orders of the appointing authority made thereon, accompanied by the statement of service, if there be any, and

five copies of the order, if there be any, promulgating the case, will be transmitted directly to the Judge Advocate General of the Army.

(b) Records of Trial by Special Courts-martial. After having been acted upon by the officer appointing the court, or by the officer commanding for the time being, the record of each trial by special court-martial, accompanied by a copy of the order publishing the case, will be forwarded, ordinarily without indorsement or letter of transmittal, to the officer exercising general court-martial jurisdiction over the command, there to be filed in the office of the judge advocate for a period of two years, at the end of which time it may be destroyed.

(c) Records of Trial by Summary Courts-martial. The several records of trial by summary courts-martial within a command shall be filed together in the office of the commanding officer and shall constitute the summary-court record of the command.

(d) Reports of Trial by Summary Courts-martial. The report of trial by summary court (copy of record of trial) will, with the least practicable delay after action has been taken on the sentence, be completed and transmitted to the officer exercising general court-martial jurisdiction over the command, there to be filed in the office of the judge advocate for a period of two years, at the end of which time it may be destroyed.

SECTION VI.

LOSS OF RECORDS OF TRIAL.

368. Action to be Taken. When, prior to action by the reviewing authority, a record of trial by court-martial is lost or destroyed, a new record of trial in the case will, if practicable, be prepared and will become the record of trial in the case. Such new record will, however, only be prepared when the extant original notes or other sources are such as to enable the preparation of a complete and accurate record of the case. In any case of loss of a record of trial by court-martial the summary court, judge advocate, or other proper person will fully inform the appointing authority as to the facts and as to the action, if any, taken.

CHAPTER XVI.

COURTS-MARTIAL—ACTION BY APPOINTING OR SUPERIOR AUTHORITY.

SECTION I.

ACTION ON THE PROCEEDINGS.

369. Appointing Authority. The term appointing authority is employed to designate the officer whose province and duty it is to take action upon the proceedings of a court-martial after the same are terminated, and, when the record is transmitted to him for such action, to approve or disapprove the sentence or acquittal. This officer is ordinarily the commander who has convened the court. In his absence, however, or where the command has been otherwise changed, his successor in command, or, in the language of A. W. 46, "the officer commanding for the time being" is invested (by that article) with the same authority to pass upon the proceedings and order the execution of the sentence in a case of conviction. (Digest, p. 554, XIV, A, 1.)

370. Record of Action by Appointing Authority. Upon the receipt of the proceedings by the appointing authority, he will state at the end thereof in each case his decisions and orders.

371. Sentence Not Effective Until Approved. No sentence of a court-martial shall be carried into execution until the same shall have been approved by the officer appointing the court or by the officer commanding for the time being. (A. W. 46.) The acquittal of the accused does not entitle him to be released at once from confinement as in cases before civil courts. The acquittal is not effective until it has been acted on by the proper reviewing authority. But the announcement of the result of trial in orders is not essential to the validity of the sentence or acquittal. It is not necessary for the reviewing authority to approve the findings and proceedings.

372. Effect of Approval and Disapproval. While approval gives life and operation to a sentence, disapproval, on the other hand, nullifies it. A disapproval of the sentence of a court-martial by the reviewing authority is not a mere expression of disapprobation but is a final determinate act putting an end to the proceedings in the particular case and rendering them entirely nugatory and inoperative; and the legal effect of a disapproval is the same whether or not the officer disapproving is authorized finally to confirm the sentence. But to be thus operative a disapproval should be expressed. The effect of the entire disapproval of a sentence is not merely to annul the same as such but also to prevent the accruing of any disability or forfeiture, which would have been incidental upon an approval. (Digest, p. 563, XIV, E, 9, b, (1).)

373. Manner of Approval. The approval of the sentence should properly be of a formal character. The article requires the sentence to be approved. A formal approval of the findings only does not meet the requirement of the article. The sentence should be approved by "the officer appointing the court," or the officer commanding for the time being, although—as in a case of a sentence of dismissal in time of peace—he may not be empowered finally to confirm and give effect to the sentence. His approval is required as showing that he does not, as he is authorized to do, disapprove. (Digest, p. 174, CIV, A, 1, and A, 2.)

374. The Officer Commanding for the Time Being. The "officer commanding for the time being," indicated in A. W. 46, is an officer who has succeeded to the command of the officer who appointed the court; as where the latter has been regularly relieved and another officer assigned to the command; or where the command of the appointing officer has been discontinued, and merged in a larger or other command, at some time before the proceedings of the court are completed and required to be acted upon. Thus where, under these circumstances, a separate brigade has ceased to exist as a distinctive organization and been merged in a division, or a division has been similarly merged in an army or department, the commander of the division in the one case and of the army or department in the other, is "the officer commanding for the time being," in the sense of the article. So where a court was convened by a division commander, but before the reviewing authority had acted upon the sentence the division was discontinued and the organizations composing it were distributed among the divisions of another corps, it was held that the commander of this other corps was the officer "commanding for the time being." So, where, before the proceedings of a special court convened by a post commander were completed, the post command had ceased to exist and the command became distributed in the department, it was held that the department commander, as the legal successor of the post commander, was the proper authority to approve the sentence. (Digest, p. 174, CIV, C, 1; p. 175, CIV, C, 2, and see C, 4.)

375. Action When Accused is Transferred to Another Department. Where

an accused who has been tried by general court-martial proceeds with his command, from the department in which he has been tried to another department, before action has been taken on his case by the reviewing authority, the commanding general of the department in which he has been tried is the proper reviewing authority of the case. (Digest, p. 554, XIV, A, 3.)

376. Appointing Authority Must Act in Person. The appointing authority can not delegate to an inferior or other officer his function as reviewing authority as conferred by the forty-sixth article of war; nor can he authorize a staff or other officer to subscribe for him his decision and orders on the proceedings. He will sign in his own hand the action taken by him on the proceedings, his rank and the fact that he is the commanding officer appearing after his signature.

377. Powers Incident to Power to Approve. The power to approve the sentence of a court-martial shall be held to include:

(a) The power to approve or disapprove a finding and to approve only so much of a finding of guilty of a particular offense as involves a finding of guilty of a lesser included offense when, in the opinion of the authority having power to approve, the evidence of record requires a finding of only the lesser degree of guilt; and

(b) The power to approve or disapprove the whole or any part of the sentence. (A. W. 47.)

The authority here conferred to approve only so much of a finding of guilty as involves a finding of guilty of a lesser included offense is coextensive with the power of courts-martial to convict of lesser included offenses. The more frequent occasions for the exercise of this authority are indicated below.

- (1) Affray.
 - (a) Assault.
 - (b) Breach of peace (disorder).
- (2) Assault with intent to commit murder.
 - (a) Any of the minor degrees of assault.
- (3) Battery.
 - (a) Assault.
- (4) Murder.
 - (a) Manslaughter.
 - Voluntary.
 - Involuntary.
 - (b) Attempt to commit.
 - (c) Felonious assault.
 - (d) Assault and battery
- (5) Mayhem.
 - (a) Assault with intent to commit.
 - (b) Assault and battery.
- (6) Rape.
 - (a) Assault with intent to commit rape.
 - (b) Assault and battery.
 - (c) Assault.
- (7) Robbery.
 - (a) Assault with intent to rob.
 - (b) Larceny from the person.
 - (c) Assault and battery.
 - (d) Assault.
- (8) Desertion.
 - (a) Attempt to desert.
 - (b) Absence without leave.

- (9) Willful disobedience of superior officer.
 - (a) Failure to obey.
- (10) Willful disobedience of noncommissioned officer.
 - (a) Failure to obey.
- (11) Refusal to receive and keep prisoners.
 - (a) Failure to receive and keep.
- (12) Quitting post to plunder or pillage.
 - (a) Quitting post.
- (13) Drunk on duty.
 - (a) Drunk.
- (14) Conduct unbecoming an officer and gentleman.
 - (a) Conduct to the prejudice of good order and military discipline.

378. Confirmation of Sentences. In the following cases confirmation by the President is required before the sentence of a court-martial is carried into execution:

- (a) Any sentence respecting a general officer.
- (b) Any sentence extending to the dismissal of an officer except that in time of war a sentence extending to the dismissal of an officer below the grade of a brigadier general may be carried into execution upon confirmation by the commanding general of the Army in the field or by the commanding general of the territorial department or division.
- (c) Any sentence extending to the suspension or dismissal of a cadet, and
- (d) Any sentence of death, except in the cases of persons convicted in time of war of murder, rape, mutiny, desertion, or as spies, and in such excepted cases a sentence of death may be carried into execution upon confirmation of the commanding general of the Army in the field or by the commanding general of the territorial department or division.

When the authority competent to confirm the sentence has already acted as the approving authority no additional confirmation by him is necessary. (A. W. 48.)

[Note: For statement by whom a sentence of dismissal from service or dishonorable discharge imposed by National Guard courts-martial, not in the service of the United States, must be approved before its execution, see sec. 107, act of June 3, 1916, 39 Stat., 166, Appendix 2, post.]

379. Powers Incident to Power to Confirm. The power to confirm the sentence of a court-martial shall be held to include—

- (a) The power to confirm or disapprove a finding, and to confirm so much only of a finding of guilty of a particular offense as involves a finding of guilty of a lesser included offense when, in the opinion of the authority having power to confirm, the evidence of record requires a finding of only the lesser degree of guilt; and
- (b) The power to confirm or disapprove the whole or any part of the sentence. (A. W. 49.)

The manner of the exercise of the power conferred upon confirming authorities is indicated in the remarks in paragraph 377 relating to the power incident to approve a sentence as provided for under A. W. 47.

380. Mitigation of Punishment—Definition. By mitigating a punishment is meant a reduction in quantity or quality, the general nature of the punishment remaining the same. (Digest, p. 177, CXII, B.)

381. Mitigation or Remission of Sentences. The power to order the execution of the sentence adjudged by a court-martial shall be held to include *inter alia* the power to mitigate or remit the whole or any part of the sentence, but no sentence of dismissal of an officer and no sentence of death shall be mitigated or remitted by any authority inferior to the President. Any un-

executed portion of a sentence adjudged by a court-martial may be mitigated or remitted by the military authority competent to appoint, for the command, exclusive of penitentiaries and the United States Disciplinary Barracks, in which the person under sentence is held, a court of the kind that imposed the sentence, and the same power may be exercised by superior military authority; but no sentence extending to the dismissal of an officer or loss of files, no sentence of death, and no sentence approved or confirmed by the President shall be remitted or mitigated by any other authority. The power of remission and mitigation extends to all uncollected forfeitures adjudged by sentence of a court-martial. (A. W. 50.)

382. Mitigation, When Permissible. A sentence providing for dishonorable discharge only can not be mitigated. Subject to the limitations expressed in the Executive order prescribing maximum limits of punishment, forfeiture of pay adjudged by a court-martial may be mitigated to detention of pay for a like period, or less, and confinement at hard labor may be mitigated to hard labor without confinement for a like period or less. A sentence of dishonorable discharge, forfeiture of all pay and allowances due and to become due, and confinement at hard labor for a definite period may be mitigated to confinement at hard labor and a forfeiture of two-thirds of the soldier's pay per month for a period not exceeding that prescribed in the sentence.

383. Effect of Remission at Time of Approval. The action of a reviewing authority in approving a sentence and simultaneously remitting a portion thereof is legally equivalent to approving only the sentence as reduced. (Bul. 12, p. 5, War Dept., 1912.)

384. Commutation of Sentences. The power to commute sentences imposed by military tribunals, not being vested in military commanders, can be exercised by the President alone. Therefore a department commander can not commute to confinement at hard labor a sentence of dishonorable discharge awarded an enlisted man.

385. Adding to Sentences. Neither the reviewing authority nor any other officer is authorized to add to the punishment imposed by a court-martial. Where post orders classify all soldiers at a post according to their conduct, and provide that soldiers undergoing sentence of a court-martial will be denied pass privileges until the sentence is completed, such a provision adds to the punishment and is unlawful. (Bul. 46, p. 7, War Dept., 1914.)

386. Sentences in Excess of Legal Limit. Where a sentence in excess of the legal limit is divisible, such part as is legal may be approved and executed. (Digest, p. 564, XIV, E, 9, c.) Thus: When a sentence to confinement, hard labor without confinement, forfeiture, or detention of pay is in excess of the legal limit, the part within the limit is legal and may be executed.

387. Action on Sentence May be Modified Before Publication. Action taken by a reviewing officer upon the proceedings and sentence of a court-martial may be recalled and modified before it has been published and the party to be affected has been duly notified of the same. After such notice the action is beyond recall. An approval can not then be substituted for a disapproval or vice versa. (Digest, p. 565, XIV, E, 9, c.)

388. Where Conviction of Desertion is Disapproved—Grounds to be Stated. Where the reviewing authority disapproves a sentence for desertion he should indicate in his review whether his disapproval is based upon his belief that the evidence does not show an intent to desert, or is for some other reason that assumes the accused was guilty as charged. The reason for so indicating the grounds of his disapproval is to enable the Quartermaster Corps to decide whether the pay and allowances due at date of alleged desertion should be forfeited and whether the reward paid for apprehending the deserter, and the ex-

penses incurred by the Government in transporting him from point of apprehension, delivery, or surrender to the station of his company or detachment or to the place of trial, including the cost of transportation of the guard, should be set against the alleged deserter's pay, under A. R. 127, 1913. (12 Comp., 328; 15 idem., 661.)

389. Place of Confinement—Change of. The authority which has designated the place of confinement or higher authority may change the place of confinement of any prisoner under the jurisdiction of such authority; but when a military prison or post has been designated as the place of confinement of a prisoner under sentence, no power is competent to increase the punishment by designating a penitentiary as the place of confinement.

390. Loss of Files. Where a court-martial convened by a department commander for the trial of an officer sentences the accused to the punishment of a loss of files, the approval of the appointing authority is sufficient to give full effect to the sentence, and no action by superior authority can add anything to its effect or conclusiveness. Confirmation by the President is not essential to the execution of such a sentence; and the fact that the same involves a change in the Army Register does not make requisite or proper a revision of the case by the War Department. The department commander, however, can not restore the files, such action can be taken only by the President. (See A. W. 50.)

391. Suspension of Sentences Until Pleasure of President be Known. Any officer who has authority to carry into execution the sentence of death, or of dismissal of an officer, may suspend the same until the pleasure of the President shall be known; and in such case, he shall immediately transmit to the President a copy of the order of suspension, together with a copy of the proceedings of the court. (A. W. 51.)

392. Suspension of Sentence Not Involving Dishonorable Discharge. The authority competent to order the execution of a sentence adjudged by a court-martial may, if the sentence involve neither dismissal nor dishonorable discharge, suspend the execution of the sentence in so far as it relates to the forfeiture of pay or to confinement, or to both; and the person under sentence may be restored to duty during the suspension of confinement. At any time within one year after the date of the order of suspension such order may, for sufficient cause, be vacated and the execution of the sentence directed by the military authority competent to order the execution of like sentences in the command, exclusive of penitentiaries and the United States Disciplinary Barracks, to which the person under sentence belongs or in which he may be found; but if the order of suspension be not vacated within one year after the date thereof the suspended sentence shall be held to have been remitted. (A. W. 53.)

393. Suspension of Sentences of Dishonorable Discharge. The authority competent to order the execution of a sentence including dishonorable discharge may suspend the execution of the dishonorable discharge until the soldier's release from confinement; but the order of suspension may be vacated at any time and the execution of the dishonorable discharge directed by the officer having general court-martial jurisdiction over the command, exclusive of penitentiaries and the United States Disciplinary Barracks in which the soldier is held, or by the Secretary of War. (A. W. 52.) The object in seeking the legislation contained in A. W. 52 was to further the plan of giving soldiers convicted of purely military offenses an opportunity to reclaim themselves and gain restoration to the colors through service in disciplinary companies. Reviewing authorities will aid in the accomplishment of this object by discriminating action in passing upon sentences.

394. Place of Confinement to be Designated by Reviewing Authority. When

the sentence of a general court-martial prescribes dishonorable discharge and confinement, so much of the sentence as relates to confinement will be expressed in substantially the following form:

To be confined at hard labor at such place as the reviewing authority may direct for ——— [leaving to the reviewing authority the designation of the place of confinement].

395. Forms for Action on Sentence by Reviewing Authority. (See Appendix 10.)

396. When Confinement in a Penitentiary May be Directed. Except for desertion in time of war, repeated desertion in time of peace, and mutiny, no person shall under the sentence of a court-martial be punished by confinement in a penitentiary unless an act or omission of which he is convicted is recognized as an offense of a civil nature by some statute of the United States, or at the common law as the same exists in the District of Columbia, or by way of commutation of a death sentence, and unless also the period of confinement authorized and adjudged by such court-martial is one year or more: Provided, That when a sentence of confinement is adjudged by a court-martial upon conviction of two or more acts or omissions any one of which is punishable under these articles by confinement in a penitentiary, the entire sentence of confinement may be executed in a penitentiary: Provided further, That penitentiary confinement hereby authorized may be served in any penitentiary directly or indirectly under the jurisdiction of the United States: Provided further, That persons sentenced to dishonorable discharge and to confinement not in a penitentiary shall be confined in the United States Disciplinary Barracks or elsewhere as the Secretary of War or the reviewing authority may direct, but not in a penitentiary. (A. W. 42.)

[Note: For a full statement of the law relating to penitentiary confinement, the War Department policy with reference to the segregation of general prisoners convicted of offenses punishable with penitentiary confinement and requirements placed upon appointing authorities in stating the law applicable where such confinement is directed, see Chap. XIII, Sec. II, pars. 337, 339, and 341.]

397. When Confinement in Disciplinary Barracks Will be Directed. The United States Disciplinary Barracks at Fort Leavenworth, Kans., or one of its branches will be designated as the place of confinement of all general prisoners other than residents of Porto Rico, the Canal Zone, Hawaiian Islands, or the Philippine Islands who are to be confined for six months or more and who are not to be confined in a penitentiary pursuant to the preceding paragraph. From time to time detailed instructions will be issued as to which of the barracks shall be designated and as to when the prisoners shall be transferred to them.

398. When Confinement in Post Will be Directed. A military post, station, or camp will be designated as the place of confinement of any general prisoner whose case does not come within the terms of paragraphs 396 and 397 of this section.

399. Coöperation of Reviewing Authorities. The successful segregation of general prisoners according to the grade of their offense as prescribed by the three preceding paragraphs must depend to a considerable extent upon the coöperation of officers exercising general court-martial jurisdiction. The demand for prison labor at posts is not deemed a sufficient reason for a departure from the rule of segregation prescribed.

400. Court-martial Orders. Trials by general courts-martial, including so much of the proceedings as will give the charges and specifications, the pleas, findings, and sentence, and the action and remarks of the reviewing authority

will be announced in general orders issued from the War Department or in general court-martial orders from the headquarters exercising general court-martial jurisdiction. If the charges contain matter which for any reason is unfit for publication, such matter will be omitted from the order, but a copy thereof will be promptly furnished by the reviewing authority to the commanding officer of the post at which the officer or soldier is confined, to be included with the papers required to be sent to the commanding officer of the post or other places of confinement where the sentence of confinement is to be executed. Trials by special courts-martial will also be published in orders similar in form to general court-martial orders. (For forms, see Appendix 11.)

SECTION II.

ACTION AFTER PROMULGATION OF SENTENCE.

401. Date of Beginning of Sentence. The order promulgating the proceedings of a court and the action of the reviewing authority will, when practicable, be of the same date. When this is not practicable, the order will give the date of the action of the reviewing authority, which date will be the beginning of a sentence of confinement, as well where dishonorable discharge is imposed as where it is not. A sentence of confinement is continuous until the term expires, except where the prisoner is absent without authority or under a parole which proper authority revokes or is delivered to the civil authorities under A. W. 74. It is appropriate for the appointing authority to consider, at the time of approval, confinement served by an accused prior thereto, and in a proper case make it the basis of mitigation of the sentence.

402. Applications for Clemency. The power to remit or mitigate punishment imposed by a court-martial, vested in the authority who appointed the court or the corresponding authority under whose jurisdiction the sentence is being executed, extends only to unexecuted portions of a sentence. If the punishment be one imposed by a general court-martial, it may be remitted or mitigated only by an officer competent to order a general court-martial and under whose jurisdiction the sentence is being executed. The fact that a soldier has been dishonorably discharged through his sentence does not affect this power. An application for clemency in case of a prisoner sentenced to confinement in a penitentiary or in the United States Disciplinary Barracks or any branch thereof will be forwarded to The Adjutant General of the Army for the action of the Secretary of War and the President. A military prisoner sentenced to confinement in a penitentiary or in the United States Disciplinary Barracks or any branch thereof will, so far as concerns the exercise of clemency, be considered to have passed beyond the jurisdiction of the department or other commander from the date of the approval of his sentence. The power to commute sentences imposed by military tribunals, not being vested in military commanders, can be exercised by the President only.

403. Remission of Suspended Sentence of Dishonorable Discharge. Requests to remit the dishonorable discharge under a suspended sentence of dishonorable discharge are requests for clemency, and will be made to the authority empowered to extend clemency.

404. Clemency Applications Limited to One in Six Months. It appearing that the expenditure of much unnecessary time and labor is involved in the reexamination in the War Department upon further applications for clemency of cases relating to military prisoners which have received recent and thorough consideration in connection with prior applications, the Secretary of War has directed that where such further application is received at the War Department

within six months of such prior consideration the case will not be reëxamined unless there be set forth in the application new and material reasons for the granting of clemency, but that the applicant will be advised of the recent consideration and of the action had thereon.

CHAPTER XVII. PUNITIVE ARTICLES.

SECTION I.

ENLISTMENT—MUSTER—RETURNS.

FIFTY-FOURTH ARTICLE.

405. Any person who shall procure himself to be enlisted in the military service of the United States by means of willful misrepresentation or concealment as to his qualifications for enlistment, and shall receive pay or allowances under such enlistment, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

A fraudulent enlistment is an enlistment procured by means of a willful misrepresentation in regard to a qualification or disqualification for enlistment, or by intentional concealment of a disqualification which has had the effect of causing the enlistment of a man not qualified to be a soldier and who but for such false representation or concealment would have been rejected.

Willful means intentional, thus excluding cases of mistake or forgetfulness.

Misrepresentation and concealment include any act, statement, or omission, however made, which has the effect of conveying an untruth or concealing the truth concerning the applicant's qualifications or disqualifications for enlistment.

The misrepresentation or concealment may be in matters which are designed to open the door to inquiry concerning the qualifications or disqualifications for enlistment, such as questions as to previous service, previous applications for enlistment, etc.

The qualifications or disqualifications may be prescribed by law, regulations, or orders.

Answers to questions having no bearing on the applicant's qualifications for enlistment, such as questions as to applicant's name, address, or immaterial statements as to age, are not sufficient.

ANALYSIS AND PROOF.

The article applies only to enlisted men.

The article defines one offense, i.e., fraudulent enlistment.

I. FRAUDULENT ENLISTMENT.

PROOF.

- (a) The enlistment of the accused in the military service as alleged.
- (b) That the accused willfully misrepresented a certain fact or facts regarding his qualifications or disqualifications for enlistment, or willfully—that is, intentionally—concealed a disqualification, as alleged.
- (c) That enlistment was procured by such misrepresentation or concealment.
- (d) That under such enlistment the accused received either pay or allowances, or both, as alleged.

(e) Where a soldier enlists without a discharge (see twenty-ninth article), the proof should include the fact that at the time of the alleged enlistment the accused was a soldier, and that the enlistment was entered into without a regular discharge from the former enlistment.

FIFTY-FIFTH ARTICLE.

406. Any officer who knowingly enlists or musters into the military service any person whose enlistment or muster in is prohibited by law, regulations, or orders shall be dismissed from the service or suffer such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article.

The prohibited enlistment must be knowingly made, i.e., it must be shown that the accused knew that the person enlisted or mustered in by him was within the prohibited class.

Knowingly includes not only a certainty of belief but also such a degree of belief as the ordinarily prudent man acts upon.

The enlistment or muster in of the person must be at the time prohibited by law or by regulations or orders that were operative as to the accused.

This excludes cases where the enlistment or muster in was prohibited by regulations or orders of the existence of which the accused was not aware or at the time chargeable with knowledge.

ANALYSIS AND PROOF.

The article applies only to officers.

The article defines two offenses which may be treated under one heading as follows:

I. UNLAWFUL ENLISTMENT (OR MUSTER IN).

PROOF.

(a) The enlistment or muster in by the accused officer of the person named, as alleged.

(b) That such person was within the classes whose enlistment or muster in were prohibited at the time of such enlistment or muster in.

(c) That the accused knew this at the time of the enlistment or muster in of such person.

FIFTY-SIXTH ARTICLE.

407. * * * Any officer who knowingly makes a false muster of man or animal, or who signs or directs or allows the signing of any muster roll knowing the same to contain a false muster or false statement as to the absence or pay of an officer or soldier, or who wrongfully takes money or other consideration on mustering in a regiment, company, or other organization, or on signing muster rolls, or who knowingly musters as an officer or soldier a person who is not such officer or soldier, shall be dismissed from the service and suffer such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article for requirements as to muster rolls and definition of the offenses.

Muster has been defined as the assembling, inspecting, entering upon the formal rolls, and officially reporting as a component part of the command of persons or public animals. (Winthrop, p. 852.)

ANALYSIS AND PROOF.

The article applies only to officers.

The article defines a number of offenses which may be treated under the following heads:

- I. Making false muster.
- II. Signing, directing, or allowing the signing of false muster rolls.
- III. Taking money or other consideration on muster or signing muster rolls.
- IV. Mustering as an officer or soldier one who is not.

I. MAKING FALSE MUSTER.

PROOF.

- (a) That the muster of a certain man or animal was made by the accused officer, as alleged.
- (b) That the muster was false as alleged.
- (c) That the accused officer knew this at the time of making the muster.

II. SIGNING, DIRECTING, OR ALLOWING THE SIGNING OF FALSE MUSTER ROLLS.

PROOF.

- (a) That the accused officer signed the muster roll or directed or allowed the signing of the muster roll as alleged.
- (b) That such muster roll was false in certain particulars as alleged.
- (c) That the accused officer knew this at the time he signed the roll or directed or allowed it to be signed as alleged.

III. TAKING MONEY OR OTHER CONSIDERATION ON MUSTER OR SIGNING MUSTER ROLLS.

PROOF.

- (a) That the accused officer made the muster of the organization or signed the muster rolls as alleged.
- (b) That he accepted money or other consideration as a compensation or reward for making the muster or signing the muster rolls.
- (c) That the taking of such money or other consideration was wrongful—that is, without legal excuse.

IV. MUSTERING AS AN OFFICER OR SOLDIER ONE WHO IS NOT.

PROOF.

- (a) That the accused officer mustered as an officer or soldier a certain person, as alleged.
- (b) That the person so mustered was not such officer or soldier.
- (c) That the accused knew this when he made the muster.

FIFTY-SEVENTH ARTICLE.

408. Every officer commanding a regiment, an independent troop, battery, or company, or a garrison, shall, in the beginning of every month, transmit through the proper channels, to the Department of War, an exact return of the same, specifying the names of the officers then absent from their posts, with the reasons for and the time of their absence. Every officer whose duty it is to render to the War Department or other superior authority a return of the state of the troops under his command, or of the arms, ammunitions, clothing, funds, or other property thereunto belonging, who knowingly makes a false return thereof shall be dismissed from the service and suffer such other punishment as a court-martial may direct. And any officer who, through neglect or design, omits to render such return shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article, the penal part of which applies broadly to "every officer whose duty it is to render to the War Department or other superior authority a return of the state of the troops under his command, or of the arms, ammunition, clothing, funds, or other property thereunto belonging."

ANALYSIS AND PROOF.

The article applies to commanding officers only.

The article defines two offenses:

I. Making false returns.

II. Omitting to render returns.

I. MAKING FALSE RETURNS.

As to knowingly, see remarks under fifty-fifth article.

PROOF.

(a) That the accused officer was a commanding officer, as alleged.

(b) That it became his duty as such to render to a certain superior authority a certain return as specified.

(c) That he complied with such duty, and that the return so made was false in certain particulars, as alleged.

(d) That the accused officer knew that the return was false at the time of making it.

II. OMITTING TO RENDER RETURNS.

The term "neglect" involves the idea of culpability and includes the case of an officer who, knowing the return to be due, fails to render it through remissness or procrastination.

PROOF.

(a) That the accused officer was a commanding officer as alleged.

(b) That it became his duty as such to render to a certain superior authority a certain return as specified.

(c) That he omitted through neglect or design to render such return.

SECTION II.

DESERTION—ABSENCE WITHOUT LEAVE.

FIFTY-EIGHTH ARTICLE.

409. Any person subject to military law who deserts or attempts to desert the service of the United States shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct, and, if the offense be committed at any other time, any punishment, excepting death, that a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

Desertion is absence without leave accompanied by the intention not to return.

Both elements are essential to the offense. The offense becomes complete when the person absents himself without authority from his place of service with intent not to return thereto. A prompt repentance and return are no defense, nor is it a defense that the deserter at the time of departure intended to report for duty elsewhere. Thus, where a soldier leaves his post intending never to

go back unless a certain event happens, or leaves his post with such intent and reports at another post, he is a deserter; but unless such intent exists at some time the soldier can not be a deserter whether his purpose is to stay away a definite or indefinite length of time. Where a soldier, without having been discharged, again enlists in the Army or in the Militia in the service of the United States, such enlistment is, by the twenty-ninth article, made sufficient evidence of desertion. In such a case, proof of the intent permanently to stay away from his former place of service and of the status of absence without leave therefrom are unnecessary.

ANALYSIS AND PROOF.

The article includes all persons subject to military law. See Article 2.

The article defines two offenses, as follows:

I. Desertion.

II. Attempting to desert.

I. DESERTION.

PROOF.

(a) That the accused absented himself, or remained absent without authority, from his place of service, as alleged.

(b) That he intended, at the time of absenting himself or at some time during his absence, to remain away permanently from such place.

(c) That his absence was of a duration and was terminated as alleged.

(d) That his act was done, if so alleged, in the execution of a certain conspiracy, or in the presence of a certain outbreak of Indians, or of a certain unlawful assemblage which his organization was opposing, or in time of war where the court will not take judicial notice of the existence of a status of war.

(e) Where the soldier enlisted without a discharge (see twenty-ninth article), that the accused was a soldier in a certain organization of the Army as alleged; and that, without being discharged from such organization, he again enlisted in the Army, Navy, Marine Corps, or some foreign army as alleged. In this case proof of the absence without leave and of the intention not to return become unnecessary.

II. ATTEMPTING TO DESERT.

An attempt to desert is an overt act other than mere preparation toward accomplishing a purpose to desert.

Usually the endeavor of the accused toward getting away will be frustrated by an agency independent of his own will; but once the attempt is made a turning back by the accused of his own accord does not obliterate the offense. An instance of the offense is: A soldier intending to desert hides himself in an empty freight car on the post, intending to effect his escape from the post by being taken out in the car.

PROOF.

(a) That the accused made the attempt by doing the overt act or acts alleged.

(b) That he intended to desert at the time of doing such act or acts.

(c) That his act was done, if so alleged, in the execution of a certain conspiracy, or in the presence of a certain outbreak of Indians, or a certain unlawful assemblage which his organization was opposing, or in time of war where the court will not take judicial notice of the existence of the status specified.

FIFTY-NINTH ARTICLE.

410. Any person subject to military law who advises or persuades or knowingly assists another to desert the service of the United States shall, if the offense be committed in time of war, suffer death, or such other punishment as a court-martial may direct, and, if the offense be committed at any other time, any punishment, excepting death, that a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the definition of desertion under the next preceding article.

As to knowingly, see remarks under the fifty-fifth article.

The offenses of persuading and assisting desertion are not complete unless the desertion occurs; but the offense of advising is complete when the advice is given, whether the person advised deserts or not.

It is not necessary that the accused act alone in giving the advice or assistance, or in the persuasion; and he may act through other persons in committing the offenses.

ANALYSIS AND PROOF.

The article applies to all persons subject to military law. See article 2.

The article defines three offenses, as follows:

I. Advising desertion.

II. Persuading desertion.

III. Assisting desertion.

I. ADVISING DESERTION.**PROOF.**

(a) That the accused advised a person subject to military law to desert the service as alleged.

(b) That the act was done, if so alleged, in time of war, where the court will not take judicial notice of the status of war.

II. PERSUADING DESERTION.**PROOF.**

(a) That the accused used persuasion to induce a person subject to military law to desert the service as alleged.

(b) That the person whom he persuaded deserted as alleged, and was induced to do so by such persuasion. See proof of desertion in the next preceding article, items (a) and (b).

(c) That the act was done, if so alleged, in time of war, where the court will not take judicial notice of the status of war.

III. ASSISTING DESERTION.**PROOF.**

(a) That the accused knowingly assisted a person subject to military law to desert the service as alleged.

(b) That the person given such assistance deserted as alleged. See proof of desertion in the next preceding article, items (a) and (b).

(c) That the act was done, if so alleged, in time of war, where the court will not take judicial notice of the status of war.

SIXTIETH ARTICLE.

411. Any officer who, after having discovered that a soldier in his command is a deserter from the military or naval service or from the Marine Corps, retains such deserter in his command without informing superior authority or the commander of the organization to which the deserter belongs shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See definition of desertion under article 58.

Discovered does not imply a certainty on the one hand or a mere suspicion on the other. It implies such a belief as the ordinarily prudent officer would act upon.

ANALYSIS AND PROOF.

The article applies only to commanding officers.

The article defines one offense:

I. RETAINING A DESERTER.

PROOF.

- (a) That the accused officer exercised a certain command as alleged.
- (b) That while so in command he discovered that a certain soldier in his command was a deserter from the military or naval service, or from the Marine Corps, as alleged.
- (c) That such soldier was in fact such a deserter. See proof of desertion under fifty-eighth article, items (a) and (b).
- (d) That he retained such deserter in his command without informing superior authority or the commanding officer of the organization to which the deserter belongs, as alleged.

SIXTY-FIRST ARTICLE.

412. Any person subject to military law who fails to repair at the fixed time to the properly appointed place of duty, or goes from the same without proper leave, or absents himself from his command, guard, quarters, station, or camp without proper leave, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The article is designed to cover every case not elsewhere provided for where any person subject to military law is through his own fault not at the place where he is required to be at a time when he should be there.

The first part of the article—that relating to properly appointed place of duty—applies whether such place is appointed as a rendezvous for several or for one only. Thus, it would apply in the case of a soldier failing to report as the kitchen police or leaving such duty after reporting.

A soldier turned over to the civil authorities upon application is not punishable under this article for the period he is held by them under such delivery. So, also, where a soldier is absent with leave and is held, tried, and acquitted by the civil authorities, his status does not change to absence without leave. But where the soldier is absent without leave when tried, although acquitted, or being absent with leave is convicted and held beyond the expiration of his pass, or being absent without leave is unable to return through sickness or lack of transportation facilities, or other disabilities, the period of the absence without leave will include the time he is so detained; but, in view of the fact that the absence during such time is enforced, it would be appropriate not to consider the length of such detention for the purpose of administering punishment in the case.

In computing the length in days of a period of absence for the purpose of determining the maximum punishment for an absence without leave under this article periods of 24 hours are considered one day. Thus, a soldier who absents himself from 11.59 p. m. one day to 12.01 a. m. the next is absent only a fraction of a day as far as the maximum punishment order is concerned, although the period of absence cover parts of two calendar days.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See Article 2.

The article defines a number of offenses which may be treated under the general term "Absence without leave."

I. ABSENCE WITHOUT LEAVE.

PROOF.

(1) Where the accused fails to appear at or goes from a place of duty.

(a) That a certain authority appointed a certain time and place for a certain duty by the accused, as alleged.

(b) That he failed to report to such place at the proper time, or having so reported went from the same without authority from any one competent to give him leave to do so.

(2) Where the accused is charged with absenting himself without proper leave.

(a) That the accused absented himself from his command, guard, quarters, station, or camp for a certain period, as alleged.

(b) That such absence was without authority from any one competent to give him leave.

SECTION III.

DISRESPECT—INSUBORDINATION—MUTINY.

SIXTY-SECOND ARTICLE.

413. Any officer who uses contemptuous or disrespectful words against the President, Vice President, the Congress of the United States, the Secretary of War, or the governor or legislature of any State, Territory, or other possession of the United States in which he is quartered shall be dismissed from the service or suffer such other punishment as a court-martial may direct. Any other person subject to military law who so offends shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The contemptuous or disrespectful words, as used in this article, cover language disrespectful and contemptuous in themselves, such as abusive epithets, denunciatory or contumelious expressions, or intemperate or malevolent comments upon official or personal acts, etc., or words disrespectful or contemptuous because of the connection in which and the circumstances under which they are used.

It is essential that a person against whom such words are used be in one of the offices named at the time; but it is immaterial whether the words are spoken against him in his official or private capacity.

The truth or falsity of the statements is, as a rule, immaterial.

Trials for offenses covered by this article have usually been for the use of "contemptuous or disrespectful words against the President," or the Government mainly as represented by the President. The deliberate employment of denunciatory or contumelious language in regard to the President, whether spoken in public or published, or conveyed in a communication designed to be made public, has, in repeated cases, been made the subject of charges and trial under this article. (Digest, p. 120; Winthrop, p. 872.)

The language used must be disrespectful or contemptuous. Adverse criticism of the Executive expressed in emphatic language in the heat of political discussion, but not apparently intended to be personally disrespectful, should not be made the basis of trial under this article. (Idem.)

ANALYSIS AND PROOF.

The article applies to any person subject to military law.

The article defines a number of offenses which may be treated under the general term of "disrespect toward the President, etc."

I. DISRESPECT TOWARD THE PRESIDENT, ETC.

PROOF.

(a) That the accused used certain contemptuous or disrespectful words against the President, or other of the authorities mentioned in the article, as alleged.

(b) Where such words are not contemptuous or disrespectful in themselves that the words were used under certain circumstances or in a certain connection, or that a certain intended meaning gave them the character of contemptuous or disrespectful words, as alleged.

SIXTY-THIRD ARTICLE.

414. Any person subject to military law who behaves himself with disrespect toward his superior officer shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The disrespectful behavior contemplated by this article is such as detracts from the respect due to the authority and person of a superior officer. It may consist in acts or language, however expressed.

It is not essential that the disrespectful behavior be in the presence of the superior, but in general it is considered objectionable to hold one accountable under this article for what was said or done by him in a purely private conversation.

The officer toward whom the disrespectful behavior was directed must have been the superior of the accused at the time of the acts charged; but by superior is not necessarily meant a superior in rank, as a line officer, though inferior in rank, may be the commanding officer, and thus the superior of a staff officer, such as a surgeon.

Disrespect by words may be conveyed by opprobrious epithets or other contemptuous or denunciatory language. (Winthrop, p. 874.)

Disrespect by acts may be exhibited in a variety of modes—as neglecting the customary salute, by a marked disdain, indifference, insolence, impertinence, undue familiarity, or other rudeness in the presence of the superior officer. (Winthrop, p. 875.)

It is not essential that the behavior be intentional, and it is immaterial that only facts were stated; but where the person who did the acts or spoke the words did not know that the person against whom they were directed was his superior officer, such ignorance is a defense.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See Article 2.

The article defines one offense, that is, disrespect toward a superior officer.

I. DISRESPECT TOWARD A SUPERIOR OFFICER

PROOF.

(a) That the accused did or omitted to do certain acts or spoke certain words toward a certain officer, as alleged.

(b) That the behavior involved in such acts, omissions, or words was that

under certain circumstance or in a certain connection or with a certain meaning, as alleged.

(c) That the officer toward whom the acts, omissions, or words were directed was the accused's superior officer.

SIXTY-FOURTH ARTICLE.

415. Any person subject to military law who, on any pretense whatsoever, strikes his superior officer or draws or lifts up any weapon or offers any violence against him, being in the execution of his office, or willfully disobeys any lawful command of his superior officer, shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

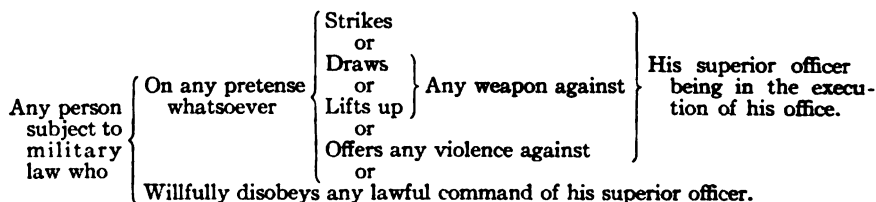
The phrase "on any pretense whatsoever" is not to be understood as excluding as a defense the fact that the striking was done in legitimate self-defense or in the discharge of some duty, such as is enjoined by the sixty-seventh article.

By "superior officer" is meant not only the commanding officer of the accused, whatever may be the relative rank of the two, but any other commissioned officer of rank superior to that of the accused. That the accused did not know the officer to be his superior is available as a defense.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See Article 2.

The article embraces offenses indicated by the following diagram:



These offenses may be treated under the following heads:

- I. Assaulting superior officer.
- II. Disobeying superior officer.

I. ASSAULTING SUPERIOR OFFICER.

The word "strikes" means an intentional blow with anything by which a blow can be given.

The phrase "draws or lifts up any weapon against" covers any simple assault committed in the manner stated.

The offense consisting either in a mere threatening of violence without anything further being proposed, or in an attempt to do violence which is not effectuated. The weapon chiefly had in view by the word "draw" is no doubt the sword; the term might, however, apply to a bayonet in a sheath, or to a pistol; and the drawing of either in an aggressive manner, or the raising or brandishing of the same minaciously in the presence of the superior and at him is the sort of act contemplated. The raising in a threatening manner of a firearm (whether or not loaded) or of a club, or any implement or thing by which a serious blow could be given, would be within the description—"lifts up." (Winthrop, p. 879.)

The phrase "offers any violence against him" comprises any form of battery or of mere assault not embraced in the preceding more specific terms "strikes" and "draws or lifts up." But the violence where not executed must be physically attempted or menaced. A mere threatening in words would not be an offering of violence in the sense of the article. (Winthrop, pp. 879 and 880.)

An officer is in the execution of his office "when engaged in any act or service required or authorized to be done by him by statute, regulation, the order of a superior or military usage." (Winthrop, p. 881.)

PROOF.

(a) That the accused struck a certain officer with or without a certain thing or weapon or drew or lifted up a certain weapon against him or offered violence against him, as alleged.

(b) That such officer was the accused's superior officer at the time.

(c) That such superior officer was in the execution of his office at the time, as alleged.

II. DISOBEYING SUPERIOR OFFICER.

The willful disobedience contemplated is such as shows an intentional defiance of authority, as where a soldier is given an order by an officer to do or cease from doing a particular thing at once and refuses to do what is ordered or simply omits to do it.

Where the order is operative in futuro a mere neglect to comply with it "through heedlessness, remissness, or forgetfulness" is an offense chargeable not in general under this article, but under the "general article" (Winthrop, p. 884), and the same is true of a mere refusal to obey such an order before the time set for its execution.

The order must relate to military duty and be one which the superior officer is authorized under the circumstances to give the accused. Disobedience of an order which has for its sole object the attainment of some private end or which is given for the sole purpose of increasing the penalty for an offense which it is expected the accused may commit is not punishable under this article.

An accused can not be convicted of a violation of this article if the order was in fact unlawful; but, unless the order is plainly illegal, the disobedience of it is punishable under the general article, i.e., the ninety-sixth article.

To justify from a military point of view a military inferior in disobeying the order of a superior, the order must be one requiring something to be done which is palpably a breach of law and a crime or an injury to a third person, or is of a serious character (not involving unimportant consequences only) and if done would not be susceptible of being righted. An order requiring the performance of a military duty or act can not be disobeyed with impunity unless it has one of these characteristics.

That obedience to a command involved a violation of the accused's religious scruples is not a defense.

Failure to comply with the general or standing orders of a department, district, post, etc., or with the Army Regulations, is not an offense under this article, but under the ninety-sixth article; and so of a nonperformance by a subordinate of any mere routine duty.

The form of the order is immaterial, as is the method by which it is transmitted to the accused; but the communication must amount to an order and the accused must know that it is from his superior officer; that is, a commissioned officer who is authorized to give the order whether he is superior in rank to the accused or not.

PROOF.

- (a) That the accused received a certain command from a certain officer as alleged.
 (b) That such officer was the accused's superior officer.
 (c) That the accused willfully disobeyed such command.

SIXTY-FIFTH ARTICLE.

416. Any soldier who strikes or assaults, or who attempts or threatens to strike or assault, or willfully disobeys the lawful order of a noncommissioned officer while in the execution of his office, or uses threatening or insulting language, or behaves in an insubordinate or disrespectful manner toward a noncommissioned officer while in the execution of his office, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

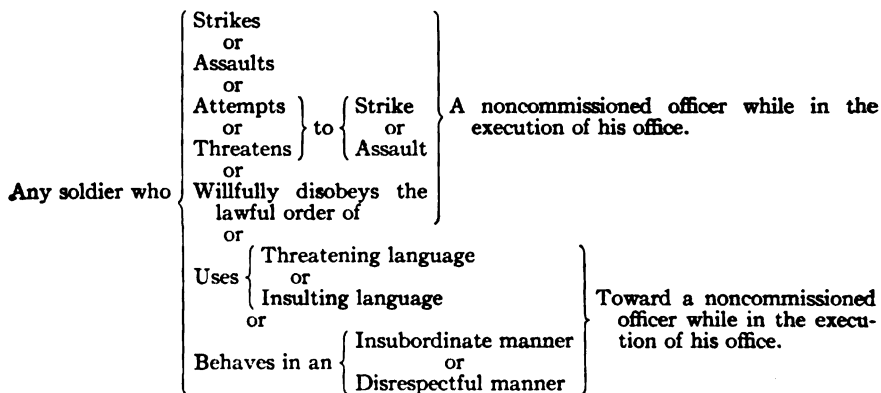
This article has the same general objects with respect to noncommissioned officers as the sixty-third and sixty-fourth articles have with respect to commissioned officers, namely, to insure obedience to their lawful orders, and to protect them from violence, insult, or disrespect.

The terms "willful disobedience," "lawful order," and "in the execution of his office" are used in the same sense as in the sixty-fourth article.

ANALYSIS AND PROOF.

The article applies to enlisted men only.

The article embraces offenses indicated by the following diagram:



These offenses may be briefly treated under the following headings:

I. Assaulting a noncommissioned officer.

II. Disobeying a noncommissioned officer.

III. Using threatening or insulting language or behaving in an insubordinate or disrespectful manner toward a noncommissioned officer.

I. ASSAULTING A NONCOMMISSIONED OFFICER.

For definition of the offense, see ninety-third article, item IX.

The part of the article relating to assaults covers any unlawful violence against a noncommissioned officer in the execution of his office, whether such violence is merely threatened or is advanced in any degree toward actual application.

PROOF.

(a) That the accused soldier struck a certain noncommissioned officer with a certain thing, or assaulted, or attempted or threatened to strike or assault him in a certain manner, as alleged.

(b) That such noncommissioned officer was at the time in the execution of his office, as alleged.

II. DISOBEYING A NONCOMMISSIONED OFFICER.**PROOF.**

(a) That the accused soldier received a certain command from a certain noncommissioned officer, as alleged.

(b) That the noncommissioned officer was in the execution of his office.

(c) That the accused soldier willfully disobeyed such command.

III. USING THREATENING OR INSULTING LANGUAGE OR BEHAVING IN AN INSUBORDINATE OR DISRESPECTFUL MANNER TOWARD A NONCOMMISSIONED OFFICER.

The phrase "while in the execution of his office" limits the application of this part of the article to language and behavior within sight or hearing of the noncommissioned officer toward whom it is used; the word "toward" not being used in the same sense as in the sixty-third article.

PROOF.

(a) That the accused used certain language or did or omitted to do certain acts under certain circumstances, or in a certain manner or with a certain intended meaning, as alleged.

(b) That such language or behavior was used toward a certain noncommissioned officer.

(c) That such noncommissioned officer was at the time in the execution of his office, as alleged.

SIXTY-SIXTH ARTICLE.

417. Any person subject to military law who attempts to create or who begins, excites, causes, or joins in any mutiny or sedition in any company, party, post, camp, detachment, guard, or other command shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

Mutiny imports collective insubordination, and necessarily includes some combination of two or more persons in resisting lawful military authority.

Sedition implies the raising of commotion or disturbance against the State; it is a revolt against legitimate authority and differs from mutiny in that it implies a resistance to lawful civil power.

The concert of insubordination contemplated in mutiny or sedition need not be preconceived nor is it necessary that the act of insubordination be active or violent. It may consist simply in a persistent and concerted refusal or omission to obey orders or to do duty with an insubordinate intent.

ANALYSIS AND PROOF.

The article applies to any person subject to military law.

The article defines five offenses relating to mutiny and five relating to sedition.

I. Attempting to create a mutiny (or sedition).

II. Beginning a mutiny (or sedition).

III. Joining in a mutiny (or sedition).

IV. Exciting a mutiny (or sedition).

V. Causing a mutiny (or sedition).

I. ATTEMPTING TO CREATE A MUTINY OR SEDITION.

An attempt to commit a crime is an act done with specific intent to commit the particular crime and proximately tending to, but falling short of, its consummation. There must be an apparent possibility to commit the crime in the manner specified. Voluntary abandonment of purpose after an act constituting an attempt is not a defense.

The intent which distinguishes mutiny or sedition is the intent to resist lawful authority in combination with others. The intent to create a mutiny or sedition may be declared in words, or, as in all other cases, it may be inferred from acts done or from the surrounding circumstances.

A single individual may harbor an intent to create a mutiny and may commit some overt act tending to create a mutiny or sedition and so be guilty of an attempt to create a mutiny or sedition, alike whether he was joined by others or not, or whether a mutiny or sedition actually followed or not.

PROOF.

(a) An act or acts of accused which proximately tended to create a certain intended (or actual) collective insubordination.

(b) A specific intent to create a certain intended (or actual) collective insubordination.

(c) That the insubordination occurred or was intended to occur in a company, party, post, camp, detachment, guard, or other command.

II-III. BEGINNING OF JOINING IN A MUTINY.

There can be no actual mutiny or sedition until there has been an overt act of insubordination joined in by two or more persons, and so no person can be guilty of beginning or joining in a mutiny unless an overt act of mutiny is proved. A person can not be guilty of beginning a mutiny unless he is the first, or among the first, to commit an overt act of mutiny; a person can not join in a mutiny without joining in some overt act. Hence presence of the accused at the scene of mutiny is necessary in these two cases.

PROOF.

(a) The occurrence of certain collective insubordination in a company, party, post, camp, detachment, or other command.

(b) That the accused began or joined in the certain collective insubordination.

IV-V. CAUSING OR EXCITING A MUTINY.

As in II and III, supra, no person can be guilty of causing or exciting a mutiny unless an overt act of mutiny follows his efforts. But a person may excite or cause a mutiny without taking personal part in or being present at the demonstrations of mutiny which result from his activities.

PROOF.

(a) The occurrence of certain collective insubordination in a certain company, party, post, camp, detachment, or guard, or other command.

(b) Acts of the accused tending to create or excite the certain collective insubordination.

SIXTY-SEVENTH ARTICLE.

418. Any officer or soldier who, being present at any mutiny or sedition, does not use his utmost endeavor to suppress the same, or knowing or having reason to believe that a mutiny or sedition is to take place, does not without delay give information thereof to his commanding officer shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See pages 1421, 1422.

ANALYSIS AND PROOF.

The article applies only to officers and soldiers. It defines two offenses relating to mutiny and two relating to sedition.

I. Being present at a mutiny (or sedition), failing to use the utmost endeavor to suppress it.

II. Having knowledge or reason to believe that a mutiny (or sedition) is to take place, failing to give information thereof to his commanding officer without delay.

I. FAILURE TO SUPPRESS MUTINY (OR SEDITION).

Mere presence countenancing such collective insubordinations and disturbances as mutinies, riots, and seditions has been considered criminal for over a century. The article goes a step further and requires of officers and soldiers their utmost endeavors to suppress such disorders.

One is not present at a mutiny unless an act or acts of collective insubordination occur in his presence.

Utmost endeavor is a relative term. The rule governing the lawful use of force to suppress crime or arrest wrongdoers is that as much force may be used as is reasonably necessary to accomplish the desired purpose, and no more. This article has been construed as authorizing and requiring the most extreme measures—even to the using of a dangerous weapon and the taking of life—where such extreme measures are reasonably necessary. But all the circumstances of necessity are to be considered. Means which in war and before the enemy would be not only justified, but laudable, might, in time of peace, render the person employing them criminally and civilly liable for abuse of authority.

PROOF.

(a) The occurrence of an act or acts of collective insubordination in the presence of the accused.

(b) Acts or omissions of the accused which constitute a failure to use his utmost endeavor to suppress such acts.

II. FAILURE TO GIVE INFORMATION OF MUTINY (OR SEDITION).

Where circumstances known to the accused are such as would have caused a reasonable man in the same or similar circumstances to believe that a mutiny or sedition was impending, these circumstances will be sufficient to charge the accused with such reason to believe as will render him culpable under the article.

It is not a necessary element of the crime that the impending mutiny or sedition materialize.

"Delay" imports the lapse of an unreasonable time without action.

The expression "commanding officer" here includes in its meaning any officer having a military command over the person who has knowledge or reason to believe that a mutiny or sedition is impending.

PROOF.

(a) That the accused knew that a mutiny or sedition was impending or that he knew of circumstances that would have induced, in a reasonable man, a belief that a mutiny or sedition was impending.

(b) Acts or omissions of the accused which constitute a failure or unreasonable delay in informing his commanding officer of his knowledge or belief.

SIXTY-EIGHTH ARTICLE.

419. All officers and noncommissioned officers have power to part and quell all quarrels, frays, and disorders among persons subject to military law and to order officers who take part in the same into arrest, and other persons subject to military law who take part in the same into arrest or confinement, as circumstances may require, until their proper superior officer is acquainted therewith. And whosoever, being so ordered, refuses to obey such officer or noncommissioned officer or draws a weapon upon or otherwise threatens or does violence to him shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

A fray is a fight in a public place to the terror of the people, in which acts of violence occur or dangerous weapons are exhibited or threatened to be used. All persons aiding or abetting a fray are principals. The word "frays" is thus seen to be somewhat restrictive, but the words "quarrels" and "disorders" include any disturbance of a contentious character from a mere war of words to a rout or riot.

To quell is to quiet, allay, abate, or put down.

It is immaterial under the article whether the officer or noncommissioned officer who essays to part or quell quarrels, frays, and disorders is on a duty status or not, as it is immaterial whether the persons engaged in the disorder are superior to him in rank or not.

ANALYSIS AND PROOF.

The punitive portion of the article applies to all persons subject to military law. It is designed to enforce the authority of officers or noncommissioned officers to part and quell certain disorders and to order the participants into confinement or arrest.

The article defines four crimes:

- I. Refusal to obey an order of an officer or noncommissioned officer placing the accused in arrest or confinement.
- II. Upon being ordered into arrest or confinement, drawing a weapon on the officer or noncommissioned officer giving the order.
- III. Upon being ordered into arrest or confinement, threatening the officer or noncommissioned officer giving the order.
- IV. Upon being ordered into arrest or confinement, doing violence to the officer or noncommissioned officer giving the order.

I. DISOBEDIENCE OF ORDERS INTO ARREST OR CONFINEMENT.

It should appear that the power conferred by the article was being exercised for the purpose stated, and therefore the charges and proof should refer to the order given during the disorder. It should be made to appear that the accused heard or understood the order and knew that the person giving it was an officer or noncommissioned officer.

PROOF.

- (a) That the accused was a participant in a certain quarrel, fray, or disorder occurring among persons subject to military law.
- (b) That during the disorder a certain officer or noncommissioned officer ordered the accused into arrest (if accused is an officer) or into arrest or confinement (if accused is a person subject to military law other than an officer), with a view to quell or part the disorder.
- (c) That the accused refused to obey.

II, III, IV. THREATENING, DRAWING A WEAPON UPON, OR OFFERING VIOLENCE TO, AN OFFICER OR NONCOMMISSIONED OFFICER.

The proof of the second, third, and fourth crimes defined by the article should follow in form and essentials the proof required under the first crime (disobedience of order into arrest or confinement, *supra*), except that instead of proving a refusal to obey (par. 3, *supra*), drawing a weapon, making a threat, or doing violence must be proved as the consummation of the particular offense. The word threat as here used includes any menacing action, either by gesture or by words.

SECTION IV.

ARREST; CONFINEMENT.

SIXTY-NINTH ARTICLE.

420. An officer charged with crime or with a serious offense under these articles shall be placed in arrest by the commanding officer, and in exceptional cases an officer so charged may be placed in confinement by the same authority. A soldier charged with crime or with a serious offense under these articles shall be placed in confinement, and when charged with a minor offense he may be placed in arrest. Any other person subject to military law charged with crime or with a serious offense under these articles shall be placed in confinement or in arrest, as circumstances may require; and when charged with a minor offense such person may be placed in arrest. Any person placed in arrest under the provisions of this article shall thereby be restricted to his barracks, quarters, or tent, unless such limits shall be enlarged by proper authority. Any officer who breaks his arrest or who escapes from confinement before he is set at liberty by proper authority shall be dismissed from the service or suffer such other punishment as a court-martial may direct; and any other person subject to military law who escapes from confinement or who breaks his arrest before he is set at liberty by proper authority shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The arrest of an officer has been compared to an enlargement on bail, the security being the officer's commission. It is for this reason that the punishment may include dismissal. The distinction between arrest and confinement lies in the difference between the kinds of restraint imposed. In arrest the restraint is moral restraint imposed by the orders fixing the limits of arrest, or by the terms of the article. Confinement imports some physical restraint.

ANALYSIS AND PROOF.

The article applies to all persons subject to military law. The article defines two crimes:

- I. Breach of arrest.
- II. Escape from confinement.

I. BREACH OF ARREST.

The offense is committed when the person restrained infringes the limits set by orders, or by the sixty-ninth article of war, and the intention or motive that actuated him is immaterial to the issue of guilt, though, of course, proof of inadvertence or bona fide mistake is admissible to guide the court in assessing punishment. The unlawfulness of the arrest is a valid defense, but innocence of the accusation upon which the arrest is imposed is entirely irrelevant.

PROOF.

- (a) That the accused was duly placed in arrest.
- (b) That before he was set at liberty by proper authority he transgressed the limits fixed by the sixty-ninth article of war or by the orders of proper authority.

II. ESCAPE FROM CONFINEMENT.

An escape may be either with or without force or artifice, and either with or without consent of the custodian. Any completed casting off of the restraint of confinement, before being set at liberty by proper authority, is an escape from confinement, and a lack of effectiveness of the physical restraint imposed is immaterial to the issue of guilt. It seems, however, that an escape is not complete until the prisoner has, momentarily at least, freed himself from the restraint of his confinement, so, if the movement toward escape is opposed, or before it is completed an immediate pursuit ensues, there will be no escape until opposition is overcome, or pursuit is shaken off. In cases where the escape is not completed the offense should be charged as an attempt under the ninety-sixth article of war.

PROOF.

- (a) That the accused was placed in confinement.
- (b) That he freed himself from the restraint of his confinement before he had been set at liberty by proper authority.

SEVENTY-FIRST ARTICLE.

421. No provost marshal or commander of a guard shall refuse to receive or keep any prisoner committed to his charge by an officer belonging to the forces of the United States, provided the officer committing shall, at the time, deliver an account in writing, signed by himself, of the crime or offense charged against the prisoner. Any officer or soldier so refusing shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The words "commander of a guard" include a commander of any rank or grade, and hence a noncommissioned officer or private. The term "any prisoner" includes civil as well as military prisoners who are committed according to the terms of the article. A provost marshal or commander of a guard may receive a prisoner without an account of the charge against him or other due formality of commitment, but he must receive the prisoner where the required account in writing accompanies the commitment.

A mere name or description of the offense charged in common parlance when written and signed by the committing officer is a sufficient "account in writing."

ANALYSIS AND PROOF.

The article applies to officer and soldiers.
The article defines one crime:

- I. REFUSING TO RECEIVE OR KEEP A PRISONER COMMITTED WITH A WRITTEN ACCOUNT OF THE OFFENSE CHARGED AGAINST HIM SIGNED BY THE OFFICER COMMITTING THE PRISONER.

PROOF.

- (a) That the accused was a provost marshal or commander of a guard.
- (b) That a certain prisoner was committed to his charge by a certain officer belonging to the forces of the United States.
- (c) That, at the time of commitment, the committing officer delivered to

the accused a written account of the crime or offense charged against the prisoner, which account was signed by the committing officer.

(d) That the accused refused to receive or keep the prisoner.

SEVENTY-SECOND ARTICLE.

422. Every commander of a guard to whose charge a prisoner is committed shall, within twenty-four hours after such confinement, or as soon as he is relieved from his guard, report in writing to the commanding officer the name of such prisoner, the offense charged against him, and the name of the officer committing him; and if he fails to make such report he shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The term "commander of a guard" includes commanders of any rank or grade.

The term "prisoner" includes civilian as well as military prisoners.

The term "commanding officer" imports the commander to whom the guard report is properly made.

ANALYSIS AND PROOF.

The article applies to officers and soldiers. It defines one offense:

I. FAILURE TO RENDER A REPORT AS PRESCRIBED.

PROOF.

- (a) That the accused was commander of a certain guard.
- (b) That a prisoner was committed to his charge.
- (c) That the accused—
 1. Failed to make any report at all, or,
 2. That the report rendered was not in writing, or,
 3. That no report was rendered within 24 hours after confinement, or as soon as accused was relieved from his guard, or,
 4. That the report failed to set forth one or more of the particulars prescribed.

SEVENTY-THIRD ARTICLE.

423. Any person subject to military law who, without proper authority, releases any prisoner duly committed to his charge, or who through neglect or design suffers any prisoner so committed to escape, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The article describes three long-recognized common-law crimes.

It looks to the punishment of any person who is responsible for the unauthorized release or escape of a prisoner duly committed to his charge, and hence any member of a guard, party, escort, and convoy, or any person subject to military law to whose charge a prisoner is committed may be guilty of an offense under this article. Where a prisoner is committed to the commander of a guard, party, escort, or convoy, and is released by, or escapes from, a subordinate or subordinates to whom the commander has duly delegated custody of the prisoner, or to whom that custody duly falls as an incident of duty, all will be responsible under this article, except those who can show that the escape or release occurred under circumstances against which they could not reasonably guard.

The words "any prisoner" import both military and civilian prisoners.

A person may receive a prisoner in his capacity as commander or member of a guard, or he may be burdened with such a responsibility as a personal

trust. In the former case, the lowest authority competent to release the prisoner is the chief of the command, of the guard by which the prisoner is held. In the latter case, the authority who has imposed the trust, and who was competent to do so, is the lowest "proper authority" to order a release.

While a commander of the guard must receive a prisoner properly committed by any officer, the power of the committing officer ceases as soon as he has committed the prisoner, and he is not a "proper authority" to order a release.

An officer is not responsible under this article unless the prisoner was duly committed, but, as was pointed out in the discussion of the seventy-first article, an officer may receive a prisoner not committed in strict compliance with the terms of that article or other law, and if, having so received a prisoner, he releases such prisoner, or suffers him to escape, he may be held to answer, under the ninety-sixth article, for any dereliction of duty that may be predicated on his conduct in the case.

ANALYSIS AND PROOF.

The article applies to any person subject to military law.

The article defines three crimes:

- I. Releasing a prisoner without proper authority.
- II. Suffering a prisoner to escape through neglect.
- III. Suffering a prisoner to escape through design.

I. RELEASING A PRISONER WITHOUT PROPER AUTHORITY.

A release imports a removal of restraint from the prisoner in which the custodian is the sole actor, and in which the prisoner takes no initiative.

PROOF.

- (a) That a certain prisoner was duly committed to the charge of the accused.
- (b) That the accused released him without proper authority.

II. SUFFERING A PRISONER TO ESCAPE THROUGH NEGLIGENCE.

The word "neglect" is here used in the sense of the word "negligence."

Negligence is a relative term. It is defined in law as the absence of due care. The legal standard of care is that which would have been taken by a reasonably prudent man in the same or similar circumstances. This test looks to the standard required of persons acting in the capacity in which the accused was acting. Thus, if the accused is an officer, the test will be, "How would a reasonably prudent officer have acted?" If the circumstances were such as would have indicated to a reasonably prudent officer that a very high order of care was required to prevent escape, then the accused must be held to a very high order of care. The test is thus elastic, logical and just.

A prisoner can not be said to have escaped until he has overcome the opposition that restrained him, and shaken off immediate pursuit. Once he has done these things, the fact that he returns, is taken in a fresh pursuit, is killed, or dies, will not relieve the person accused of guilt under this article.

PROOF.

- (a) That a certain prisoner was duly committed to the charge of the accused.
- (b) That the prisoner escaped.
- (c) That the accused did not take such care to prevent escape as a reasonably prudent person, acting in the capacity in which the accused was acting,

would have taken in the same or similar circumstances. (This constitutes neglect.)

(d) That the escape was the proximate result of the neglect of the accused.

III. SUFFERING A PRISONER TO ESCAPE THROUGH DESIGN.

In law a wrongful act is designed when it is intended or when it results from conduct so shockingly and grossly devoid of care as to leave room for no inference but that the act was contemplated as an extremely probable result of the course of conduct followed. Thus, on a charge of suffering a prisoner to escape through design, evidence of gross negligence may be received as probative of design.

It sometimes happens that a prisoner has been permitted larger limits than should have been allowed, and an escape is consummated without hindrance. It does not at all follow that such an escape is to be considered as designed. The conduct of the responsible custodian is to be examined in the light of all the circumstances of the case, the heinousness of the crime with which the prisoner is charged, the notoriety of the prisoner's guilt, the probability of his return, and the intention and motives of the custodian.

PROOF.

- (a) That a certain prisoner was duly committed to the charge of the accused.
- (b) That the prisoner escaped.
- (c) 1. Acts of the accused tending to permit escape. 2. Acts of the accused probative of a design to suffer the escape.
- (d) That as a result of these acts and of this design the prisoner escaped.

SEVENTY-FOURTH ARTICLE.

424. When any person subject to military law, except one who is held by the military authorities to answer, or who is awaiting trial or result of trial, or who is undergoing sentence for a crime or offense punishable under these articles, is accused of a crime or offense committed within the geographical limits of the States of the Union and the District of Columbia, and punishable by the laws of the land, the commanding officer is required, except in time of war, upon application duly made, to use his utmost endeavor to deliver over such accused person to the civil authorities, or to aid the officers of justice in apprehending and securing him, in order that he may be brought to trial. Any commanding officer who upon such application refuses or willfully neglects, except in time of war, to deliver over such accused person to the civil authorities or to aid the officers of justice in apprehending and securing him shall be dismissed from the service or suffer such other punishment as a court-martial may direct.

When, under the provisions of this article, delivery is made to the civil authorities of an offender undergoing sentence of a court-martial, such delivery, if followed by conviction, shall be held to interrupt the execution of the sentence of the court-martial, and the offender shall be returned to military custody, after having answered to the civil authorities for his offense, for the completion of the said court-martial sentence.

DEFINITIONS AND PRINCIPLES.

I. REFUSING TO DELIVER ACCUSED PERSONS.

The words "commanding officer," as here used, import the officer who is chief of the complete integral place, body of troops, or detachment, wherein the person accused is serving at the time application is duly made. The words

"upon application duly made" prescribe a condition precedent to responsibility. They are inserted to prevent the possibility of false arrests, and to enable the commanding officer to satisfy himself of the true official character of him who makes the application, of the subsistence of an actual accusation against the person sought, and of the locus of the charged crime or offense.

The commanding officer should require that the application show that the crime or offense is alleged to have been committed within the geographical limits of the States of the Union and the District of Columbia. A sufficient form of application will be a written communication setting forth the fact of such an accusation of crime or offense committed within the prescribed limits as would subject the accused person to arrest by the civil authorities for the purposes of trial, or that a warrant for such arrest has issued, and a request that the commanding officer deliver the person accused to the civil authorities or assist them in apprehending or securing him. When the military jurisdiction has actively attached in any of the ways prescribed in the article, the commanding officer may, but he is not required to, make the prescribed delivery.

II. REFUSING TO AID IN APPREHENDING ACCUSED PERSONS.

The commanding officer is required not only to deliver the person accused but to aid in apprehending and securing him. The article therefore contemplates cases where, after apprehension by either the military or civil authorities, an application is duly made to a commanding officer for his assistance in securing a person subject to military law and accused of crime.

"Utmost endeavor" is to be understood in a reasonable sense with reference to the circumstances of the particular case. Thus, if the accused is not within military control, as where he is absent as a deserter, nothing more can be required of a commander than to furnish civil authority such information of his whereabouts and the prospect of his return as may be available.

While commanding officers are enjoined to use their utmost endeavor in carrying out the provisions of this law, a mere inadvertent neglect to take some necessary step toward delivery, apprehension, or securing of the person accused will not constitute an offense under this article, which contemplates only refusals and willful neglects to act.

ANALYSIS AND PROOF.

The punitive portion of the article applies only to officers, but the obligation to deliver or assist in apprehending and securing rests on all persons subject to military law.

The article defines two offenses:

I. Refusing or willfully neglecting to deliver an accused person.

II. Refusing or willfully neglecting to aid in apprehending and securing an accused person.

The essentials of proof are similar in both cases.

PROOF.

(a) That the accused was the commanding officer of a certain integral place, body of troops, or detachment.

(b) That a certain person under his command stood accused of a certain crime or offense, committed within the geographical limits of the States of the Union and the District of Columbia.

(c) That application was duly made to the accused officer by a person in proper civil authority—

1. To deliver the accused person to the civil authorities; or
2. To aid the officers of justice in apprehending and securing, or either, the accused person.

(d) Acts or omissions of the accused officer which constitute a refusal or a willful neglect to deliver the accused person or to aid in apprehending or securing him.

SECTION V.

WAR OFFENSES.

SEVENTY-FIFTH ARTICLE.

425. Any officer or soldier who misbehaves himself before the enemy, runs away, or shamefully abandons or delivers up any fort, post, camp, guard, or other command which it is his duty to defend, or speaks words inducing others to do the like, or casts away his arms or ammunition, or quits his post or colors to plunder or pillage, or by any means whatsoever occasions false alarms in camp, garrison, or quarters, shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

Misbehavior is by no means confined to acts of cowardice. It is a general term, and as here used it renders culpable under this article any conduct by an officer or soldier not conformable to the standard of behavior before the enemy set by the history of our arms. Running away is but a particular form of misbehavior specifically made punishable by this article.

"The enemy" imports any hostile body that our forces may be opposing and well includes a rebellious mob, a band of renegades, or a tribe of Indians.

ANALYSIS AND PROOF.

The article applies only to officers and soldiers. It defines seven offenses:

- I. Misbehavior before the enemy.
- II. Running away before the enemy.
- III. Shamefully abandoning or delivering up any command.
- IV. Speaking words inducing others to misbehave, run away, or abandon or deliver up any command.
- V. Casting away arms or ammunition.
- VI. Quitting post or colors to plunder or pillage.
- VII. Occasioning false alarms.

I. MISBEHAVIOR BEFORE THE ENEMY.

Under this clause may be charged any act of treason, cowardice, insubordination, or other unsoldierly conduct committed in the presence of the enemy.

PROOF.

- (a) That the accused was serving in the presence of an enemy.
- (b) Acts or omissions of the accused not conformable to the standard of soldierly conduct set by the history of our arms.

II. RUNNING AWAY BEFORE THE ENEMY.

- (a) That the accused was serving in the presence of an enemy.
- (b) That he misbehaved himself by running away.

III. SHAMEFULLY ABANDONING OR DELIVERING UP ANY COMMAND.

While the word "abandon" is broad enough to include a case in which a soldier or a subordinate officer leaves a fort, post, guard, or command which it is his duty to defend, it is probable that this clause of the article looks only to offenses by the commanding officers of such commands, and that abandonment by a subordinate should be charged as misbehavior or running away.

The words "deliver up" are synonymous with the word "surrender."

The surrender or abandonment of a command by an officer charged with its defense can only be justified by the utmost necessity and extremity, such as the exhaustion of provisions or water, the absence of hope of relief, and the certainty or extreme probability that no further effort could prevent the place, with its garrison, their arms, and magazines, from presently falling into the hands of the enemy. Unless such absolute necessity is shown, the conclusion must be that the surrender or abandonment was shameful within the meaning of this article.

An officer's duty to defend may be imposed by orders or by the circumstances in which he finds himself at a particular stage of operations; but an officer will find less justification in abandoning a post that he has been ordered to defend than in abandoning one that he has decided to defend. He will have less justification in delivering up a post than in abandoning it, and in delivering up a post that he has been ordered to defend he will have no justification at all except such as can be found in proof that no further resistance was possible.

PROOF.

(a) That the accused was charged by orders or by circumstances with a duty to defend a certain fort, post, camp, guard, or other command.

(b) That without justification he abandoned it or surrendered it.

IV. SPEAKING WORDS INDUCING OTHERS TO MISBEHAVE, RUN AWAY, OR TO ABANDON OR DELIVER UP ANY COMMAND.

The words "to do the like" refer to the offenses of misbehavior and running away, as well as to abandoning or delivering up a command.

The inducement contemplated is verbal only, but it may include any argument, persuasion, threat, language of discouragement or alarm, or false or incorrect statement which may avail to bring about an unnecessary surrender, retreat, or any misbehavior before the enemy. The offense will not be complete, however, unless the words spoken do induce some person other than the accused to misbehave, run away, or abandon or surrender a command. It is to be noted, however, that speaking words whose natural tendency is to induce others to do any of these things may in itself constitute misbehavior of the speaker within the meaning of the article, although the words spoken induce no misconduct on the part of others.

PROOF.

(a) That some person other than the accused misbehaved in the presence of the enemy or ran away or abandoned or delivered up any command which it was his duty to defend.

(b) Words spoken by the accused which induced such action.

V. CASTING AWAY ARMS OR AMMUNITION.

PROOF.

(a) That the accused cast away certain arms or ammunition as specified.

VI. QUITTING POST OR COLORS TO PLUNDER OR PILLAGE.

The word "post" includes any place of duty, whether permanently or temporarily fixed. The term "colors" was used to include cases where the offender's organization is moving, but the words "quits his post," as here used, import any unauthorized leaving of that place where the accused should be.

In proving this crime an intent to pillage or plunder must be shown. The words "to pillage or plunder" may be properly paraphrased "to seize and appropriate public or private property." The offense is no less committed, though the quitting is by quasi authority, as where soldiers quit the place where they should be to go forth and maraud in company with an officer or noncommissioned officer.

The act is complete when the accused has left his post with the described intent, although he may never have consummated his design.

PROOF.

- (a) That the accused left his post of duty.
- (b) That the intention of the accused in leaving was to seize and appropriate private or public property.

VII. OCCASIONING FALSE ALARMS.

The article is intended as well to guard the repose and tranquillity of troops as to avoid the ill effect on morale which must inevitably follow needless excursions and alarms. The article contemplates the spreading of false and disturbing rumors and reports as well as the needless giving of such alarm signals as the beating of drums and the blowing of trumpets.

The intent is immaterial. If the alarm was given, and it appears that there was no material cause or occasion which should reasonably justify a general alarm, the offense is complete.

PROOF.

- (a) That an alarm was occasioned in a certain camp, garrison, or quarters.
- (b) Conduct of the accused which occasioned the alarm.
- (c) That there was no reasonable or sufficient justification in fact for occasioning the alarm.

SEVENTY-SIXTH ARTICLE.

426. If any commander of any garrison, fort, post, camp, guard, or other command is compelled, by the officers or soldiers under his command, to give it up to the enemy or to abandon it, the officers or soldiers so offending shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

When the surrender or abandonment of a command is induced by words spoken, the offense should be charged under the seventy-fifth article. Where the surrender or abandonment is compelled by acts rather than words, the charge should be laid under the present article.

The offense here contemplated is very like that of a mutiny which results in the surrender or abandonment of any command, but, unlike mutiny, no concert of action is an essential element of this offense. The offense is not complete until the command is abandoned or given up to the enemy. The compulsion need not consist in the use of actual violence or force. A refusal to obey orders or to do duty or to participate in measures of defense would be as effective compulsion as if forcible restraint were resorted to.

ANALYSIS AND PROOF.

The article applies to officers and soldiers.

The article defines one crime.

I. SUBORDINATES COMPELLING COMMANDER TO SURRENDER.

PROOF.

- (a) That a certain commander has abandoned his command or given it up to the enemy.
- (b) That the accused was under the command of this commander.
- (c) Acts or omissions of the accused that compelled the commander to abandon his command or give it up to the enemy.

SEVENTY-SEVENTH ARTICLE.

427. Any person subject to military law who makes known the parole or countersign to any person not entitled to receive it according to the rules and discipline of war, or gives a parole or countersign different from that which he received, shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

A countersign is a word given from the principal headquarters of a command to aid guards and sentinels in their scrutiny of persons who apply to pass the lines.

A parole is a word used as a check on the countersign. It is imparted only to those who are entitled to inspect guards and to commanders of guards.

ANALYSIS AND PROOF.

The article applies to any person subject to military law.

It defines two offenses:

- I. Making known the parole or countersign.
- II. Giving a parole or countersign different from that received.

I. MAKING KNOWN THE PAROLE OR COUNTERSIGN.

The class of persons entitled to receive the countersign will expand and contract under the varying circumstances of war. Who these persons are will be determined largely, in any particular case, by the general or special orders under which the accused was acting. It is no defense under the terms of this law that the accused did not know that the person to whom he communicated the countersign or parole was not entitled to receive it. Before imparting such a word it behooves a person subject to military law to determine at his peril that the person to whom he presumes to make known the word is a person authorized to receive it.

The intent or motive that actuated the accused is immaterial to the issue of guilt, as would also be the circumstance that the imparting was negligent or inadvertent. It is likewise immaterial whether the accused had himself received the password in the regular course of duty or whether he obtained it in some other way.

PROOF.

- (a) That the accused made known the countersign or parole to a certain person, known or unknown.
- (b) That the person was not entitled to receive it.

II. GIVING A PAROLE OR COUNTERSIGN DIFFERENT FROM THAT RECEIVED.

The intent or motive that actuated the accused is immaterial to the issue of guilt.

PROOF.

(a) That the accused received a certain countersign or parole.

(b) That he gave a parole or countersign different from that which he received.

SEVENTY-EIGHTH ARTICLE.

428. Any person subject to military law who, in time of war, forces a safeguard shall suffer death or such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

A safeguard is a detachment, guard, or detail posted by a commander for the purpose of protecting some person or persons, place, or property. The term also imports a written order left by a commander with an enemy subject or posted upon enemy property for the protection of the individual or property concerned.

Any trespass on the protection of the safeguard will constitute an offense under the article, provided that the accused was aware of the existence of the safeguard.

ANALYSIS AND PROOF.

The article applies to all persons subject to military law.

It defines one offense:

I. FORCING A SAFEGUARD.

PROOF.

(a) That a safeguard had been issued or posted for the protection of a certain person or persons, place, or property.

(b) That, with knowledge of the safeguard, or under circumstances that charged him with notice of the safeguard, the accused trespassed upon its protection.

SEVENTY-NINTH ARTICLE.

429. All public property taken from the enemy is the property of the United States and shall be secured for the service of the United States, and any person subject to military law who neglects to secure such property or is guilty of wrongful appropriation thereof shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

Immediately upon its capture from the enemy public property becomes the property of the United States. Neither the individual who takes it nor any other person has any private right in such property. On the contrary, every person subject to military law has an immediate duty to take such steps as are within his powers and functions to secure such property to the service of the United States and to protect it from destruction or loss.

ANALYSIS AND PROOF.

The article applies to all persons subject to military law. See A. W. 2.

It defines two offenses:

I. Neglecting to secure captured public property.

II. Wrongful appropriation of captured public property.

I. NEGLECTING TO SECURE CAPTURED PUBLIC PROPERTY.

The neglect will consist in a failure to take such steps as a reasonably prudent man acting in the capacity in which accused was acting would have taken in the same or similar circumstances to secure the property in question to the service of the United States.

PROOF.

- (a) That certain public property was captured from the enemy.
- (b) That the functions of the accused vested him with a certain power and imposed on him a certain duty to secure such property to the service of the United States.
- (c) Acts or omissions of the accused which evidence a failure to take such steps to secure the property to the service of the United States as would have been taken by a reasonably prudent person acting in the capacity in which the accused was acting and in the same or similar circumstances.

II. WRONGFUL APPROPRIATION OF CAPTURED PUBLIC PROPERTY.

Any unauthorized and unjustified act in disposition of property which is inconsistent with the true owner's right of complete dominion over it is a wrongful appropriation of it. A wrongful appropriation is distinguished from a neglect in that it presumes some act, while a neglect may consist solely in an omission.

PROOF.

- (a) That certain public property was captured from the enemy.
- (b) Acts of the accused in disposition of the captured public property, inconsistent with the United States' right of complete dominion over that property.

EIGHTIETH ARTICLE.

430. Any person subject to military law who buys, sells, trades, or in any way deals in or disposes of captured or abandoned property, whereby he shall receive or expect any profit, benefit, or advantage to himself or to any other person directly or indirectly connected with himself, or who fails whenever such property comes into his possession or custody or within his control to give notice thereof to the proper authority and to turn over such property to the proper authority without delay, shall, on conviction thereof, be punished by fine or imprisonment, or by such other punishment as a court-martial, military commission, or other military tribunal may adjudge, or by any or all of said penalties.

DEFINITIONS AND PRINCIPLES.

This article is broader than the preceding one in the following particulars: It protects abandoned as well as captured property and private as well as public property.

Unless the property is private or abandoned property or unless the acts charged fall within the descriptions of this article, the offense should be charged under article 79, supra.

ANALYSIS AND PROOF.

The article applies to all persons subject to military law. See A. W. 2: It defines a number of offenses which may be treated as follows:

- I. Any dealing in or disposition of captured or abandoned property whereby the accused receives or expects to receive an advantage.
- II. Failure or delay in reporting the receipt of and in turning over to proper authority captured or abandoned property.

I. DEALING IN CAPTURED OR ABANDONED PROPERTY.

This portion of the article addresses itself to several specific acts of wrongful dealings and looks especially to cases where, instead of appropriating the property to his own use in kind, the accused in any other way deals with it to advantage. The article prohibits receipt as well as disposition of captured or abandoned property by barter, gift, pledge, lease, or loan. It lies against the destruction or abandonment of such property if any of these acts are done in the receipt or expectation of profit, benefit, or advantage to the actor or to any other person directly or indirectly connected with himself. The expectation of profit need not be founded on contract; it is enough if the prohibited act be done for the purpose, or in the hope, of benefit or advantage, pecuniary or otherwise.

PROOF.

(a) That the accused has disposed of, dealt in, received, etc., certain public or private or abandoned property.

(b) That by so doing the accused received or expected some profit or advantage to himself or to a certain person connected in a certain manner with himself.

II. FAILURE OR DELAY IN REPORTING THE RECEIPT OF CAPTURED OR ABANDONED PROPERTY.

Proper authority is any authority competent to order the disposition of the property in question, and the required report should be direct or through such channels as the customs and rules of the service prescribe.

PROOF.

(a) That certain captured or abandoned property came into the possession, custody, or control of the accused.

(b) Acts or omissions of the accused which evidence his failure in reporting the receipt of, and in turning over without delay, such property to proper authority.

EIGHTY-FIRST ARTICLE.

431. Whosoever relieves the enemy with arms, ammunition, supplies, money, or other thing, or knowingly harbors or protects or holds correspondence with or gives intelligence to the enemy, either directly or indirectly, shall suffer death, or such other punishment as a court-martial or military commission may direct.

DEFINITIONS AND PRINCIPLES.

"Enemy" imports enemy citizens as well as soldiers and does not restrict itself to the enemy government or its army. All the citizens of one belligerent are enemies of the Government and of all the citizens of the other.

ANALYSIS AND PROOF.

This article describes, in nearly every phrase, an overt act of treason. The word whosoever, as it is here used, subjects to the jurisdiction of courts-martial and military commissions all persons, either military or civil, who, in the theater of operations and during the continuance of war, traffic with the enemy in any of the ways herein denounced.

The article defines four offenses:

- I. Relieving the enemy.
- II. Harboring or protecting the enemy.
- III. Holding correspondence with the enemy.
- IV. Giving intelligence to the enemy.

I. RELIEVING THE ENEMY.

"Relieves," in the sense here used, is substantially equivalent to furnishes or supplies. It is immaterial whether the articles furnished are needed by the enemy or whether the transaction is a donation or sale. Knowledge or intent is not an essential in proof of this offense.

PROOF.

(a) That the accused either directly or indirectly furnished the enemy with a certain article or articles.

II. HARBORING OR PROTECTING THE ENEMY.

An enemy is harbored or protected when he is shielded either physically or by use of any artifice, aid, or representation from any injury or misfortune which in the chance of war may befall him. It must appear that the offense is knowingly committed. But, as in all other cases where knowledge must be proved, circumstances sufficient to put a reasonable man on notice will be sufficient to charge the accused with notice.

PROOF.

(a) That the accused harbored or protected a certain person.

(b) That the person so protected was an enemy, and that the accused had notice or is chargeable with notice of this fact.

III. HOLDING CORRESPONDENCE WITH THE ENEMY.

Correspondence does not necessarily import a mutual exchange of communication. The rule requires absolute nonintercourse, and any communication, no matter what may be its tenor or intent, is here denounced. The prohibition lies against any method of communication whatsoever, from the winking of an eye to the sending of script, and the offense is complete the moment the communication emanates from the accused whether it reaches its destination or not. The words "directly or indirectly" are construed as applying to this offense, and they include within the prohibition communications printed in newspapers and intended for the enemy and to communications conveyed to the enemy through friendly or neutral hands. It is essential to prove that the offense was knowingly committed.

Citizens of neutral powers resident in or visiting invaded or occupied territory can claim no immunity from the customary laws of war which threaten punishment for communication with the enemy. The offense of communicating with the enemy when committed by a resident of occupied territory constitutes war treason and is properly charged under this article.

PROOF.

(a) That the accused uttered a certain communication.

(b) That the communication was intended for a certain person, and that the accused had notice or is chargeable with notice that this person was an enemy.

IV. GIVING INTELLIGENCE TO THE ENEMY.

This is a particular case of corresponding with the enemy rendered more heinous by the fact that the communication contains intelligence that may be useful to the enemy for any of the multifarious reasons that make informa-

tion valuable to belligerents. As in the preceding case, knowledge must be proved, and it is immaterial to the issue of guilt whether the intelligence was conveyed by direct or indirect means. The word "intelligence" imports that the information conveyed is true, at least in part.

PROOF.

- (a) That the accused knowingly conveyed to the enemy certain information.
- (b) That the information was true, at least in part.

EIGHTY-SECOND ARTICLE.

432. Any person who in time of war shall be found lurking or acting as a spy in or about any of the fortifications, posts, quarters, or encampments of any of the armies of the United States, or elsewhere, shall be tried by a general court-martial or by a military commission, and shall, on conviction thereof, suffer death.

DEFINITIONS AND PRINCIPLES.

See below.

ANALYSIS AND PROOF.

The words "any person" bring within the jurisdiction of courts-martial and military commissions all persons of whatever nationality or civil status who may be accused of the offense denounced by the article.

The article defines one crime—being a spy.

I. BEING A SPY.

The principal characteristic of this offense is a clandestine dissimulation of the true object sought, which object is an endeavor to obtain information with the intention of communicating it to the hostile party.

Thus, soldiers not wearing disguise, dispatch riders, whether soldiers or civilians, and persons in aircraft who carry out their missions openly and who have penetrated hostile lines are not to be considered spies, for the reason that, while they may have resorted to concealment, they have practiced no dissimulation.

It is necessary to prove an intent to communicate information to the hostile party. This intent will very readily be presumed on proof of a deceptive insinuation of the accused among our forces, but this presumption may be rebutted by very clear evidence that the person had come within the lines for a comparatively innocent purpose, as to visit his family, or that he has assumed a disguise to enable him to reach his own lines.

It is not essential that the accused obtain the information sought or that he communicate it. The offense is complete with the lurking or dissimulation with intent to accomplish these objects.

An act of espionage completed by the escape of the accused to his own lines can not be the subject of trial if the quondam spy is later captured.

A person living in occupied territory who, without dissimulation, merely reports what he sees or what he hears through agents to the enemy may be charged under the preceding article with communicating or giving intelligence to the enemy, but he may not be charged under this article with being a spy.

PROOF.

- (a) That the accused was found at a certain place within our lines, acting clandestinely, or under false pretenses.
- (b) That he was obtaining, or endeavoring to obtain, information with intent to communicate the same to the enemy.

SECTION VI.

MISCELLANEOUS CRIMES AND OFFENSES.

EIGHTY-THIRD ARTICLE.

433. Any person subject to military law who willfully, or through neglect, suffers to be lost, spoiled, damaged, or wrongfully disposed of, any military property belonging to the United States shall make good the loss or damage and suffer such punishment as a court-martial may direct.

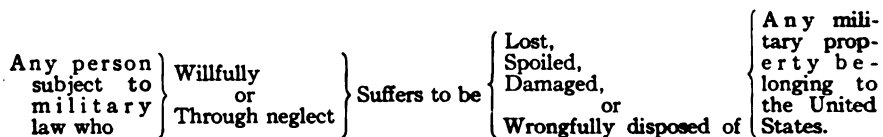
DEFINITIONS AND PRINCIPLES.

The loss, etc., may be said to be willfully suffered when the accused knowing the loss, etc., to be imminent or actually going on, takes no steps to prevent it, as where a sentinel seeing a small and readily extinguishable fire in a stack of hay on his post allows it to burn up. A suffering through neglect implies an omission to take such measures as were appropriate under the circumstances to prevent a probable loss, damage, etc.

The willful or neglectful sufferance specified by the article may consist in a deliberate violation or positive disregard of some specific injunction of law, regulations, or orders; or it may be evidenced by such circumstances as a reckless or unwarranted personal use of the property; causing or allowing it to remain exposed to the weather, insecurely housed or not guarded; permitting it to be consumed, wasted, or injured by other persons; loaning it to an irresponsible person by whom it is damaged, etc. (Winthrop, p. 862.)

ANALYSIS AND PROOF.

The article applies to any one subject to military law. See article 2.
The article embraces eight offenses, indicated by the following diagram:



These offenses may be briefly treated under the heading "Suffering military property to be lost, etc."

I. SUFFERING MILITARY PROPERTY TO BE LOST, ETC.

PROOF.

(a) That certain military property was lost, spoiled, damaged, or wrongfully disposed of in the manner alleged.

(b) That such loss, spoiling, damage, or wrongful disposition was suffered by the accused through a certain omission of duty on his part.

(c) That such omission was willful, or negligent, as alleged.

(d) The value of the property, as alleged.

EIGHTY-FOURTH ARTICLE.

434. Any soldier who sells or wrongfully disposes of or willfully or through neglect injures or loses any horse, arms, ammunition, accouterments, equipment, clothing, or other property issued for use in the military service, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See definitions under A. W. 80, pages 232, 233.

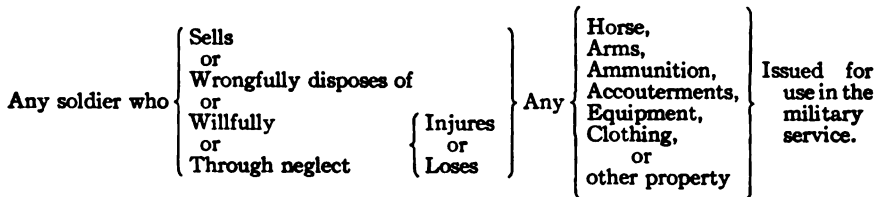
Accouterments applies in the military sense to those parts of the soldier's equipment which are issued by the Ordnance Department * * * in connection with his arms and ammunition, such, for example, as belts and cartridge pouches. (Digest, p. 1084.)

Clothing includes all articles of clothing whether issued under a clothing allowance or otherwise; for example, overcoats and sweaters as now issued are articles of clothing. That the property sold, disposed of, lost, or injured was issued to someone other than the accused is immaterial; the article applies to any property issued for use in the military service.

ANALYSIS AND PROOF.

This article applies to enlisted men only.

The article defines a number of offenses, indicated by the following diagram:



These offenses may be treated under the following heads:

I. Selling or wrongfully disposing of military property.

II. Willfully or through neglect injuring or losing military property.

I. SELLING OR WRONGFULLY DISPOSING OF MILITARY PROPERTY.

See matter under A. W. 80, Item I.

PROOF.

(a) That the accused soldier sold or otherwise disposed of certain property in the manner alleged.

(b) That such disposition was wrongful.

(c) That the property was issued for use in the military service.

(d) The value of the property as alleged.

II. WILLFULLY OR THROUGH NEGLIGENCE INJURING OR LOSING MILITARY PROPERTY.

A willful injury or loss is one that is intentionally occasioned. A loss or injury is occasioned through neglect when it is the result of a want of such attention to the nature or probable consequences of an act or omission as was appropriate under the circumstances.

Accouterments applies in the military sense to those parts of the soldier's equipment which are issued by the Ordnance Department in connection with his arms and ammunition, such for example as belts and cartridge pouches. (Digest, p. 1084.)

Clothing includes all articles of clothing, whether issued under a clothing allowance or otherwise; for example, overcoats and sweaters as now issued are articles of clothing. That the property sold, disposed of, lost, or injured was issued to some one other than the accused is immaterial; the article applies to any property issued for use in the military service.

PROOF.

- (a) That certain property was injured in a certain way or lost, as alleged.
- (b) That such property was issued for use in the military service.
- (c) That such injury or loss was willfully caused by the accused in a certain manner, as alleged; or that such injury or loss was the result of certain neglect on the part of the accused.
- (d) The value of the property, as alleged.

EIGHTY-FIFTH ARTICLE.

435. Any officer who is found drunk on duty shall, if the offense be committed in time of war, be dismissed from the service and suffer such other punishment as a court-martial may direct; and if the offense be committed in time of peace, he shall be punished as a court-martial may direct. Any person subject to military law, except an officer, who is found drunk on duty shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

The article does not require that the accused shall have become drunk, but that he shall have been found, i.e., discovered or perceived, to be drunk, when on duty, and it does not therefore necessarily follow that his drunkenness shall have commenced after the duty has been entered upon. To permit an officer or soldier, when inebriated, to go upon any duty of importance, while in general involving an injustice to the individual, is also a reprehensible act and a military offense in the superior who knowingly suffers it. But the fact that he was already intoxicated can not render the party himself any the less legally liable under the article, if, after having entered upon the duty, his intoxication continues and his condition is detected. But, on the other hand, a soldier (or officer), is not "found" drunk in the sense of the article if he is simply discovered to be drunk when ordered, or otherwise required, to go upon the duty, upon which, because of his condition, he does not enter at all. (Winthrop, pp. 944, 945.)

Whether the drunkenness was caused by liquor or drugs is immaterial, but where the sole cause was a liquor or drug duly prescribed by a medical officer of the Army or a civil physician and taken in good faith according to the prescription no offense is committed.

The fact that the accused, owing to an unsuspected susceptibility, permanent or temporary, was made drunk by indulging in a very small amount of intoxicant is not a defense.

Any intoxication which is sufficient to sensibly impair the rational and full exercise of the mental and physical faculties is drunkenness within the meaning of the article. (Digest, p. 540.)

Where the accused is charged under this article, a conviction under the general article of being under the influence of liquor is wholly inconsistent if he was found in such condition while on duty. The article requires no particular degree of drunkenness, and if the accused was found so far under the influence of liquor as to be punishable at all he was found drunk on duty within the meaning of this article.

The term "duty" as used in this article, means of course military duty. But—it is important to note—every duty which an officer or soldier is legally required, by superior military authority, to execute, and for the proper execution of which he is answerable to such authority, is necessarily a military duty. (Winthrop, p. 949.)

The words "on duty," as used in this article, have also received an authorita-

tive interpretation. As applied to the commanding officer of a post, or of an organization, or detachment in the field, the senior officer present, in the actual exercise of command, is constantly on duty; the term being here used in contradistinction to "on leave." In the case of other officers, or of enlisted men, the term "on duty" has been held to relate to the performance of duties of routine or detail, in garrison or in the field; the words "off duty," in respect to such persons, relating to such periods or occasions when, no duty being required of them by orders or regulations, officers and men are said to occupy that status of leisure known to the service as being "off duty." (Davis, p. 408.)

In time of war and in a region of active hostilities the circumstances are often such that all members of a command may properly be considered as being continuously on duty within the meaning of this article.

A medical officer of a post, where there are constantly sick persons under his charge who may at any moment require his attendance, may, generally speaking, be deemed to be "on duty" in the sense of the article during the whole day and not merely during the hours regularly occupied by sick call, visiting the sick, or attending hospital. If found drunk at any other hour he may in general be charged with an offense under this article. (Digest, p. 127.)

So, also, an officer of the day and members of the guard are on duty during their entire tour within the meaning of this article, but a sentinel found drunk on post is chargeable under the next succeeding article. The article also applies to cases where the duty being performed is merely a preliminary one, such as a reporting for inspection by a soldier designated for guard or a reporting under orders for duty at a post to the commanding officer.

The offense of a person who absents himself from his duty and is found drunk while so absent, or who is relieved from duty at a post and ordered to remain there to await orders, and is found drunk during such status, is not chargeable under this article.

ANALYSIS AND PROOF.

This article applies to any person subject to military law. See Article 2. The article defines one offense, namely, being found drunk on duty.

I. BEING FOUND DRUNK ON DUTY.

PROOF.

- (a) That the accused was on a certain duty, as alleged.
- (b) That he was found drunk while on such duty.

EIGHTY-SIXTH ARTICLE.

436. Any sentinel who is found drunk or sleeping upon his post, or who leaves it before he is regularly relieved, shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct; and if the offense be committed in time of peace, he shall suffer any punishment, except death, that a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

As to drunkenness, see matter under eighty-fifth article, page 1442.

The term "sentinel" does not include a watchman.

A sentinel is on post within the meaning of this article not only when he is walking a duly designated sentinel's post, as is ordinarily the case in garrison, but also "when he may be stationed in observation against the approach of an enemy, or on post to maintain internal discipline, or to guard stores, or to guard prisoners while in confinement or at work." (Digest, p. 128.)

The fact that the sentinel was not posted in the regular way is not a defense.

ANALYSIS AND PROOF.

The article applies only to sentinels.

The article defines three offenses, namely:

- I. Being found drunk on post.
- II. Being found sleeping on post.
- III. Leaving post before being relieved.

I. BEING FOUND DRUNK ON POST.

As to drunkenness, see matter under eighty-fifth article, page 1442.

PROOF.

(a) That the accused soldier was posted as a sentinel on a certain post, as alleged.

(b) That he was found drunk while on such post.

II. BEING FOUND SLEEPING ON POST.

The fact that the accused had been previously overtaxed by excessive guard duty is not a defense, although evidence to that effect may be received in extenuation of the offense.

PROOF.

(a) That the accused soldier was posted as a sentinel on a certain post, as alleged.

(b) That he was found sleeping while on such post.

III. LEAVING POST BEFORE BEING RELIEVED.

The offense of leaving post is not committed when a sentinel goes an immaterial distance from the point, path, area, or object which was prescribed as his post.

PROOF.

(a) That the accused soldier was posted as a sentinel on a certain post, as alleged.

(b) That he left such post without being regularly relieved.

EIGHTY-SEVENTH ARTICLE.

437. Any officer commanding in any garrison, fort, barracks, camp, or other place where troops of the United States may be serving who, for his private advantage, lays any duty or imposition upon or is interested in the sale of any victuals or other necessities of life brought into such garrison, fort, barracks, camp, or other place for the use of the troops, shall be dismissed from the service and suffer such other punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article.

ANALYSIS AND PROOF.

This article applies to commanding officers only.

The article defines offenses which may be treated under two heads, as follows:

- I. Laying a duty or imposition upon the bringing in of victuals, etc.
- II. Being interested in the sale of victuals, etc.

I. LAYING A DUTY OR IMPOSITION UPON THE BRINGING IN OF VICTUALS, ETC.

A commanding officer who should prohibit the entry into his camp of peddlers of vegetables for the troops, permitting it only if the peddlers pay him for the privilege, would be guilty of this offense whether any money was actually paid or not.

PROOF.

(a) That the accused officer was in command of a certain place where troops of the United States were serving, as alleged.

(b) That he laid a certain duty or imposition upon the bringing into such command of victuals or other necessities of life for the use of such troops, as alleged.

(c) That such duty or imposition was laid for his own private advantage.

II. BEING INTERESTED IN THE SALE OF VICTUALS, ETC.

The interest need not be a direct interest, such as that attaching to a partnership, or part ownership, of the articles introduced for sale, but may be one of an indirect or contingent character, as, for instance, an interest arising from an agreement or mutual understanding between the officer and the owner of the supplies that the former shall receive a percentage on the sales, or a commission on all profits above a certain sum, or some present of money or goods in return for his sanction of the speculation or promotion of the business. (Winthrop, p. 870.)

Thus a commanding officer commits this offense when he agrees with a peddler to exclude others in consideration of some advantage to himself.

A commanding officer might become interested in the sale of articles by the post exchange within the meaning of this article.

PROOF.

(a) That the accused officer was in command of a certain place where troops of the United States were serving, as alleged.

(b) That he became pecuniarily interested in a certain way in the sale of certain victuals or other necessities of life to such troops, as alleged.

(c) That he so became interested for his own private advantage.

EIGHTY-EIGHTH ARTICLE.

438. Any person subject to military law who abuses, intimidates, does violence to, or wrongfully interferes with any person bringing provisions, supplies, or other necessities to the camp, garrison, or quarters of the forces of the United States shall suffer such punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article.

This article in no way interferes with the lawful powers of a military commander to exclude persons or supplies inimical to health or good order of his command. The purpose of this article is to prevent the diminishing or cutting off the supply of necessities brought in by private persons through any abuse, intimidation, doing violence to, or wrongfully interfering with, such persons. The prohibition against interference, etc., therefore, applies not only while such persons are coming to the camp, etc., but also while they remain and during their return therefrom.

The wrongful interference contemplated would include not only any wrongful act not included in the terms "abuse, etc.," which prevents, obstructs, or delays the movements of the person, but any wrongful interference with the supplies themselves, such as stealing or destroying them.

ANALYSIS AND PROOF.

This article applies to any person subject to military law. The article defines a number of offenses which may be briefly treated under one head, as follows:

I. INTIMIDATING, DOING VIOLENCE TO, OR WRONGFULLY INTERFERING WITH PERSONS BRINGING NECESSARIES.

PROOF.

(a) That a certain person named or described was bringing provisions, supplies, or other necessities to a certain camp, garrison, or quarters of the forces of the United States, as alleged.

(b) That the accused abused, intimidated, did violence to, or wrongfully interfered with such person while so engaged and in the manner alleged.

EIGHTY-NINTH ARTICLE.

439. All persons subject to military law are to behave themselves orderly in quarters, garrison, camp, and on the march; and any person subject to military law who commits any waste or spoil, or willfully destroys any property whatsoever (unless by order of his commanding officer), or commits any kind of depredation or riot shall be punished as a court-martial may direct. Any commanding officer who, upon complaint made to him, refuses or omits to see reparation made to the party injured, in so far as the offender's pay shall go toward such reparation, as provided for in article one hundred and five, shall be dismissed from the service, or otherwise punished, as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article and the definitions under the respective offenses as given below.

ANALYSIS AND PROOF.

This article divides itself into two parts, one embracing all persons subject to military law, and the other commanding officers only.

The article defines a number of offenses which may be briefly treated under the following headings:

- I. Committing any waste or spoil.
- II. Willfully destroying property.
- III. Committing depredation or riot.
- IV. Refusing or omitting to see reparation made.

I. COMMITTING ANY WASTE OR SPOIL.

The terms "waste" or "spoil" as used in this article refer to such acts of voluntary destruction of or permanent damage to real property as burning down buildings, tearing down fences, cutting down shade or fruit trees, and the like.

PROOF.

(a) That the accused being with a certain command in quarters, camp, garrison, or on the march, committed waste or spoil on certain property in the manner alleged.

(b) That such acts were not ordered by his commanding officer.

II. WILLFULLY DESTROYING PROPERTY.

To be destroyed it is not necessary that the property be completely demolished or annihilated. It is sufficient if it is so far injured as to be useless for the purpose for which it was intended.

PROOF.

(a) That the accused being with a certain command in quarters, camp, garrison, or on the march, destroyed certain property, as alleged.

(b) That such destruction was willful and was not ordered by his commanding officer.

III. COMMITTING DEPREDAATION OR RIOT.

The terms "any kind of depredation or riot," include plundering, pillaging, robbing, and any other willful damage to property not included in the preceding specific terms of the article. Injuries to persons are not made punishable by this article.

PROOF.

(a) That the accused being with a certain command in quarters, camp, garrison, or on the march, committed certain acts of depredation on certain property, or certain acts of rioting resulting in injury to certain property, as alleged.

IV. REFUSING OR OMITTING TO SEE REPARATION MADE.

Refusing to entertain a proper complaint at all; refusing or omitting to convene a board for the assessment of damage; or to act on such proceedings, or to direct the proper stoppages are instances of this offense.

PROOF.

(a) That the accused was the commanding officer of a certain command in quarters, garrison, camp, or on the march, as alleged.

(b) That a complaint was duly made to him by a certain person of damage to or loss of certain property occasioned by troops of the accused's command, as alleged.

(c) That the accused either refused to see reparation made or omitted in the manner alleged to see reparation made to the party injured in so far as the offender's pay would go toward such reparation.

NINETIETH ARTICLE.

440. No person subject to military law shall use any reproachful or provoking speeches or gestures to another; and any person subject to military law who offends against the provisions of this article shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article.

The article is intended to prevent what frequently are the first steps toward quarrels, fights, or serious offenses.

Reproachful speeches and gestures are such as involve censorious comment on the actions or opinions of another. Provoking speeches and gestures are such as tend to exasperate or to arouse anger and resentment.

ANALYSIS AND PROOF.

This article applies to any person subject to military law. The article defines offenses which may be treated under one heading, as follows:

I. USING PROVOKING SPEECHES OR GESTURES.

PROOF.

- (a) That the accused used certain speeches or gestures to a certain person, as alleged.
- (b) That the speeches or gestures were reproachful or provoking.
- (c) That the person to whom such speeches or gestures were addressed is in one of the classes of persons subject to military law.

NINETY-FIRST ARTICLE.

441. Any person subject to military law who fights or promotes or is concerned in or connives at fighting a duel, or who having knowledge of a challenge sent or about to be sent fails to report the fact promptly to the proper authority shall, if an officer, be dismissed from the service or suffer such other punishment as a court-martial may direct; and if any other person subject to military law, shall suffer such punishment as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See the terms of the article.

A duel is a concerted fight between two persons with deadly weapons, the object of which is claimed to be the satisfaction of wounded honor. (Wharton, vol. 2, p. 555.)

[Note: The offenses made punishable by this article are of such infrequent occurrence that it is considered inadvisable to comment more fully upon them. In a case of doubt, works on military law should be consulted.]

ANALYSIS AND PROOF.

This article applies to any person subject to military law.

The article embraces a number of offenses which may be briefly treated under the following headings:

- I. Fighting or promoting a duel.
- II. Being concerned in or conniving at fighting a duel.
- III. Failing to report knowledge of a challenge.

I. FIGHTING OR PROMOTING A DUEL.

Fighting or promoting a duel would include such acts as the sending, giving, or accepting a challenge, or the carrying of a challenge or acceptance, the arrangement of the preliminaries, and, in general, any act by which a duel is intentionally furthered, encouraged, or incited, whether the duel takes place or not.

PROOF.

- (a) That the accused fought a duel with a certain person as alleged, or that he promoted a duel between certain persons in the manner alleged.

II. BEING CONCERNED IN OR CONNIVING AT FIGHTING A DUEL.

Being concerned in or conniving at fighting a duel would include the being present thereat in some capacity other than a principal, as in the case of seconds and doctors.

PROOF.

- (a) That the accused was concerned in or connived at fighting a certain duel in the manner alleged.

III. FAILING TO REPORT KNOWLEDGE OF A CHALLENGE.

A challenge is a written or verbal demand, request, or invitation to another to fight a duel.

To constitute a challenge no particular form is necessary. It is enough if what was sent or about to be sent, considered in connection with the circumstances, amounts to such a demand, request or invitation. However, an effort to provoke a challenge or an announcement of a willingness to accept one is not a challenge.

As to knowledge, see matter under fifty-fifth article.

PROOF.

(a) That the accused knew that a certain challenge had been sent, or was about to be sent, as alleged.

(b) That he either did not report the fact to the proper authority at all, or that he unnecessarily delayed making such report, as alleged.

NINETY-SECOND ARTICLE.

442. Any person subject to military law who commits murder or rape shall suffer death or imprisonment for life, as a court-martial may direct; but no person shall be tried by court-martial for murder or rape committed within the geographical limits of the States of the Union and the District of Columbia in time of peace.

DEFINITIONS AND PRINCIPLES.

See the terms of the article and the matter under the treatment of the several offenses defined therein.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See Article 2.

The article defines two offenses, as follows:

I. Murder.

II. Rape.

I. MURDER.

Murder is the unlawful killing of a human being with malice aforethought. (Federal Penal Code, 1910, sec. 273.)

"Unlawfully" as used in the definition of murder means without legal justification or excuse.

A homicide done in the proper performance of a legal duty is justifiable. Thus, executing a person pursuant to a sentence of death; killing in suppressing a mutiny or in preventing the escape of a prisoner where no other available means are adequate; killing an enemy in battle; and killing to prevent the commission of a felony attempted by force or surprise, such as murder, burglary, or arson, are cases of justifiable homicide.

The right and duty of a sentinel over a prisoner in his charge in case of attempted escape is discussed in the Manual of Interior Guard Duty, 1914.

This right and duty extends to other members of the guard whose duties include the safe-keeping of such prisoner. (Digest, 1912, p. 583.)

The same principles apply to the arrest of a soldier by officers or soldiers authorized to make the particular arrest.

A party of soldiers left their camp at night in time of war without leave contrary to positive orders and proceeded to a neighboring town, where they created a disturbance. Their commanding officer followed them, found them in a saloon, and was about to arrest them, when they broke from him,

and knowing who he was disregarded his order to halt and ran away from him. He repeated his order, and not being obeyed and having no other means of detaining them, fired upon them while fleeing with a pistol, and shot and killed one of them. Held, that he did not use undue force in endeavoring to maintain discipline and to arrest the offenders whom he was endeavoring to return to their stations, and that he was not guilty of an offense requiring punishment, and that his conduct under the circumstances in which he was placed was justified. (Digest, p. 480.)

The general rule is that "The acts of a subordinate officer or soldier, in compliance with his supposed duty, or of superior orders, are justifiable, and he will be protected against the consequences, unless they are manifestly beyond the scope of his authority, and such that a man of ordinary sense and understanding would know to be illegal, where he acts in good faith and without malice." (Wharton on Homicide, 3d ed., p. 731.)

The foregoing principles should not be construed as conferring immunity on an officer or soldier who willfully or through culpable negligence does acts endangering the lives of innocent third parties in the discharge of his duty to prevent escape or effect an arrest.

But where a guard fired on a prisoner fleeing down a public street which was apparently clear, under circumstances that would have justified the homicide of the prisoner, and thereby accidentally killed a young woman whom he did not see at the time he shot, it was held that the homicide was excusable.

A homicide which is the result of an accident or misadventure in doing a lawful act in a lawful manner, or which is done in self-defense on a sudden affray, is excusable. Thus, where a lawful operation, performed with due care and skill, causes the death of the patient, the homicide is excusable. To excuse a killing on the ground of self-defense upon a sudden affray, the killing must have been necessary to save the person's life or the lives of those whom he is bound to protect, or to prevent great bodily harm to himself or them. The danger must be believed on reasonable grounds to be imminent, and no necessity will exist until the person, if not in his own house, has retreated as far as he safely can. The person doing the killing must not have been the aggressor and intentionally provoked the difficulty; but if he withdraws in good faith and his adversary follows and renews the fight, the latter becomes the aggressor.

The death must take place within a year and a day of the act or omission that caused it, and the offense is committed at the place of such act or omission although the victim may have died elsewhere.

Malice does not necessarily mean hatred or personal ill will toward the person killed, nor an actual intent to take his life, or even to take anyone's life. The use of the word "aforethought" does not mean that the malice must exist for any particular time before commission of the act, or that the intention to kill must have previously existed. It is sufficient that it exist at the time the act is committed. (Clark, pp. 187, 188.)

Malice aforethought may exist when the act is unpremeditated. It may mean any one or more of the following states of mind preceding or coexisting with the act or omission by which death is caused; (a) An intention to cause the death of, or grievous bodily harm to, any person, whether such person is the person actually killed or not (except when death is inflicted in the heat of a sudden passion, caused by adequate provocation); (b) knowledge that the act which causes the death will probably cause the death of, or grievous bodily harm to, any person, whether such person is the person actually killed or not, although such knowledge is accompanied by indifference whether death or

grievous bodily harm is caused or not, or by a wish that it may not be caused; (c) intent to commit any felony; (d) an intent to oppose force to an officer or other person lawfully engaged in the duty of arresting, keeping in custody, or imprisoning any person, or the duty of keeping the peace, or dispersing an unlawful assembly, provided the offender has notice that the person killed is such officer or other person so employed. (Clark, p. 187.)

PROOF.

(a) That the accused killed a certain person named or described by certain means, as alleged. This involves proof—

- (1) That the person alleged to have been killed is dead.
- (2) That he died in consequence of an injury received by him.
- (3) That such injury was the result of the act of the accused.
- (4) That the death took place within a year and a day of such act.

(b) That such killing was with malice aforethought; that is, that the accused was in one or more of the states of mind described above.

II. RAPE.

Rape is the having of unlawful carnal knowledge of a woman by force and without her consent.

As the carnal knowledge must be unlawfully had, a husband who has carnal knowledge of his wife forcibly where she does not consent is not guilty of this offense; but he is guilty when he assists another man in having such carnal knowledge.

Any penetration, however slight, of the woman's genitals is sufficient carnal knowledge, whether emission occurs or not.

The offense may be committed on a female of any age, on a man's mistress, or on a common harlot.

Force, actual or constructive, and a want of consent are indispensable in rape, but the force involved in the act of penetration is alone sufficient force where there is in fact no consent.

Where there is actual consent to the connection, though such consent be obtained by fraud, there is no rape; thus, where a woman agrees to connection with a physician on his false representation that the act is part of the required treatment, or where a man successfully passes himself off to a woman as her husband and is admitted by her to connection as such, the crime of rape is not committed.

There is no consent where the woman is so idiotic as to be incapable of consenting, and a man having connection with her not believing that he has her consent is guilty of rape. So also where the woman is insensible, unconscious, or asleep, or where her apparent consent was extorted by violence to her person or fear of sudden violence. A child under the age of 10 is presumed incapable of consenting.

Mere verbal protestations and a pretense of resistance do not of course show a want of consent, but the contrary, and where a woman fails to take such measures to frustrate the execution of the man's design as she is able to and are called for by the circumstances the same conclusion may be drawn.

It has been said of this offense that "it is true that rape is a most detestable crime * * *; but it must be remembered that it is an accusation easy to be made, hard to be proved, but harder to be defended by the party accused, though innocent."

PROOF.

(a) That the accused had carnal knowledge of a certain female, as alleged;

(b) That the act was done by force and without her consent; or that the female was under the age of 10 years.

NINETY-THIRD ARTICLE.

443. Any person subject to military law who commits manslaughter, mayhem, arson, burglary, robbery, larceny, embezzlement, perjury, assault with intent to commit any felony, or assault with intent to do bodily harm, shall be punished as a court-martial may direct.

DEFINITIONS AND PRINCIPLES.

See matter under several offenses listed in the article.

ANALYSIS AND PROOF.

This article applies to any person subject to military law. The article defines the following offenses, namely:

- I. Manslaughter.
- II. Mayhem.
- III. Arson.
- IV. Burglary.
- V. Larceny.
- VI. Robbery.
- VII. Embezzlement.
- VIII. Perjury.
- IX. Assault with intent to commit any felony.
- X. Assault with intent to do bodily harm.

I. MANSLAUGHTER.

Manslaughter is unlawful homicide without malice aforethought and is either voluntary or involuntary.

Voluntary manslaughter is where the act causing the death is committed in the heat of sudden passion caused by provocation.

Involuntary manslaughter is homicide unintentionally caused in the commission of an unlawful act not amounting to a felony, nor likely to endanger life, or by culpable negligence in performing a lawful act, or in performing an act required by law. (Clark, pp. 197, 204.)

In involuntary manslaughter the provocation must be such as the law deems adequate to excite uncontrollable passion in the mind of a reasonable man; the act must be committed under and because of the passion, and the provocation must not be sought or induced as an excuse for killing or doing bodily harm. (Clark, p. 197.)

The killing may be manslaughter only even if intentional, but where sufficient cooling time elapses between the provocation and the blow the killing is murder, even if the passion persists. Instances of adequate provocation are: Assault and battery, inflicting actual bodily harm or a gross insult; an unlawful imprisonment; and the sight by a husband of an act of adultery committed by his wife. If the person so assaulted or imprisoned, or the husband so situated at once kills the offender or offenders in a heat of a sudden passion caused by their acts, manslaughter only has been committed.

Instances of inadequate provocation are: Knowledge by the brother of a female of her seduction; insulting or abusive words or gestures; and injuries to property.

In involuntary manslaughter in the commission of an unlawful act the act must be *malum in se* and not merely *malum prohibitum*. Thus the driving of an automobile in slight excess of the speed limit fixed by ordinance is not the kind of unlawful act contemplated, but voluntarily engaging in an affray is such an act. To use an immoderate amount of force in suppressing a mutiny

is an unlawful act, and if death is caused thereby the one using such force is guilty of manslaughter at least.

Instances of culpable negligence in performing a lawful act are: Negligently conducting target practice so that the bullets go in the direction of an inhabited house within range; pointing a pistol in fun at another and pulling the trigger, believing, but without taking reasonable precautions to ascertain, that it would not be discharged; carelessly leaving poisons or dangerous drugs where they may endanger life.

Instances of culpable negligence in performing an act required by law are: Gross negligence or inattention by those in charge of controlling or operating trains in the discharge of their duties; culpable failure on the part of a parent to provide food, shelter, and medical attendance for his helpless child where able to do so.

Where there is no legal duty to act there can, of course, be no neglect. Thus where a stranger makes no effort to save a drowning man, or a person allows a mendicant to freeze or starve to death, no crime is committed.

PROOF.

(a) See item (a) under "Proof of murder" under ninety-second article.

(b) The facts and circumstances of the case, as alleged, indicating that the homicide amounted in law to manslaughter.

II. MAYHEM.

Mayhem at common law is "a hurt of any part of a man's body whereby he is rendered less able, in fighting, either to defend himself or to annoy his adversary." (Bishop, vol. 2, p. 579.)

The offense at common law did not include such injuries which merely disfigure, such as cutting off the nose or ear; but did include such injuries as knocking out a front tooth, or castration, which were supposed to weaken a man's fighting ability.

The injury must be willfully and maliciously done, but need not be premeditated. If the hurt is done under circumstances which would excuse or justify a homicide, no offense is committed.

A person inflicting such a hurt upon himself is guilty of this offense, and if another does it at his request, both are so guilty.

PROOF.

(a) That the accused inflicted on a certain person a certain injury in the manner alleged.

(b) The facts and circumstances of the act showing such injury to have been inflicted intentionally and maliciously.

III. ARSON.

Arson, at the common law, is the malicious burning of another's house. (Bishop, vol. 2, p. 5.)

The house must be the dwelling house of another, as the offense is against the habitation, not against property as such.

The term "dwelling house" includes outbuildings that form part of the cluster of buildings used as a residence. A mere scorching is not a burning. To constitute a burning some part, however small, of the house must be actually consumed or disintegrated by charring or by a blaze.

A shop or store is not the subject of arson unless occupied as a dwelling. It is not arson to burn a house that has never been occupied or which has been

permanently abandoned; but it is arson if the occupant is merely temporarily absent. It is not arson to burn one's own dwelling, whoever owns it, or even the dwelling of another at his request, and this is so even if there is an intent to burn an adjoining house belonging to a third party; but it is arson if such house is actually burned. A house occupied by another than the owner is a subject of arson by the owner.

The burning must be willful and malicious, which excludes a burning arising from negligence or mischance, unless the accused was engaged in the commission of a felony. Where a man, who, in setting fire to his own house to get the insurance, burns his neighbor's, he is guilty of arson in burning the neighbor's house.

PROOF.

- (a) That the accused burned a certain dwelling house of another, as alleged.
- (b) Facts and circumstances indicating that the act was willful and malicious.

IV. BURGLARY.

Burglary at common law is the breaking and entering, in the night, of another's dwelling house, with intent to commit a felony therein. (Bishop, vol. 2, p. 56.)

To constitute burglary the house must be a dwelling house of another, dwelling house including outhouses within the curtilage or the common inclosure; there must be an actual breaking, or there must be the constructive breaking involved where an entry is effected by fraud or false pretenses, by intimidation, by conspiracy with a servant or other inmate, or by descent of a chimney; there must be an entry; the breaking and entry must both be at night; but not necessarily on the same night, and there must be an intent to commit a felony in the house at the time of the breaking and of the entering, but the felony need not be committed. (Clark and Marshall, pp. 595, 596.)

A store is not a subject of burglary unless part of or used also as a dwelling house, as where the occupant uses another part of the same building as his dwelling; or where the store is habitually slept in by his servants or members of his family.

The house must be in the status of being occupied at the time of the breaking and entering. It is not necessary to this status that any one actually be in it; but if the house has never been occupied at all or has been left without any intention of returning to it this status does not exist. Separate dwellings within the same building as a flat in an apartment house or a room in a hotel are subjects of burglary by other tenants or guests, and in general by the owner of the building himself. At common law a tent is not a subject of burglary.

There must be a breaking, actual or constructive. Merely to enter through a hole left in the wall or roof or through an open window or door, even if left only slightly open and pushed farther open by the person entering, will not constitute an actual breaking; but where there is any removal of any part of the house designed to prevent entry, other than the moving of a partly open door or window, it is sufficient. Thus opening a closed door or window or other similar fixture, or cutting out the glass of a window or the netting of the screen is a sufficient breaking. So also the breaking of an inner door by one who has entered the house without breaking, or by a servant lawfully within the house, but who has no authority to enter the particular room is a sufficient breaking, but unless such a breaking is followed by an entry into the particular room with intent to commit a felony therein, burglary is not committed.

There is a constructive breaking when the entry is gained by a trick, such as concealing oneself in a box; or under false pretense, such as personating a gas or telephone inspector; or by intimidating the inmates through violence or

threats into opening the door; or through collusion with a confederate, an inmate of the house; or by descending a chimney, even if only a partial descent is made, and no room is entered. An entry must be effected before the offense is complete; but the entry of any part of the body, even a finger, is sufficient; and an insertion into the house of an instrument, except merely to facilitate further entrance, is a sufficient entry.

Both the breaking and entry must be in the nighttime, which at common law was the period between sunset and sunrise when there is not sufficient daylight to discern a man's face, and both must be done with the intent to commit a felony in the house. It is immaterial whether the felony be committed or even attempted, and where a felony is actually intended it is no defense that its commission was impossible. The felony intended may be a statutory felony.

PROOF.

(a) That the accused broke and entered a certain dwelling house of a certain person, as specified.

(b) That such breaking and entering was done in the nighttime.

(c) The facts and circumstances of the case (for instance, the actual commission of the felony) which indicate that such breaking and entering were done with the intent to commit the alleged felony therein.

V. LARCENY.

Larceny at common law is the taking and removing, by trespass, of personal property which the trespasser knows to belong either generally or specially to another, with the felonious intent to deprive him of his ownership therein. (Bishop, vol. 2, p. 440.)

In larceny there must be a taking and carrying away. When actual physical possession is obtained and the property moved the least distance, the taking and carrying away is complete. Such possession must, however, be complete; thus, enticing a domestic animal a short distance, or seizing property secured by a chain, or causing another to drop property by knocking his hand is not a taking of such property. The taking need not be by the hands of the thief. Thus, where one, having the required intent to steal, entices a horse into his own stable without touching him, or procures an insane person to take the goods, or procures a railroad company to deliver another's trunk by changing the check on it, he is guilty of larceny.

The taking must be by trespass; that is, the property must be taken from the actual or constructive possession of the owner without his consent.

One who has a lawful right to the possession of the property of another can not steal it. Thus where an article is borrowed or hired in good faith the bailee does not commit larceny if he subsequently during the bailment decides to and does convert the article to his own use. But if at the time the article is borrowed, etc., the borrower intends to convert it, such a taking is by trespass and his act a larceny. And where the possession of an article is obtained by fraud, although no intent to steal existed at the time, a subsequent forming and carrying out of such intent is a larceny, as the taking and keeping possession in such a case is a continuing trespass. Thus where a horse was hired by one who really intended to go farther than he stated to the owner, but who did not intend to steal the horse, it was held that his subsequent conversion of the animal was a larceny.

These rules apply to any case of bailment, but do not apply where the owner intends to part with the ownership of the property. Where a carrier of goods in a bale, or a person intrusted with a trunk for safekeeping, breaks bulk and appropriates part or all of the contents, he is guilty of larceny regardless of what his intention was when he received the property.

The principle of the rules as to a bailee who accepts the possession of property in good faith, or who intends at the time to steal it, applies to cases of property delivered by mistake. Thus, where an article intended for one is delivered to another by mistake the latter's acceptance of the possession, knowing of the mistake and with the required intent, is a larceny; but if he accepts it in ignorance of the mistake and in good faith as intended for him, his subsequent appropriating to his own use is not a larceny, as there was no trespass in the taking.

This same rule applies where a person is paid by mistake more money than he is entitled to.

The possession of goods may be in one person although the goods themselves be in the actual manual control of another, who is said to have the custody of them. Thus, where the owner of a coin gives it to a friend to examine on the spot, he still retains the possession, and if the recipient goes away with the coin intending to steal it he is guilty of larceny. So, too, a guest at a hotel or a private house has the bare custody of articles such as those in his room or given him for use at the table and can commit a larceny of such articles.

Where a servant receives goods or coins from his master to use, care for, or employ for a specific purpose in his service, the master retains possession and the servant has the custody only and may commit larceny of them. The fact of the existence of the relationship of master and servant does not prevent the latter from being a bailee of the former's property, in which case the rules as to bailees apply; for instance, a master might lend his servant a horse to use on the latter's own business. Where, however, a servant receives goods or coins from a third person on behalf of his master he has the possession of the goods or coins and can not commit a larceny of them until they have reached the possession of his master, which they do when delivered into his hands or deposited in the receptacle or place provided for the purpose. Thus, if a clerk receive some coins for his master in the course of business and places in the cash drawer or safe belonging to the master he no longer has the possession of the coins and his taking of them with the requisite intent would be larceny; but he does not relinquish possession if, merely for his own convenience, he uses the safe or drawer as a hiding place. His subsequent taking of the coins would not, therefore, be larceny.

This distinction between custody and possession is of the utmost importance, for it is often very difficult to determine whether the crime is larceny or embezzlement, each particular case depending upon the peculiar circumstances. To illustrate the doctrine: Where a third person hands a clerk money to pay a bill which he owes the clerk's employer, and the clerk, instead of putting the money into his employer's safe or other proper place, puts it into his own pocket and appropriates it, or hides it on the premises and afterwards carries it off, he does not commit larceny, for, as the money has not reached its destination, but is merely in transit, the master has not obtained possession, either actual or constructive. If, however, the clerk puts the money in the safe, it is in his employer's constructive possession; and if he takes it out again and converts it, he is guilty of larceny. If it is not the duty of the clerk to put the money in the safe, but he is required to keep it on his person for his master, then, as soon as he receives the money, it has reached its ultimate destination, and he will be guilty if he appropriates it, instead of holding it for his master. If a master gives his servant a check to take to the bank and get cashed he has mere custody of the check itself, and commits larceny if he appropriates it; but if he cashes the check and appropriates the money he commits embezzlement only, as the money has never been in the master's possession. (Clark, pp. 285, 286.)

Where the owner of an article delivers it to another, intending at the time an unconditional passing of the property as well as the possession, the other can not be guilty of larceny, whatever the inducement employed by him. Thus where property is obtained from a dealer and the false pretense of being sent for it by a regular charge customer, or where property is bought on credit with no intention of paying, or where a bogus check is given in payment of goods or in exchange for money, or where money is borrowed on false pretenses with the understanding that different coins or bills are to be returned is no larceny.

In the case of property delivered by servants or agents, such delivery can not go beyond the actual or apparent authority of the servant or agent. So where a master sends his servant with a c. o. d. package and the purchaser induces the servant to give him the package without payment or pays with a worthless check, intending to keep the package, it is larceny.

The reason for the rule above stated as to an intention to pass the property preventing the taking from amounting to larceny is that the consent of the owner precludes the existence of an essential element of larceny, viz., a trespass. But where the taking overlaps the consent given it is pro tanto a trespass and where the other elements of larceny are present, he who does the taking is guilty of the offense. Thus where one gets candy from a slot machine by using a counterfeit coin, or where a customer after buying a cigar takes the whole box of matches provided by owner of the store for the use of his customer, the act in each case is a trespass, and the offenders are guilty of larceny if the other elements of that offense are present.

Another application of the rule that the consent must be as broad as the taking is made in cases where the owner's intent is to pass the property in the goods only when a condition is fulfilled. Thus where goods are handed to a purchaser on a cash sale the title is not intended to pass until the price is paid; and if the person receiving them runs off with the goods without paying for them and with the required intent, he is guilty of larceny.

This rule applies in many analogous cases. For instance it is larceny "for a man to whom money is handed to be changed to run off with it or keep it, *animo furandi*, and refuse to give the change, though the intention may be that he shall keep part of it as payment for goods purchased or as a loan, for there is no consent to part with the money without receiving the change." (Clark and Marshall, p. 467.) In these cases of conditional delivery the recipient has only the bare custody and it is therefore immaterial whether the intent to steal existed at the time of the delivery, or was formed later.

The taking may be from any one having possession of the property; hence, property may be stolen from one who himself has stolen it, and the owner of goods may steal them from a bailee with a special property in them.

One retains the constructive possession of property although it is actually out of his control until some one else takes possession, except in the case of abandoned property. So where a desk was sold and coins were afterwards found by the purchaser in a secret drawer and taken by him, he takes it from the possession of the owner. Where a person finds property he has a right to take it and examine it. If the circumstances give him no clue to the ownership he can rightfully appropriate it and this act or a subsequent refusal to give it up to the owner will not be a larceny, as there was no trespass in the taking. If the circumstances do give him such a clue he can rightfully assume possession for the owner and a subsequent change of intent and an appropriation of the property would not be a larceny, but where he intends to appropriate it at the time he assumes possession he is guilty of larceny, and none the less so if he intends to return it in the event that a reward is given.

In larceny, as in other crimes, the evil intent and the act must coexist; that is, as stated in the definition of larceny, the taking and removing by trespass must be with the particular intent described.

But where the possession of property is obtained by a trespass the subsequent retention of the property without right is a continuing trespass, and however innocent the original intent of the trespasser, he commits larceny if while wrongfully retaining possession he has the intent to steal. Thus where an animal belonging to one person becomes mingled with the herd of another and is driven off by mistake, without the knowledge of either person, there is a continuing trespass, and if on discovering his mistake the owner of the herd converts the animal to his own use he is guilty of larceny.

The felonious intent in larceny is that entertained by a thief; i.e., a fraudulent intent to deprive the owner permanently of his property in the goods or of their value or a part of their value. Unless such a purpose exist with the taking and carrying away by trespass there is no larceny.

Thus larceny is not committed where the taking was without any intent at all as regards the property, as in the case of property taken by mistake or accidentally; or where the intent was to take one's own property, as in the case of property taken under a bona fide claim of right, however unfounded; or where the intent was to take another's property temporarily from his possession, as in the case of property taken for a temporary use, or in fun, or out of curiosity, or to keep for him, or to deprive him of the power of using it. Thus if one takes a horse merely to enable him to escape with stolen property, or takes property from a drunken friend in order to prevent him from losing it, or taking a cudgel out of the owner's hand to prevent a beating there is no larceny.

Whether the required intent exists where property is taken to pawn or hold for a reward depends upon the circumstances. Some cases of taking property to pledge would come within the above rule as to temporary use, as where the intent is in good faith to redeem and return it; but in the absence of such intent the taking is larceny.

Where the taking is with the design of returning it to the owner, but in the hope of obtaining a reward, it is not larceny; but if the purpose is to keep the property until a reward is offered it is. Taking property with the intent to sell it back to the owner or return it to him for some other consideration is, of course, more indicative of than inconsistent with the existence of the required intent. Thus, stealing a railroad ticket is none the less stealing because it was intended to be returned to the railroad when made use of.

Once the goods are taken and removed with the felonious intent above described the offense is complete and is none the less a larceny because the thief may have had in mind a disposition of the property without benefit or advantage to himself. Thus, an intent to give it to another or to destroy it out of revenge, or to prevent its use as evidence or otherwise against himself or another, does not prevent the felonious taking of another's property from being larceny.

In line with this principle it has been held that a servant who clandestinely took his master's oats for the purpose of feeding them to his master's horse was guilty of larceny.

When a larceny has been committed a prompt repentance by the thief, followed by a return of the property or payment for it, is no defense.

Under the common law personal property only can be stolen. Thus, where trees, fences, crops, or fixtures are cut down or severed by a trespasser and immediately taken away by him, there is no larceny. But should the trespasser, after cutting down some trees, for instance, leave the fallen timber and relin-

quish his possession, the possession of the owner attaches to the property in its new character as personal property, and a subsequent taking by the trespasser with intent to steal is larceny.

At common law a piece of paper may be stolen, though its value is less than that of the smallest coin; but if the paper is so written upon as to be evidence of valid and subsisting agreement, it loses its value as a piece of paper and is no longer a subject of larceny. Thus, a promissory note, a bank note or a post-exchange check or other writing evidencing a chose in action is not a subject of larceny at common law.

PROOF.

- (a) The taking by the accused of the property as alleged.
- (b) The carrying away by the accused of such property.
- (c) That such property belonged to a certain other person named or described.
- (d) That such property was of the value alleged, or of some value.
- (e) The facts and circumstances of the case indicating that the taking and carrying away were by trespass and with a fraudulent intent to deprive the owner permanently of his property or interest in the goods or of their value or a part of their value.

VI. ROBBERY.

Robbery at common law is the taking, with intent to steal, of the personal property of another, from his person or in his presence, against his will, by violence or intimidation. (Clark, p. 323.)

The felonious and forcible taking from the person of another goods or money to any value by violence or putting him in fear. (Bouvier's Law Dictionary, 15th ed., vol. 2, p. 601.)

Robbery includes larceny and the elements of that offense must always be present. See matter under heading "V" under this article.

Thus it is not robbery to take one's own property, unless the person from whom it is taken has a special property in the goods and the right to possession; nor is it robbery to take property that is honestly believed to be one's own or to take it for a merely temporary use.

It is not necessary that the person from whom the property is taken be the actual owner—it is enough if he have a possession or a custody that is good against the taker.

The property must be taken from the person or in his presence; but to be in the presence it is not necessary that the owner be within any certain distance of his property; it is enough if he be near enough to be in control of his property. Thus where some persons entered a house and forced the owner by threats to disclose the hiding place of valuables in an adjoining room, and then, leaving the owner tied, went into such room and stole the valuables their offense was held to be robbery.

The taking must be against the owner's will by means of violence or intimidation. The violence or intimidation must precede or accompany the taking. Thus where property is taken by stealth from the person of its owner it is not robbery in case the thief overcomes a forcible effort to retake it; or the owner is deterred by the threats of the thief from making an attempt to retake it.

The violence must be actual violence to the person, but the amount of violence used is immaterial. It is enough where it overcomes the actual resistance of the person robbed, or puts him in such a position that he makes no resistance, or suffices to overcome the resistance offered by a chain or other fastening by which the article is attached to the person. Where an article is merely snatched out of another's hand or a pocket is picked by stealth and no other force is used

and the owner is not put in fear, the offense is not robbery. But if in snatching the article resistance is overcome, there is sufficient violence, as where a woman's earring is torn from her ear or a hair ornament entangled in her hair is snatched away. So, also, when a person's attention is diverted by being jostled by a confederate of a pickpocket, who is thus enabled to steal the person's watch, it is a robbery.

Other instances of robbery by violence are where a man is knocked insensible and his pockets rifled, and where an officer steals property from the person of a prisoner in his charge after handcuffing him on the pretext of preventing his escape.

It is equally robbery whether the robber prevents resistance by rendering his victim physically incapable of making any, or by putting him, by threat or menaces, in such fear that he is warranted in making none. The fear must be a reasonably well-founded apprehension of present or future danger, and the goods must be taken while such apprehension exists. The danger apprehended may be, for instance, his own death or some bodily injury to him, or the destruction of his habitation, or a prosecution for sodomy.

In the last case it is immaterial whether the person threatened with the prosecution is innocent or guilty of the offense. A danger of being prosecuted for any other offense is held not to be sufficient. (Clark and Marshall, p. 865.)

PROOF.

- (a) The larceny of the property. See proof under larceny above.
- (b) That such larceny was from the person or in the presence of the person alleged to have been robbed.
- (c) That the taking was by violence or putting in fear, as alleged.

VII. EMBEZZLEMENT.

Embezzlement is a fraudulent appropriation of another's property by a person to whom it has been intrusted or into whose hands it has lawfully come. It differs from larceny in that the original taking of the property was lawful or with the consent of the owner, while in larceny the felonious intent must have existed at the time of the taking. (Cyc., vol. 15, p. 488.)

Embezzlement is not a common law but a statutory offense.

The purpose of embezzlement statutes is to meet the case of a servant, clerk, bailee, or other person to whom the possession of property is intrusted by or for the owner, and who fraudulently misappropriates it to his own use or otherwise, the circumstances being such that the act is not larceny.

The gist of the offense is a breach of trust, and can not be committed unless some fiduciary relationship exists between the owner and the person in possession of the property and unless such possession was taken by virtue of such relationship.

PROOF.

- (a) That the accused was the clerk or servant of a certain other person or stood in some other fiduciary relationship to that person, as alleged.
- (b) That in such fiduciary capacity the accused received into his possession certain money or property of such person, as alleged.
- (c) That he converted or appropriated to his own use such money or property during the existence of such fiduciary relationship.
- (d) The facts and circumstances indicating that the accused had in so doing the fraudulent intent to deprive the owner permanently of his property in the goods or money, or of their value or a part thereof.

VIII. PERJURY.

Perjury, at common law, is the willful and corrupt giving, upon a lawful oath, or in any form allowed by law to be substituted for an oath, in a judicial proceeding or course of justice, of false testimony material to the issue or matter of inquiry. (Clark, p. 385.)

The false testimony must be willfully and corruptly given; that is, with a deliberate intent to testify falsely.

It is not perjury to testify by mistake to what is believed to be true, however unfounded the belief may be; hence, a witness may contradict under oath testimony formerly given by him without committing perjury, since he may on each occasion have believed his testimony to be true. On the other hand, a witness may commit perjury by testifying that he knows a thing to be true, when in fact he either knows nothing about it at all or is not sure about it, and this is so whether the thing be true or false in fact. So, also, a witness may commit perjury in testifying falsely as to his belief, remembrance, or impression, or as to his judgment or opinion on matters of fact. Thus, where a witness swears that he does not remember certain facts, when in fact he does, he commits perjury, if the other elements of the offense are present. So, also, where a witness testified that in his opinion a certain person was drunk when in fact he entertains the contrary opinion.

The oath must be one required or authorized by law and must be duly administered by one authorized to administer it. If no particular form of oath is prescribed by statute, the form of oath is immaterial, but "there must be in some form, in the presence of an officer authorized to administer it, an unequivocal and present act by which the affiant takes upon himself the obligation of an oath." (Clark and Marshall, p. 863.)

Thus, where a person merely delivers an affidavit signed by him to an officer authorized to administer the oath thereto, and without anything more being said or done the officer signs the jurat, no oath has been administered.

Where a form of oath has been prescribed a literal following of the statute is not essential. It is sufficient if the oath administered conforms in substance to the statutory form.

An oath includes an affirmation where the latter is authorized in lieu of an oath.

It is no defense that the witness voluntarily appeared, or that he was incompetent as a witness, or that his testimony was given in response to questions that he could have declined to answer, even if he was forced to answer it over his claim of privilege.

It is a defense, however, if the tribunal or magistrate had no jurisdiction of the cause in which the false testimony was given.

The false testimony must be material to the issue or matter of inquiry, but the issue or matter of inquiry may be a collateral one.

Thus perjury may be committed by giving material false testimony with respect to the credibility of a material witness, or in an affidavit in support of a request for a continuance, as well as by giving testimony with respect to a fact from which a legitimate inference may be drawn as to the existence or non-existence of a fact in issue. It is no defense that such testimony would have been excluded if objected to as incompetent, or that it was not believed, or that it did not affect the result in any way, or that subsequent proceedings rendered it immaterial.

PROOF.

- (a) That a certain judicial proceeding or course of justice was pending.
- (b) That the accused was sworn in such proceeding.
- (c) That such oath was administered to the accused in a matter where an oath was required or authorized by law, as alleged.

- (d) That such oath was administered by a person having authority to do so.
- (e) That upon such oath he gave the testimony alleged.
- (f) That such testimony was false, and material to the issue or matter of inquiry.
- (g) The facts and circumstances indicating that such false testimony was willfully and corruptly given.

IX. ASSAULT WITH INTENT TO COMMIT ANY FELONY.

An assault with intent to commit any felony is an assault made with a specific intent to murder, rape, rob, or to commit manslaughter, sodomy, or other common-law felony.

An assault is an attempt or offer with unlawful force or violence to do a corporal hurt to another. (Clark and Marshall, p. 271.)

Raising a stick over another's head as if to strike him, presenting a fire-arm ready for use within range of another, striking at another with a cane or fist, assuming a threatening attitude and hurrying toward another are examples of assaults.

Some overt act is necessary in any assault. Mere preparation, such as unfastening the catch on a pistol holster in order that the pistol may be drawn, or picking up a stone at a considerable distance from another without making any attempt or offer to throw it, is not an assault.

The force or violence must be physical; mere words, however threatening, or insulting gestures are not by themselves sufficient to constitute an assault.

Furthermore, in an assault there must be an intent, actual or apparent, to inflict corporal hurt on another.

Where the circumstances known to the person menaced clearly negative such intent there is no assault. Thus, where a person accompanies an apparent attempt to strike another by an unequivocal announcement in some form of his intention not to strike, there is no assault. This principle was applied in a case where the defendant raised his whip and shook it at the prosecutor within striking distance, saying, "If you weren't an old man, I would knock you down."

Viewed solely as an attempt to commit a battery there must be an actual or constructive intent to do a corporal hurt to another, and an act of unlawful violence or force begun to be executed with a view to inflicting such hurt. How such purpose is defeated is immaterial.

The following have been held to be assaults: Riding after a person so as to compel him to seek safety in an inclosure to avoid a beating, though the assailant was never near enough to hit him; rushing upon another in a threatening attitude although before quite close enough to strike, the person threatened strikes in self-defense or the attack is frustrated by a third person.

It is also an assault where the person in order to avert the taking effect of the unlawful violence yields to a demand of his assailant. Thus, where A, being within striking distance of B, raises a weapon for the purpose of unlawfully striking him, stating that he will strike unless B does a certain thing, and B does that thing, thereby averting the blow, A commits an assault.

It is not a defense to a charge of assault that for some reason unknown to the assailant his attempt was bound to fail. Thus, where a soldier loads his rifle with what he believes to be a good cartridge and, pointing it at a person, pulls the trigger, he is guilty of assault, although the cartridge was so defective that it could not be used. The same principle was applied to a case where a person in a house shoots through the roof at a place where he supposed a policeman was concealed, though the policeman was at another place on the roof.

The intent need not be to injure a particular person, and mere recklessness

may supply the place of intent. Thus, where one strikes at A believing him to be B, he is guilty of assaulting A; and where one fires a loaded and capped pistol at another recklessly, and not knowing or seeking to know whether it is loaded or not, he commits an assault.

To constitute an assault, however, it is unnecessary that there be an actual or constructive intent to hurt anyone or a believed ability to inflict such hurt.

If there be to the person set upon an apparent present intent to injure, coupled with an apparent present ability to do so, it is sufficient.

The better opinion, however, is to the effect that if a person presents a gun at another, or threatens him with a stick or other weapon, and thereby reasonably puts him in fear and causes him to act on the defensive, or to retreat, there is an assault, whether there is any actual intention to injure or not. In a comparatively late Massachusetts case it was held that a man who pointed an unloaded gun at another was guilty of an assault, although he may have known that it was not loaded and may have had no intention to injure. "It is not the secret intent of the assaulting party," said the court, "nor the undisclosed fact of his ability or inability to commit a battery, that is material, but what his conduct and the attending circumstances denote at the time to the party assaulted. If to him they indicate an attack, he is justified in resorting to defensive action. The same rule applies to the proof necessary to sustain a criminal complaint for an assault. It is the outward demonstration that constitutes the mischief which is punished as a breach of the peace." (Clark and Marshall, pp. 277, 278.)

If there be such a demonstration of violence, coupled with an apparent ability to inflict the injury, so as to cause the person at whom it is directed reasonably to fear the injury unless he retreat to secure his safety, and under such circumstances he is compelled to retreat to avoid an impending danger, the assault is complete, though the assailant may never have been within the actual striking distance of the person assailed. (Clark and Marshall, p. 281, note.)

There must, however, be an apparent present ability. To aim a pistol at a man at such a distance that it clearly could not injure would not be an assault.

A battery is an assault in which force is applied, by material agencies, to the person of another, either mediately or immediately. Thus, it is a battery to spit on another; to push a third person against him; to set a dog at him which bites him; to cut his dress while he is wearing it, though without touching or intending to touch his person; to shoot him; and to cause him to take poison. So it is a battery for a man to fondle against her will a woman not his wife. The force may be applied through conductors more or less close. Thus, to strike the dress of the person assailed, or the horse on which he is riding, or the house in which he resides, may be as much a battery as to strike his face; and sending an explosive machine by express from New York to San Francisco may be as much a battery as taking it to San Francisco in person. It is not, however, a battery to lay hands on another to attract his attention, or in a party falling to seize another for support. Sending a missile into a crowd also is a battery on anyone whom the missile hits; and so is the use, on the part of one who is excused in using force, of more force than is required. (Wharton, vol. 1, pp. 566, 567.)

I. ASSAULT WITH INTENT TO MURDER.

This is an assault aggravated by the concurrence of a specific intent to murder; in other words, it is an attempt to murder.

As in other attempts there must be an overt act, beyond mere preparation or threats, or an attempt to make an attempt.

Thus, it was held not an assault with intent to murder where the defendant

drew a pistol from his hip pocket, but because of its becoming caught in the lining of his coat, did not make any actual attempt to inflict an injury with the pistol on the person alleged to have been assaulted.

To constitute an assault with intent to murder by firearms it is not necessary that the weapon be discharged; and in no case is the actual infliction of injury necessary. Thus, where a man with intent to murder another deliberately assaults him by shooting at him the fact that he misses does not alter the character of the offense.

Where the intent to murder exists, the fact that for some reason unknown the actual consummation of the murder is impossible by the means employed does not prevent the person using them from being guilty of an assault with intent to commit murder where the means are apparently adapted to the end in view. Thus, where a soldier intending to murder another loads his rifle with what he believes to be a good cartridge and aims and discharges his rifle at the other, it is no defense that he, by accident, got hold of a cartridge so defectively loaded that the bullet did not leave the gun.

In order to constitute this offense the specific intent to murder must exist, and the facts must be such that had death been caused by the act the offense would have been murder, but the converse of this latter proposition is not always true, as a man may be guilty of murder without intending to kill. Thus, where a workman recklessly throws a heavy object from the roof of a building into a street where he knows people are likely to be passing and thereby kills a person, he may be guilty of murder; but where the person is merely injured, the offense of assault with intent to commit murder is not committed.

To constitute this offense there must be a specific intent to murder the person assaulted and this intent must exist at the time of the assault.

A general felonious intent of a specific design to commit another felony is not sufficient, and where a person is too drunk to entertain the specific intent the offense is not murder. But where the accused intending to murder A shoots at and wounds B, mistaking him for A, he is guilty of assaulting B with intent to murder him; so also where a man fires into a group with intent to murder some one he is guilty of an assault with intent to murder each member of the group.

2. ASSAULT WITH INTENT TO COMMIT MANSLAUGHTER.

This offense differs from assault with intent to murder in the lack of the elements of malice necessary to constitute the latter crime.

It is an attempt to take human life in a sudden heat of passion.

The specific intent to kill is necessary and the act must be done under such circumstances that had death ensued the offense would have been manslaughter.

What has been said under the head of assault with intent to commit murder applies to the offense of assault with intent to commit manslaughter.

3. ASSAULT WITH INTENT TO COMMIT RAPE.

This is an attempt to commit rape in which the overt act amounts to an assault upon the woman intended to be ravished. Indecent advances, importunities however earnest; mere threats; and actual attempts to rape wherein the overt act is not an assault do not amount to this offense. Thus, where a man, intending to rape a woman, stealthily concealed himself in her room to await a favorable opportunity to execute his design but was discovered and fled, it was held that he was not guilty of an assault with intent to commit rape.

No actual touching is necessary. Thus where a man entered a woman's

room and got in the bed where she was and within reach of her person for the purpose of ravishing her he commits the offense, although he did not touch the woman.

This offense may be committed on a woman who is insane or an imbecile, or while she is drugged or intoxicated, or asleep, provided the offense would be rape if the purpose was carried out. But where an attempt to have connection with a woman capable of consenting and whose consent thereto has been obtained by fraud there can be no assault with intent to commit rape.

Thus an attempt to have connection with a woman who has consented thereto in the belief that one personating her husband is her husband can not be an assault with intent to commit rape.

The intent to have carnal knowledge of the woman assaulted by force and without her consent must exist and concur with the assault. In other words, the man must intend to overcome any resistance by force, actual or constructive, and penetrate the woman's person. Any less intent will not suffice. Thus where a man assaults a woman, his purpose being to seduce her, the offense is not committed.

Once an assault with intent to commit rape is made it is no defense that the man voluntarily desisted or that the woman yields her consent to the connection, so that no rape is committed.

4. ASSAULT WITH INTENT TO ROB.

This is an attempt to commit robbery wherein the overt act is an assault and the concurrent intent is forcibly to take and carry away property of the person assaulted from his person or in his presence by violence or putting him in fear.

The accused can not set up as a defense that he intended to take only money and that the person he attempted to rob had none.

5. ASSAULT WITH INTENT TO COMMIT SODOMY.

Sodomy consists in sexual connection with any brute animal, or in sexual connection, per anum, by a man with any man or woman. (Wharton, vol. 2, p. 538.)

Penetration of the mouth of the person does not constitute this offense.

Both parties are liable as principals if each is adult and consents; but if either be a boy of tender age the adult alone is liable, and although the boy consent the act is still by force.

Penetration alone is sufficient.

An assault with intent to commit this offense consists of an assault on a human being with intent to penetrate his or her person per anum.

That which has been stated, with regard to the evidence and manner of proof in cases of rape, ought especially to be observed upon a trial for this heinous offense. When strictly and impartially proved, the offense well merits strict and impartial punishment; but it is from its nature so easily charged and the negative so difficult to be proved that the accusation ought clearly to be made out. The evidence should be plain and satisfactory in proportion as the crime is detestable.—4 Bla. Com., 215. (Archbold's Criminal Practice and Pleading, 7th ed., vol. 2, pp. 185, 186, note.)

PROOF.

(1) Assault with intent to murder:

(a) That the accused assaulted a certain person, as alleged.

(b) The facts and circumstances of the case indicating the existence at the

time of the assault of the specific intent of the accused to kill such person, and that the killing would have been murder had death resulted.

[Note: Both the specific intent and the malice may be inferred from the deliberate use of a deadly weapon in a way calculated to cause death, or from other deliberate acts of violence likely to result in death or great bodily harm.]

(2) Assault with intent to commit manslaughter:

(a) That the accused assaulted a certain person, as alleged.

(b) The facts and circumstances of the case indicating the existence at the time of the assault of the specific intent of the accused to kill such person and that the killing would have been voluntary manslaughter had death resulted.

(3) Assault with intent to commit rape:

(a) That the accused assaulted a certain female, as specified.

(b) The facts and circumstances of the case indicating the existence at the time of the assault of the intent of the accused to penetrate the person of such female at all events by overcoming any resistance on her part by actual or constructive force; and the facts and circumstances indicating that the offense of rape would have been committed had the accused succeeded in carrying out his purpose.

(4) Assault with intent to rob:

(a) That the accused assaulted a certain person, as alleged.

(b) The facts and circumstances of the case indicating the existence at the time of the assault of the intent on the part of the accused forcibly to steal property of such person from his person or in his presence by violence or putting him in fear.

(5) Assault with intent to commit sodomy:

(a) That the accused assaulted a certain person, as alleged.

(b) The facts and circumstances of the case indicating the concurrent intent to commit the offense on such person.

X. ASSAULT WITH INTENT TO DO BODILY HARM.

This is an assault aggravated by the specific present intent to do bodily harm to the person assaulted by means of the force employed.

It is not necessary that any battery actually ensue, or, if bodily harm is actually inflicted, that it be of the kind intended. Where the accused acts in reckless disregard for the safety of others it is not a defense that he did not have in mind the particular person injured.

PROOF.

(a) That the accused assaulted a certain person, as alleged.

(b) The facts and circumstances of the case indicating the concurrent intent thereby to do bodily harm to such person.

NINETY-FOURTH ARTICLE.

444. Any person subject to military law who makes or causes to be made any claim against the United States, or any officer thereof, knowing such claim to be false or fraudulent; or

[2] Who presents or causes to be presented to any person in the civil or military service thereof, for approval or payment, any claim against the United States, or any officer thereof, knowing such claim to be false or fraudulent; or

[3] Who enters into any agreement or conspiracy to defraud the United States by obtaining, or aiding others to obtain, the allowance or payment of any false or fraudulent claim; or

[4] Who, for the purpose of obtaining, or aiding others to obtain, the ap-

proval, allowance, or payment of any claim against the United States or against any officer thereof, makes or uses, or procures, or advises the making or use of, any writing or other paper, knowing the same to contain any false or fraudulent statements; or

[5] Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, makes, or procures, or advises the making of, any oath to any fact or to any writing or other paper knowing such oath to be false; or

[6] Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, forges or counterfeits, or procures, or advises the forging or counterfeiting of any signature upon any writing or other paper, or uses, or procures, or advises the use of any such signature, knowing the same to be forged or counterfeited; or

[7] Who, having charge, possession, custody, or control of any money or other property of the United States, furnished or intended for the military service thereof, knowingly delivers, or causes to be delivered, to any person having authority to receive the same, any amount thereof less than that for which he receives a certificate or receipt; or

[8] Who, being authorized to make or deliver any paper certifying the receipt of any property of the United States furnished or intended for the military service thereof, makes or delivers to any person such writing, without having full knowledge of the truth of the statements therein contained and with intent to defraud the United States; or

[9] Who steals, embezzles, knowingly and willfully misappropriates, applies to his own use or benefit, or wrongfully or knowingly sells or disposes of any ordnance, arms, equipments, ammunition, clothing, subsistence stores, money, or other property of the United States furnished or intended for the military service thereof; or

[10] Who knowingly purchases or receives in pledge for any obligation or indebtedness from any soldier, officer or other person who is a part of or employed in said forces or service, any ordnance, arms, equipment, ammunition, clothing, subsistence stores, or other property of the United States, such soldier, officer, or other person not having lawful right to sell or pledge the same:

Shall, on conviction thereof, be punished by fine or imprisonment, or by such other punishment as a court-martial may adjudge, or by any or all of said penalties. And if any person, being guilty of any of the offenses aforesaid while in the military service of the United States, receives his discharge or is dismissed from the service, he shall continue to be liable to be arrested and held for trial and sentence by a court-martial in the same manner and to the same extent as if he had not received such discharge nor been dismissed.

DEFINITIONS AND PRINCIPLES.

See the respective headings under which the defenses defined by this article are treated below.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See article 2.

The article embraces a large number of offenses which may be treated under headings corresponding to the numbered paragraphs of the article, as follows:

I. Making or causing to be made a false or fraudulent claim.

II. Presenting or causing to be presented for approval or payment a false or fraudulent claim.

III. Entering into an agreement or conspiracy to defraud the United States through false claims.

IV. Making, using, procuring, or advising the making or use of a false writing or other paper in connection with claims.

V. False oath in connection with claims.

VI. Forgery, etc., of signature in connection with claims.

VII. Delivering less than amount called for by receipt.

VIII. Making or delivering receipt without having knowledge that the same is true.

IX. Embezzlement, misappropriation, sale, etc., of military property.

X. Purchasing or receiving in pledge of military property.

I. MAKING OR CAUSING TO BE MADE A FALSE OR FRAUDULENT CLAIM.

Making a claim is a distinct act from presenting it. A claim may be made in one place and presented in another. This section does not relate to personal claims against an officer of the United States, but to claims against the United States made to such officer or otherwise. It is not necessary that the claim be allowed or paid nor that it be made to the person to be benefited by the allowance or payment. The claim must be made or caused to be made with knowledge of its fictitious or dishonest character. This does not include claims, however groundless they may be, that are honestly believed by the maker to be valid, nor claims that are merely made negligently or without ordinary prudence, but it does include claims made by a person who has the belief of the false character of the claim that the ordinarily prudent man would have entertained under the circumstances. (See also the discussion under "II" of this article.)

An instance of making a false claim would be where an officer having a claim respecting property lost in the military service knowingly includes articles that were not in fact lost and submits such claim to his commanding officer for the action of the board.

PROOF.

(a) That the accused made or caused to be made a certain claim against the United States as alleged.

(b) That such claim was false or fraudulent in the particulars specified.

(c) That when the accused made the claim or caused it to be made he knew that it was false or fraudulent in such particulars.

(d) The amount involved, as alleged.

II. PRESENTING OR CAUSING TO BE PRESENTED FOR APPROVAL OR PAYMENT A FALSE OR FRAUDULENT CLAIM.

See second paragraph of the article and matter under heading "I."

The claim must be presented to some person having authority to approve or pay it. False and fraudulent claims include not only those containing some material false statement, but also claims that the person presenting knows to have been paid, or for some other reason knows he is not authorized to present or receive money on.

Where an officer knows that a certain duly assigned pay account of his is outstanding and that the assignee can collect on it if he chooses to do so, it is no defense to a charge against such officer of presenting for payment a second account covering the same period as the assigned account that the second account was presented relying on the assignee's statement that he would not present the first. But where the accused has good grounds to believe and actually does believe when he presents the second account that the assigned

account had been canceled or surrendered by the assignee, his presentation of the second claim does not constitute this offense. A cancellation or surrender of the first account after the presentation of the second account is, of course, no defense to the charge.

Presenting to a paymaster a false final statement, knowing it to be false, is an example of an offense under this paragraph.

PROOF.

(a) That the accused presented or caused to be presented for approval or payment to a certain person in the civil or military service of the United States, a certain claim against the United States, as alleged.

(b) That such claim was false or fraudulent in the particulars alleged.

(c) That when the accused presented the claim or caused it to be presented he knew it was fictitious or dishonest in such particulars.

(d) The amount involved, as alleged.

III. ENTERING INTO AN AGREEMENT OR CONSPIRACY TO DEFRAUD THE UNITED STATES THROUGH FALSE CLAIMS.

See the third paragraph of this article.

A conspiracy is the corrupt agreeing together of two or more persons to do by concerted action something unlawful either as a means or an end. (Bishop, vol. 2, p. 98.)

The mere entry into a corrupt agreement for the purpose of defrauding the United States through any of the means specified constitutes the offense. An example of this offense is an agreement between a contractor and an officer to defraud the United States by means of a padded voucher to be certified as correct by the officer.

PROOF.

(a) That the accused and one or more other persons named or described entered into an agreement.

(b) That the object of the agreement was to defraud the United States.

(c) That the means by which the fraud was to be effected were to obtain or assist certain other persons to obtain the allowance or payment of a certain false or fraudulent claim, as specified.

(d) The amount involved, as alleged.

IV. MAKING, USING, PROCURING, OR ADVISING THE MAKING OR USE OF A FALSE WRITING OR OTHER PAPER IN CONNECTION WITH CLAIMS.

See the fourth paragraph of the article, and matter under headings "I" and "II."

It is not necessary to the offense of making a writing knowing it to contain false or fraudulent statements that such writing be used or attempted to be used, or that the claim in support of which it was made be presented for approval, allowance, or payment. The false or fraudulent statement should, however, be material.

In the offense of procuring the making or use of the writing or other paper, the paper must be made or used; but in the offense of advising such acts the making or use of the paper is not necessary. Examples of offenses under this paragraph are: Willfully inducing another to make to the United States a lease of premises containing a false and fraudulent statement with a view of obtaining the allowance of a false claim for rent against the United States; falsification by a soldier of an entry in the company clothing book for the

purpose described in this paragraph of the article; and the making by an officer in his pay account of false and fraudulent statements with a view to securing the payment of such account.

PROOF.

(a) That the accused made or used or procured or advised the making or use of a certain writing or other paper, as alleged.

(b) That certain statements in such writing or other papers were false or fraudulent, as alleged.

(c) That the accused knew this.

(d) The facts and circumstances indicating that the act of the accused was for the purpose of obtaining or aiding certain others to obtain the approval, allowance or payment of a certain claim or claims against the United States, as specified.

(e) The amount involved, as alleged.

V. FALSE OATH IN CONNECTION WITH CLAIMS.

See the fifth paragraph of the article and matter under headings "I," "II," and "IV."

PROOF.

(a) That the accused made or procured or advised the making of an oath to a certain fact or to a certain writing or other paper, as alleged.

(b) That such oath was false, as alleged.

(c) That the accused knew it was false.

(d) The facts and circumstances of the case indicating that the act was for the purpose of obtaining or aiding certain others to obtain the approval, allowance, or payment of a certain claim or claims against the United States, as alleged.

VI. FORGERY, ETC., OF SIGNATURE IN CONNECTION WITH CLAIMS.

See the sixth paragraph of the article and matter under headings "I" and "II" above.

The term "forges or counterfeits" includes any fraudulent making of another's signature, whether an attempt is made to imitate the handwriting or not.

PROOF.

(a) That the accused forged or counterfeited the signature of a certain person on a certain writing or other paper or that he procured or advised the act as specified; or that he used the forged or counterfeited signature of a certain person or procured or advised its use, knowing such signature to be forged or counterfeited, as alleged.

(b) The facts and circumstances of the case indicating that his act was for the purpose of obtaining or aiding certain others to obtain the approval, allowance, or payment of a certain claim or claims against the United States, as alleged.

VII. DELIVERING LESS THAN AMOUNT CALLED FOR BY RECEIPT.

See the seventh paragraph of the article.

It is immaterial in this offense by what means, whether by deceit, collusion, or otherwise, the accused effected the transaction, or what his purpose was in so doing.

Instances of this offense are:

A contractor gave a receipt for a greater amount than was due him from the United States. Thereupon the disbursing officer gave him the full amount called for by the receipt, but received back from the contractor the excess over the amount actually due.

A disbursing officer, having delivered to a creditor of the United States less money than was actually due, received a receipt signed in blank by the creditor, which he afterwards completed by writing the true amount due.

PROOF.

(a) That the accused had charge, possession, custody, or control of certain money or property of the United States furnished or intended for the military service thereof, as alleged.

(b) That he obtained a receipt for a certain amount or quantity of such money or property, as alleged.

(c) That for such receipt he knowingly delivered, or caused to be delivered, to a certain person having authority to receive it an amount or quantity of such money or property less than the amount or quantity thereof specified in such receipt.

(d) The value of the undelivered money or property, as alleged.

VIII. MAKING OR DELIVERING RECEIPT WITHOUT HAVING KNOWLEDGE THAT THE SAME IS TRUE.

See the eighth paragraph of the article.

The following is an instance of an offense under this paragraph: An officer, being in collusion with a contractor, knowingly received from him an amount of supplies intended for the military service less than the amount shown on the receipt for the supplies, which receipt was certified to by the officer and delivered to the contractor with the intent to defraud the United States.

PROOF.

(a) That the accused was authorized to make or deliver a certificate of the receipt from a certain person of certain property of the United States furnished or intended for the military service thereof, as alleged.

(b) That he made or delivered to such person such certificate, as alleged.

(c) That such certificate was made or delivered without the accused having full knowledge of the truth of a certain material statement or statements therein.

(d) The facts and circumstances indicating that his act was done with intent to defraud the United States.

(e) The amount involved, as alleged.

IX. EMBEZZLEMENT, MISAPPROPRIATION, SALE, ETC., OF MILITARY PROPERTY.

For definitions and principles respecting larceny and embezzlement, see headings "V" and "VII" under the ninety-third article.

Misappropriating is devoting to any unauthorized purpose. The misapplication meant is where such purpose is for the party's own use or benefit.

For the definition of "disposes of," see heading "I" under the eightieth article.

The larceny, embezzlement, etc., must be of the particular kind of property mentioned in the article. Post exchange and company funds and money appropriated for other than the military service do not come within the description "money of the United States furnished or intended for the military service thereof." The term "embezzlement" as used in this article does not

include acts or omissions not within the definition of embezzlement, but which are expressly declared by statute to be embezzlements. Such statutory embezzlements are chargeable, however, under the ninety-sixth article.

The misappropriation of the property or money need not be for the benefit of the accused; the words "to his own use and benefit" qualify the words "applies only."

Instances of misappropriation are:

An officer of the Quartermaster's Department used teams, tools, and other public property in his possession as such officer in erecting buildings, etc., for the benefit of an association composed mainly of civilians, of which he was a member.

An officer of the Quartermaster's Department loaned public property (corn) to a contractor for the purpose of enabling him to fill a contract made with the United States through another officer.

An instance of misapplication is the temporary use by a quartermaster of Government horses in his charge to draw his private carriage on nonpublic business.

PROOF.

In larceny and embezzlement:

(a) See proof under headings "V" and "VII" under the ninety-third article.

(b) That the property belonged to the United States and that it was furnished or intended for the military service thereof.

In misappropriation and misapplication:

(a) That the accused misappropriated or applied to his own use certain property in the manner alleged.

(b) That such property belonged to the United States and that it was furnished or intended for the military service thereof.

(c) The facts and circumstances of the case indicating that the act of the accused was willfully and knowingly done.

(d) The value of the property, as specified.

In wrongful sale or disposition:

(a) That the accused sold or in a certain manner disposed of certain property, as specified.

(b) That such property belonged to the United States and that it was furnished or intended for the military service thereof.

(c) The facts and circumstances indicating that the act was knowingly or wrongfully done.

(d) The value of the property, as specified.

X. PURCHASING OR RECEIVING IN PLEDGE OF MILITARY PROPERTY.

See the tenth paragraph of the article and matter under fifty-fifth article.

To constitute this offense the accused must know not only that the person selling or pawning the property was in one of the specified classes but that the property was the property of the United States. As to "knowingly" see "Definitions and principles" under fifty-fifth article.

PROOF.

(a) That the accused purchased, or received in pledge, for a certain obligation of indebtedness certain military property of the United States, as alleged, knowing it to be such property.

(b) That such property was purchased or so received in pledge from a certain soldier, officer, or other person who was a part of or employed in

the military service of the United States, as alleged, and that the accused knew the person selling or pledging the property to be such soldier, officer, or other person.

(c) That such soldier, officer, or other person had not the lawful right to sell or pledge such property.

(d) The value of the property, as alleged.

NINETY-FIFTH ARTICLE.

445. Any officer or cadet who is convicted of conduct unbecoming an officer and a gentleman shall be dismissed from the service.

DEFINITIONS AND PRINCIPLES.

The conduct contemplated is action or behavior in an official capacity which, in dishonoring or disgracing the individual as an officer, seriously compromises his character and standing as a gentleman, or action or behavior in an unofficial or private capacity which, in dishonoring or disgracing the individual personally as a gentleman, seriously compromises his position as an officer and exhibits him as morally unworthy to remain a member of the honorable profession of arms. (Winthrop, p. 1106.)

There are certain moral attributes common to the ideal officer and the perfect gentleman, a lack of which is indicated by acts of dishonesty or unfair dealing; of indecency or indecorum; of lawlessness, injustice, or cruelty.

Not every one is or can be expected to meet ideal standards or to possess the attributes in the exact degree demanded by the standards of his own time; but there is a limit of tolerance below which the individual standards in these respects of an officer or cadet can not fall without his being morally unfit to be an officer or cadet or to be considered a gentleman.

This article contemplates such conduct by an officer or cadet which, taking all the circumstances into consideration, satisfactorily shows such moral unfitness.

This article includes acts made punishable by any other article of war, provided such acts amount to conduct unbecoming an officer and a gentleman; thus, an officer who embezzles military property violates both this and the preceding article.

Instances of violation of this article are:

Knowingly making a false official statement; dishonorable neglect to pay debts; opening and reading another's letters; giving a check on a bank where there were no funds to meet it, and without intending that there should be; using insulting or defamatory language to another officer in his presence, or about him to other military persons; being grossly drunk and conspicuously disorderly in a public place; public association with notorious prostitutes; cruel treatment of soldiers; committing or attempting to commit a crime involving moral turpitude; failing without a good cause to support his family.

For other instances, see Digest, pages 140-143, and Winthrop, pages 1107-1115.

ANALYSIS AND PROOF.

This article applies to officers and cadets only.

The article defines one offense, viz.:

I. CONDUCT UNBECOMING AN OFFICER AND A GENTLEMAN.

PROOF.

(a) That the accused did or omitted to do the acts as alleged.

(b) The circumstances, intent, motive, etc., as specified.

NINETY-SIXTH ARTICLE.

446. Though not mentioned in these articles, all disorders and neglects to the prejudice of good order and military discipline, all conduct of a nature to bring discredit upon the military service, and all crimes or offenses not capital, of which persons subject to military law may be guilty, shall be taken cognizance of by a general or special or summary court-martial, according to the nature and degree of the offense, and punished at the discretion of such court.

DEFINITIONS AND PRINCIPLES.

See matters under the respective headings under which the offenses are treated.

ANALYSIS AND PROOF.

The article applies to any person subject to military law. See article 2. The article embraces offenses falling within the classes described therein, and not mentioned in the other punitive articles. The offenses may be treated under the following headings:

I. Disorders and neglects to the prejudice of good order and military discipline.

II. Conduct of a nature to bring discredit upon the military service.

III. Crimes or offenses not capital.

I. DISORDERS AND NEGLECTS TO THE PREJUDICE OF GOOD ORDER AND MILITARY DISCIPLINE.

The disorders and neglects include all acts or omissions to the prejudice of good order and military discipline not made punishable by any of the preceding articles.

By the term "to the prejudice," etc., is to be understood directly prejudicial, not indirectly or remotely merely. An irregular or improper act on the part of an officer or soldier can scarcely be conceived which may not be regarded as in some indirect or remote sense prejudicing military discipline; but it is hardly to be supposed that the article contemplated such distant effects, and the same is, therefore, deemed properly to be confined to cases in which the prejudice is reasonably direct and palpable. (Winthrop, p. 1123.)

Instances of such disorders and neglects in the case of officers are: Disobedience of standing orders, or of the orders of an officer when the offense is not chargeable under a specific article; allowing a soldier to go on duty knowing him to be drunk; rendering himself unfit for duty by excessive use of intoxicants; drunkenness.

Instances of such disorders and neglects in the cases of enlisted men are: Failing to appear on duty with a proper uniform; appearing with dirty clothing; malingering; abusing public animals; refusing to submit to treatment necessary to render him fit for duty; refusing to submit to a necessary and proper operation not endangering life (see G. O. 43, W. D., 1906); careless discharge of firearms; personating an officer; making false statements to an officer in regard to matters of duty.

PROOF.

(a) That the accused did or failed to do the acts alleged.

(b) The circumstances, intent, etc., as specified.

II. CONDUCT OF A NATURE TO BRING DISCREDIT UPON THE MILITARY SERVICE.

"Discredit," as here used, means to injure the reputation of.

The principal object of including this phrase in the general article was to make military offenses those acts or omissions of retired soldiers which were not elsewhere made punishable by the Articles of War but which are of a nature to bring discredit on the service, such as a failure to pay debts.

There is, however, a limited field for the application of this part of the general article to soldiers on the active list in cases where their discreditable conduct is not made punishable by any specific article or by the other parts of the general article.

PROOF.

- (a) That the accused did or failed to do the acts alleged.
- (b) The circumstances, intent, etc., as specified.

III. CRIMES OR OFFENSES NOT CAPITAL.

The crimes referred to in A. W. 96 manifestly embrace those not capital committed in violation of public law as enforced by the civil power. (U. S. v. Grafton, 206 U. S., 348.)

All crimes or offenses wherever committed that are not made punishable by death are included, except such as are specifically included in some other article and (in view of the ninety-second article) except murder or rape committed in time of peace within the geographical limits of the States of the Union and the District of Columbia.

Within this description would be a noncapital crime which, although designated by the laws of the jurisdiction where committed with one of the names used, for instance, in the ninety-third article, is not within the common-law definition of the offense.

Thus section 90 of the Federal Penal Code of 1910 provides that a failure by an officer to render accounts for public money received by him unless authorized to retain it as salary, pay, or emolument is an embezzlement of such funds. Such an embezzlement not being within the definition of embezzlement as the term is used in the ninety-third and ninety-fourth articles would be chargeable under the general article.

The elements of some of the more common crimes that are chargeable under this article will now be discussed.

(1) Assault.

(2) Assault and battery. See matter under heading "IX" under ninety-third article.

A battery is any unlawful touching or injury, however slight, to the person of another directly or indirectly done in an angry, revengeful, rude or insolent manner. Throwing water or spitting in a person's face is a battery. So, merely taking hold of another's clothing, or pushing another against him, or striking a horse on which he is riding causing him to be thrown; striking his cane while in his hand, is a battery when done unlawfully and in the manner described.

If the injury is accidentally inflicted in doing a lawful act without culpable negligence the offense is not committed; but where personal injury results from the reckless doing of an act likely to result in such injury, the offense is committed.

It is no defense that the injury took place on a person for which it was not intended, or that the injury was not the immediate result of the defendant's acts. Thus, if a person throws a firecracker in a crowd where it is tossed from hand to hand and finally explodes and puts out a man's eye, the offense is committed.

(3) Assault with a dangerous weapon, instrument, or other thing. See matter under heading "IX," under ninety-third article.

Weapons, etc., are dangerous when they are used in such manner that they are likely to produce death or great bodily harm. Mere capability of being so used is not enough.

Boiling water may be so used as to be a dangerous thing, and a pistol may be so used as not to be a dangerous weapon.

(4) Forgery. At common law "forgery is the fraudulent making of a false writing which, if genuine, would be apparently of some legal efficacy." (Bishop, vol. 2, p. 301.)

Some of the instruments that are subjects of forgery are checks, indorsements, orders for the delivery of money or goods, railroad tickets, and receipts.

A false writing includes a false instrument that is in part or entirely printed, engraved, written with a pencil, or made by photography or other device.

A false writing may be made by materially altering an existing writing, by filling in a paper signed in blank, or by signing an instrument already written.

The writing must be false—must purport to be what it is not.

Thus, signing another's name to a check with intent to defraud is forgery, as the instrument purports on its face to be what it is not. But where, after the false signature of such person is added the word *by* and the signature of the person making the check, thus indicating an authority to sign, the offense is not forgery even if no such authority exists, as the check on its face is what it purports to be.

Forgery may be committed by signing one's own name to an instrument. Thus, where a check payable to the order of a certain person comes into the hands of another of the same name, he commits forgery, when, knowing the check to be another's, he indorses it with his own name, intending to defraud.

Forgery may also be committed by signing a fictitious name, as where a person signs a check payable to himself with a fictitious name; but when he passes a check signed by him with a fictitious name, credit being extended to him without regard to his name, forgery is not committed.

To constitute a forgery the instrument must have apparent legal efficacy. The fraudulent making of an instrument affirmatively invalid on its face is not a forgery. But this requirement does not ordinarily prevent the fraudulent making of a signature on a check, for instance, from being a forgery even if there be no resemblance to the genuine signature and the name is misspelled.

The false writing must be made with intent to defraud. A person who signs another's name to an instrument believing that he has authority to do so does not commit a forgery.

It is immaterial, however, that anyone be actually defrauded or that no further step be made toward carrying out the intent to defraud than the making of the false writing.

(5) Sodomy. See assault with intent to commit sodomy under heading "IX," under ninety-third article.

PROOF.

Crimes in general:

(a) That the accused did or failed to do the acts alleged.

(b) The circumstances, intent, etc., as specified.

(1) Assault:

(a) That the accused did the overt act alleged.

(b) The facts and circumstances of the case indicating either that such an act was an actual attempt with force and violence to do a corporal hurt to a certain person or that such act was apparently such an attempt and conveyed to the mind of the person set upon a well-grounded apprehension of such injury.

(2) Assault and battery:

(a) That the accused assaulted a certain person, as alleged.

(b) That an injury resulted to such person, as specified.

(3) Assault with a dangerous weapon, instrument, or other thing:

(a) That the accused assaulted a certain person with a certain weapon, instrument, or thing.

(b) That facts and circumstances of the case indicating that such weapon, instrument, or thing was used in a manner likely to produce death or great bodily harm.

(4) Forgery:

(a) That a certain instrument was made. (The instrument itself should be produced, if available.)

(b) That such instrument is a forgery.

(c) That the accused forged it.

(d) The facts and circumstances of the case indicating the intent of the accused thereby to defraud a certain person.

(5) Sodomy:

See proof under heading "IX," under ninety-third article.

CHAPTER XVIII. COURTS OF INQUIRY.

SECTION I.

CONSTITUTION.

447. When and by Whom Ordered. A court of inquiry to examine into the nature of any transaction of or accusation or imputation against any officer or soldier may be ordered by the President or by any commanding officer, but a court of inquiry shall not be ordered by any commanding officer except upon the request of the officer or soldier whose conduct is to be inquired into. (A. W. 97.)

448. Limitation Upon Power to Convene. There is no statutory restriction to the meaning of the term "commanding officer," consequently any commander of the officer or soldier who makes the request would have authority to convene the court, but if the charge to be inquired into is beyond the jurisdiction of a court-martial which such commander can appoint, he would not, by analogies of the service in the administration of military justice, be the proper convening authority in such case. (Op. J. A. G., approved by Secretary of War, Sept. 19, 1874.)

449. Discretion as to Ordering Court. Neither the President nor a commanding officer is obliged to order a court of inquiry on demand of an officer or soldier. Where the facts are thoroughly understood by the authority who is requested to order a court of inquiry or can be satisfactorily ascertained by an investigating officer, the commanding officer may, in his discretion, refuse the application; but in the event of such refusal the party, if not satisfied, may appeal to higher authority. (Winthrop, p. 805.)

SECTION II.

JURISDICTION.

450. As to Persons. A court of inquiry may examine into the conduct of officers or soldiers only (A. W. 97), and the inquiry is confined to those actually in the service. (Digest, p. 586, XVIII, B.)

451. As to Time. The statute of limitations (A. W. 39) does not apply to courts of inquiry. There is no legal objection therefore to investigating transactions that are remote in time.

452. As to Subject Matter. The inquiry is limited to transactions of or accusations or imputations against officers or soldiers. (A. W. 97.) The principal uses which courts of inquiry are expected to serve are: (a) For determining whether there should be a trial by court-martial in a particular instance; (b) for informing and advising superior authority in cases which appear not to call for trial by court-martial, but for some other military or administrative action; and (c) for the vindication of character or conduct. (Winthrop, p. 805.)

SECTION III. COMPOSITION.

453. Members. A court of inquiry shall consist of three or more officers. (A. W. 98.) The Secretary of War may assign retired officers, with their consent, upon courts of inquiry. (Act of Apr. 23, 1904.) In time of war retired officers may be employed on active duty in the discretion of the President. (Act of June 3, 1916.)

454. Recorder. For each court of inquiry the authority appointing the court shall appoint a recorder. (A. W. 98.) The recorder is not an adviser of the court nor a prosecutor before it, but will assist the court, if it so desires, in all matters leading to correct conclusions of fact and law.

455. Convening Order. The form of the convening order is similar to that for a court-martial. It details the members and recorder by name, fixes the time and place of meeting, specifies the subject matter of inquiry, and directs a report of the facts only, or of the facts with an opinion on the merits of the case.

456. Rank of Members. There is no statute prescribing the rank of members, but when it can be avoided they should not be inferior in rank to the officer whose conduct is being inquired into. The decision of the appointing authority, as indicated by the order convening the court, is conclusive as to whether or not it can be avoided.

457. Reporter and Interpreter. The president of a court of inquiry has the same power to appoint reporters and interpreters as is delegated to the president of a court-martial. (A. W. 115.) They are usually paid at the rates fixed by Army regulations for those of courts-martial. (A. R. 986-988.) An enlisted man may be detailed to serve as stenographic reporter and will receive extra pay as provided in A. R. 986.

SECTION IV. POWERS.

458. To Summon and Examine Witnesses. A court of inquiry and the recorder thereof shall have the same power to summon and examine witnesses as is given to a court-martial and the judge advocate thereof. (A. W. 101.)

459. Refusal to Appear or Testify. Any person not subject to military law who, being duly subpoenaed to appear as a witness before a court of inquiry or before any officer, military or civil, designated to take a deposition to be read in evidence before such court, willfully neglects or refuses to appear, or refuses to qualify as a witness, or to testify, or to produce documentary evidence which such person may have been legally subpoenaed to produce, shall be deemed guilty of a misdemeanor and punished as in like offenses with respect to courts-martial. (A. W. 23.)

460. Contempt. A court of inquiry has no authority to punish for contempt, but any conduct before it to the prejudice of good order and military discipline by persons subject to military law may be made the subject of charges against the offender.

SECTION V.

PROCEDURE.

461. General Principles. A court of inquiry is governed by the general principles of military law, applying the analogies of a court-martial where they are applicable, and recurring to adjudged cases, precedents, rules, authoritative legal opinions, and approved books of legal exposition where there is no pertinent paramount stated rule. (28 Op. Atty. Gen., 364.) A court of inquiry is not really a court in the legal sense of the term, for no criminal issue is formed before it, it arraigns no accused, receives no plea, makes no findings of guilt or innocence, awards no punishment, and expresses no opinion unless specially ordered to do so.

462. Presence of Party Whose Conduct is Being Investigated. The presence of the party whose conduct is being investigated is not essential and his absence does not affect the authority of the court to proceed with the hearing.

463. Counsel. The party whose conduct is being inquired into shall have the right to be represented before the court by counsel of his own selection, if such counsel be reasonably available. (A. W. 99.) So also the accuser, where there is one, should usually be allowed to be present with counsel, and a similar privilege may properly be extended to any officer who will be materially involved in the inquiry. (Winthrop, p. 812.)

464. Challenge. Members of a court of inquiry may be challenged by the party whose conduct is being inquired into, but only for cause stated to the court. The court shall determine the relevancy and validity of any challenge, and shall not receive a challenge to more than one member at a time. (A. W. 99.)

465. Reduced Numbers. Where the number of members is reduced by casualty or challenge, the court may proceed with the reduced number, if not below the minimum, but the appointing authority should be notified in order that he may detail new members if he desires to do so. If any testimony has been taken before a new member is added, it should be read to him in the presence of the other members. In the absence of the recorder the junior member can not act as recorder. The proper procedure is to notify the convening authority and adjourn to await the appointment of another recorder.

466. Oaths. The recorder of a court of inquiry shall administer to the members the following oath:

You, A. B., do swear (or affirm) that you will well and truly examine and inquire, according to the evidence, into the matter now before you, without partiality, favor, affection, prejudice, or hope of reward. So help you God.

After which the president of the court shall administer to the recorder the following oath:

You, A. B., do swear (or affirm) that you will, according to your best abilities, accurately and impartially record the proceedings of the court and the evidence to be given in the case in hearing. So help you God.

In case of affirmation the closing sentence of adjuration will be omitted. (A. W. 100.)

Witnesses shall take the same oath or affirmation that is taken by witnesses before courts-martial, and a reporter or interpreter shall, before entering upon his duties, take the oath or affirmation required of a reporter or an interpreter for a court-martial. (A. W. 101.)

467. Examination of Witnesses. The examination of witnesses may be by the court, by a member thereof, or by the recorder, in the discretion of the court. The party whose conduct is being inquired into or his counsel, if any, shall be permitted to examine and cross-examine witnesses so as fully to investigate

the circumstances in question. (A. W. 101.) A witness may not be compelled to answer any question which would tend to incriminate or degrade him. (A. W. 24.)

468. Depositions. Depositions to be read in evidence before courts of inquiry are taken and admitted in evidence under the same rules governing their taking and admissibility in evidence before courts-martial. (A. W. 25, 26.)

469. Conclusions. The court must, as a finding, give its conclusions as to the facts, and, when ordered, must also give an opinion on the merits of the case. The conclusions or opinion may not be unanimous, in which case a dissenting conclusion or opinion is authorized.

470. Obligation of Secrecy. The oath of members of a court of inquiry, unlike that of members of a court-martial, does not enjoin upon them secrecy as to the votes and opinions of members, but under the custom of the service it would be conduct prejudicial to discipline to divulge the recommendation or opinion of the court until announced by the appointing authority, or to disclose the vote or opinion of a member unless legally required to do so.

471. Revision by Court. If not satisfied with the investigation, or with the report or opinion, the reviewing authority may reassemble the court, in the same manner as a court-martial, and return the proceedings with direction either to have the investigation pursued further and completed, or the report of the facts made more detailed and comprehensive, or the opinion expressed in terms more definite and unequivocal or more responsive to the original instructions, or to correct or supply some other error or defect. The inquiry not being a trial but an investigation merely, the court may properly be required, upon revision, to re-examine witnesses or to take entirely new testimony, or it may do so of its own motion without orders in connection with the revision. (Winthrop, p. 819.)

472. Publication of Proceedings. The reviewing authority, having taken final action upon the report or opinion, may publish in orders, in whole or in part, or in substance, the report of the court upon the subject of the inquiry, with the opinion, if any, and the determination had or action taken thereon. Upon considerations, however, of policy or justice, the President or commander may, in his discretion, delay the publication, or omit altogether the publication of, the report, etc., or may publish the result alone, as, for example, that it is determined that no further proceedings are called for in the case.

SECTION VI.

RECORD.

473. How Authenticated. Each court of inquiry shall keep a record of its proceedings, which shall be authenticated by the signature of the president and the recorder thereof. In case the record can not be authenticated by the recorder, by reason of his death, disability, or absence, it shall be signed by the president and by one other member of the court. (A. W. 103.)

474. Disposition Of. The record shall be forwarded to the reviewing authority. (A. W. 103.) Should the court be appointed by the President the proceedings will be sent direct to the Judge Advocate General of the Army. To his office will be forwarded the original proceedings of all courts of inquiry with the decisions and orders of the reviewing authority made thereon, accompanied by five copies of the order publishing the case, if there be any, also a copy of every subsequent order affecting the case. When more than one case is embraced in a single order, a sufficient number of copies will be forwarded to enable one to be filed with each record. (A. R. 917.)

475. Admissible in Evidence. The record of the proceedings of a court of

inquiry may be read in evidence before any court-martial or military commission in any case not capital nor extending to the dismissal of an officer, and may also be read in evidence in any proceeding before a court of inquiry or a military board: Provided, That such evidence may be adduced by the defense in capital cases or cases extending to the dismissal of an officer. (A. W. 27. See par. 272.)

CHAPTER XIX. HABEAS CORPUS.

SECTION I.

PURPOSE OF WRIT.

476. To Determine Legality of Restraint. The purpose of the writ of habeas corpus is to bring the person seeking the benefit of it before the court or judge to determine whether or not he is illegally restrained of his liberty. It is a summary remedy for unlawful restraint of liberty and it can not be made use of to perform the function of a writ of error or an appeal. Where it is decided that the restraint is unlawful he is ordered released, but if the restraint is lawful the writ is dismissed. If the restraint be by virtue of legal process, the validity and present force of such process are the only subjects of investigation.

SECTION II.

WHERE RESTRAINT IS BY THE UNITED STATES.

477. State Court Without Authority. A State court is without authority to inquire into the legality of the restraint where it appears that the custody is by virtue "of the authority of the United States," the principle being that no State can authorize one of its judges or courts to exercise judicial power, by habeas corpus, within the jurisdiction of another and independent government. No State judge or court, after they are judicially informed that the party is held under the authority of the United States, has any right to interfere with him or to require him to be brought before them. (*Robb v. Connolly*, 111 U. S., 624, 632; *Ableman v. Booth*, 21 How., 506, 514; *Tarble's case*, 13 Wall., 397, 409.) If a party thus held be illegally imprisoned, it is for the courts or judicial officers of the United States, and those courts or officers alone, to grant him release. (*Tarble's case*, 13 Wall., 397, 411.)

SECTION III.

RETURN TO WRIT ISSUED BY STATE COURT.

478. To Show Authority for Restraint. The return should be sufficient in its detail of facts to show distinctly that the imprisonment is under the authority, or claim and color of the authority, of the United States and to exclude the suspicion of imposition or oppression on the part of the officer making the return. The process or orders under which the petitioner is held should be produced with the return and submitted to inspection in order that the court or the judge issuing the writ may see that the officer is acting in good faith, under the authority or claim and color of authority of the United States, and not under the mere pretense of having such authority. (*Tarble's case*, 13 Wall., 397, 409; *Covell v. Heyman*, 111 U. S., 176, 183.)

(a) **Witness Held Under Warrant of Attachment.** Where the petitioner is a civilian who has been apprehended under a warrant of attachment to be taken before a court-martial to testify as a witness, the officer making the return to

the writ issued by a State court or judge will not produce the body, but will, by his return, set forth fully the authority by which he holds the person and allege that the State court, or judge, issuing the writ is without jurisdiction to issue the same and ask to have it dismissed. He will exhibit to the court or judge issuing the writ of habeas corpus the warrant of attachment and the subpoena (and the proof of service of the subpoena) on which the warrant of attachment was based, and also a certified copy of the order convening the court-martial before which the witness was subpoenaed to testify, together with a copy of the charges and specifications in the case in which he was subpoenaed to testify, and an affidavit showing that the witness has failed to appear in response to such subpoena.

[Note: See A. R. 997. For form of return, see Form B, Appendix 15.]

(b) **Enlisted Man or General Prisoner.** The return to a writ of habeas corpus issued by a State court or judge to produce an enlisted man or a general prisoner and show cause for his detention will show in writing that the subject of the writ is a duly enlisted soldier of the United States or a general prisoner, as the case may be, and set forth fully the cause of his detention, but the officer making the return will decline to produce in court the body of the prisoner named in the writ, giving as a reason for such refusal the fact that the Supreme Court of the United States has decided that a State court or judge has no jurisdiction in such a case.

[Note: See A. R. 998. For form of return, see Form D, Appendix 15. A deserter apprehended by a civil officer authorized by a statute of the United States to apprehend deserters is in the custody of the United States. See U. S. v. Reeves, 126 Fed. Rep., 127.]

SECTION IV.

RETURN TO WRIT ISSUED BY A UNITED STATES COURT.

479. Contents. A writ of habeas corpus issued by a United States court or judge will be promptly obeyed. The person alleged to be illegally restrained of his liberty will be taken before the court from which the writ has issued and a return made, setting forth the reasons for his restraint. The officer upon whom such writ is served will at once report the fact of such service by telegraph direct to The Adjutant General of the Army and the commanding general of the department, stating briefly the grounds on which the release of the party is sought.

[Note: See A. R. 999. For form where a civilian witness is held under warrant of attachment, see Form A, Appendix 15. For form where an enlisted man or general prisoner is held, see Form C, Appendix 15. For brief of authorities when writ is applied for on grounds of age, see Appendix 15.]

SECTION V.

WRIT ISSUED IN THE PHILIPPINE ISLANDS.

480. When Return Conclusive. It shall be a conclusive answer to a writ of habeas corpus against a military officer or soldier and a sufficient excuse for not producing the prisoner if the commanding general or any general officer in command of the department or district shall certify that the prisoner is held by him either—

- (a) As a prisoner of war; or
- (b) As a member of the Army, civilian employee thereof, or a camp follower and subject to its discipline; or
- (c) As a prisoner guilty of violation of the laws of war committed in any

unpacified province or territory and who has escaped into provinces officially declared to be under civil control and has been there captured by military authorities and is held for trial for such violations of the laws of war.

[Note: Sec. 1, Act. No. 272, Philippine Commission, Oct. 21, 1901, and sec. 4, Act. No. 421, id., June 23, 1902. Respectful return in writing will be made in the case of prisoners who may be exempted from jurisdiction by the provisions of these acts stating the facts of the case, but the body of the prisoner will not be produced. In all other cases the return will be made and the body produced before the proper tribunal.]

CHAPTER XX.

MISCELLANEOUS AND TRANSITORY PROVISIONS.

SECTION I.

MISCELLANEOUS PROVISIONS.

481. Injuries to Persons or Property—Redress. Article 105 imposes upon a commanding officer, upon receipt of a complaint that damage has been done to the property of any person, or that his property has been wrongfully taken, by any person subject to military law, the duty to convene a board of officers consisting of any number from one to three to investigate the complaint. The article provides the administrative machinery by which money reparation for acts of waste, spoil, destruction, or depredation, denounced in A. W. 89 as offenses, shall be made effective. The complaint will more properly be made in writing by the injured party or his representative, and should set forth the details of the injury and be sustained by evidence showing it to be meritorious and well founded; and this evidence may also properly be required to be exhibited in the form of affidavits or written statements. It is competent, however, for a commanding officer, apprised by the report of any person in the military service, or by the oral complaint of the party injured, of any such damage, to proceed with the investigation as here outlined in case of written complaint submitted by or in behalf of the party injured and supported by affidavits or written statement. The board will be convened with the least practicable delay, is empowered to summon witnesses, examine them under oath or affirmation, receive depositions or other documentary evidence, and assess the damages against the person or persons determined to be responsible for the damage or wrongful taking. The board's assessment of damages is subject to the approval of the commanding officer and an assessment thus approved will be stopped against the pay of the offender. The order of the commanding officer directing stoppages authorized by the article is conclusive on any disbursing officer for the payment by him to the injured party of the stoppages.

The occasions for resorting to the procedure under this article are more frequent in a period pending or immediately succeeding a time of war, or during field operations and maneuvers. As the absolute identity of the guilty parties can not always be determined, the article further provides that in such a case, and when the organization or detachment to which they belong is known, stoppages to the amount of damages inflicted may be made and assessed in such proportion as may be deemed just upon the individual members thereof who are shown to have been present with such organization or detachment at the time the damages complained of were inflicted, as determined by the approved findings of the board.

The guilty parties may be tried and punished for the military offense involved

in his and their act under A. W. 89, quite irrespectively of any proceeding for the reparation of the parties injured had under this article. A trial, however, will preferably be first ordered, since, if reparation be subsequently sought to be made, the commander and the board will have the benefit of any material facts developed upon the original investigation. So, if the accused be acquitted, such acquittal will furnish persuasive but not necessarily conclusive ground for not favorably entertaining the complaint or for reducing the amount to be assessed.

482. Effects of Deceased Persons—Disposition. In case of the death of any person subject to military law, the commanding officer of the place or command will permit the legal representative or widow of the deceased, if present, to take possession of all his effects then in camp or quarters, and if no legal representative or widow be present the commanding officer shall direct a summary court to secure all such effects; and said summary court shall have authority to convert such effects into cash, by public or private sale, not earlier than 30 days after the death of the deceased, and to collect and receive any debts due decedent's estate by local debtors; and as soon as practicable after converting such effects into cash said summary court shall deposit with the proper officer, to be designated in regulations, any cash belonging to decedent's estate, and shall transmit a receipt for such deposit, accompanied by any will or other papers of value belonging to the deceased, an inventory of the effects secured by said summary court, and a full account of his transactions to the War Department for action as authorized by law in the settlement of the accounts of deceased officers or enlisted men of the Army; but if in the meantime the legal representative, or widow, shall present himself or herself to take possession of decedent's estate, the said summary court shall turn over to him or her all effects not sold and cash belonging to said estate, together with an inventory and account, and make to the War Department a full report of his transactions.

The provisions of this article shall be applicable to inmates of the United States Soldiers' Home who die in any United States military hospital outside of the District of Columbia where sent from the home for treatment. (A. W. 112.)

483. Inquests. Article 113 imposes upon the summary court-martial the principal duties of the office of coroner at common law, viz., to investigate the cause of sudden, violent, and unnatural deaths. When a person is found dead at a place described in the article, and there is reasonable belief that his death has occurred from violence or other unlawful means, the commanding officer will immediately designate and direct a summary court-martial to investigate the circumstances of the death, to the end that the cause thereof may be determined and the persons criminally responsible therefor may be brought to justice. The summary court-martial will with the least practicable delay view the body of the deceased and summon and examine, under oath or affirmation, such witnesses as may have knowledge of the cause and circumstances of the death. The summary court-martial should warn every person testifying at the inquest who is accused or suspected that he is not required to give evidence incriminating himself, and that any statement or evidence he gives may be used against him in the event of any further proceedings being instituted. If expert medical testimony is necessary, the commanding officer will, at the request of the summary court-martial, direct a medical officer to make such examination of the body of the deceased as may be necessary and to appear as a witness at the inquest. The testimony of each witness will be reduced to writing, and will, except when stenographically reported, be subscribed by him, and will be appended to the report of the inquest.

If the body of the deceased shows wounds or bruises such as to indicate or

create suspicion that he came to his death by violent means, it shall be the duty of the summary court-martial to ascertain with as much exactness as possible the precise nature of the wounds or blows and the character of the instrument by which the wounds were inflicted; the person or persons by whom the fatal blow or blows were dealt; if there were any aiders or abettors; and such other particulars as may afford the means of drawing up, with the precision required by law, the necessary charges and specifications against the person or persons accused of the homicide.

The summary court officer will render a written report of his investigation to the commanding officer, which report will state his finding as to the cause of the death and the names of the persons criminally responsible therefor, if in his opinion there be any such. Such persons, though not subject to military law, may, if found at any post over which the United States has exclusive jurisdiction, be confined by the commanding officer for such time as may be necessary for their delivery to the civil authorities. If such persons are subject to military law and appear to be guilty of an offense not triable by court-martial, they will be confined by the commanding officer, who will immediately furnish the proper United States district attorney with a copy of the findings of the summary court officer.

If the person over whose body the inquest is held is not identified as an officer or soldier, the report of the summary court-martial shall give a description of the deceased, which shall specify the name, if known, the apparent age, the sex, the color of the eyes and hair, and all marks or other particulars which may assist in the identification of the person.

[Note: For form of report of inquest see Appendix 19.]

484. Removal of Civil Suits. When any civil suit or criminal prosecution is commenced in any court of a State against any officer, soldier, or other person in the military service of the United States on account of any act done under color of his office or status, or in respect to which he claims any right, title, or authority under any law of the United States respecting the military forces thereof, or under the law of war, such suit or prosecution may at any time before the trial or final hearing thereof be removed for trial into the district court of the United States in the district where the same is pending in the manner prescribed in section 33 of the act entitled "An Act to codify, revise, and amend the laws relating to the judiciary," approved March 3, 1911 (36 Stat., 1097), and the cause shall thereupon be entered on the docket of said district court and shall proceed therein as if the cause had been originally commenced in said district court and the same proceedings had been taken in such suit or prosecution in said district court as shall have been had therein in said State court prior to its removal, and said district court shall have full power to hear and determine said cause. (A. W. 117.)

485. Complaints of Wrongs. Any officer or soldier who believes himself wronged by his commanding officer, and, upon due application to such commander, is refused redress, may complain to the general commanding in the locality where the officer against whom the complaint is made is stationed. The general shall examine into said complaint and take proper measures for redressing the wrong complained of; and he shall, as soon as possible, transmit to the Department of War a true statement of such complaint, with the proceedings had thereon. (A. W. 121.)

486. Articles of War—When Effective. Section 3 of the Act of Congress entitled "An Act making appropriations for the support of the Army for the fiscal year ending June 30, 1917, and for other purposes," approved August 29, 1916 (39 Stat., 650-670), amends section 1342, Revised Statutes of the United States, and contains the Articles of War. It is provided by section 4 of the act

cited that the Articles of War will be in force and effect on and after March 1, 1917, except that articles 4, 13, 14, 15, 29, 47, 49, and 92 became effective upon the approval of the act, August 29, 1916.

SECTION II. TRANSITORY PROVISION.

487. Prior Offenses Subject to Previous Laws. It is provided by section 5 of the act of Congress entitled "An Act making appropriations for the support of the Army for the fiscal year ending June 30, 1917, and for other purposes," approved August 29, 1916 (39 Stat., 670), that all offenses committed and all penalties, forfeitures, fines, or liabilities incurred prior to the taking effect of that act under any law embraced in or modified, changed, or repealed by that act may be prosecuted, punished, and enforced in the same manner and with the same effect as if that act had not been passed.

APPENDIX I. THE ARTICLES OF WAR.

TABLE SHOWING NUMBERS OF OLD ARTICLES AND OF
CORRESPONDING NEW ARTICLES.

OLD AND NEW CODES.

| Old number. | New number. | Old number. | New number. | Old number. | New number. | Old number. | New number. |
|-------------|-------------|-------------|-------------|-----------------|-------------|-------------|-------------|
| 1 | ..... | 32 | 61 | 63 | 2 | 96 | 43 |
| 2 | 109, 110 | 33 | 61 | 64 | 2 | 97 | 42 |
| 3 | 55 | 34 | 61 | 65 | 69 | 98 | 41 |
| 4 | 108 | 35 | 61 | 66 | 69 | 99 | 118 |
| 5 | 56 | 36 | ..... | 67 | 71 | 100 | 44 |
| 6 | 56 | 37 | ..... | 68 | 72 | 101 | ..... |
| 7 | 57 | 38 | 41, 85 | 69 | 73 | 102 | 40 |
| 8 | 57 | 39 | 86 | 70 | 70 | 103 | 39 |
| 9 | 79 | 40 | 61 | 71 | 70 | 104 | 46 |
| 10 | ..... | 41 | 75 | 72 ¹ | 8 | 105 | 48 |
| 11 | ..... | 42 | 75 | 73 ¹ | 8 | 106 | 48 |
| 12 | 56 | 43 | 76 | 74 | 11 | 107 | 48 |
| 13 | 56 | 44 | 77 | 75 ¹ | 5 | 108 | 48 |
| 14 | 56 | 45 | 81 | 76 | ..... | 109 | 46 |
| 15 | 83 | 46 | 81 | 77 | 4 | 111 | 51 |
| 16 | 84 | 47 | 58 | 78 | ..... | 112 | 50 |
| 17 | 84 | 48 | 107 | 79 | 16 | 113 | 35 |
| 18 | 87 | 49 | 28 | 81 ¹ | 6, 9, 13 | 114 | 111 |
| 19 | 62 | 50 | 29, 60 | 82 ¹ | 6, 9, 13 | 115 | 97 |
| 20 | 63 | 51 | 59 | 83 ¹ | 13, 14 | 116 | 98 |
| 21 | 64 | 52 | ..... | 84 | 19 | 117 | 100 |
| 22 | 66 | 53 | ..... | 85 | 19 | 118 | 101 |
| 23 | 67 | 54 | 89, 105 | 86 | 32 | 119 | 102 |
| 24 | 68 | 55 | 89, 105 | 87 | ..... | 120 | 103 |
| 25 | 90 | 56 | 88 | 88 | 18 | 121 | 27 |
| 26 | 91 | 57 | 78 | 89 | 21 | 122 | 120 |
| 27 | 91 | 58 | 92, 93 | 90 | 17 | 124 | 119 |
| 28 | 91 | 59 | 91 | 91 | 25 | 125 | 112 |
| 29 | 121 | 60 | 2, 94 | 92 | 19 | 126 | 112 |
| 30 | 121 | 61 | 93, 95 | 93 | 20, 70 | 127 | 112 |
| 31 | 61 | 62 | 93, 96 | 95 | 31 | 128 | 110 |

¹Old articles 72, 73, 75, 81, 82, and 83 were replaced by the act of March 2, 1913 (37 Stat., 723), effective July 1, 1913.

[Note: Except as otherwise specified herein this code becomes effective on March 1, 1917.]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

* * * * *

Sec. 3. That section thirteen hundred and forty-two of the Revised Statutes of the United States be, and the same is hereby, amended to read as follows:

"Sec. 1342. The articles included in this section shall be known as the Articles of War and shall at all times and in all places govern the armies of the United States.

"I. PRELIMINARY PROVISIONS.

"Article 1. Definitions. The following words when used in these articles shall be construed in the sense indicated in this Article, unless the context shows that a different sense is intended, namely:

"(a) The word 'officer' shall be construed to refer to a commissioned officer;

"(b) The word 'soldier' shall be construed as including a noncommissioned officer, a private, or any other enlisted man;

"(c) The word 'company' shall be understood as including a troop or battery; and

"(d) The word 'battalion' shall be understood as including a squadron.

"Art. 2. Persons Subject to Military Law. The following persons are subject to these articles and shall be understood as included in the term 'any person subject to military law,' or 'persons subject to military law,' whenever used in these articles: Provided, That nothing contained in this Act, except as specifically provided in Article two, subparagraph (c), shall be construed to apply to any person under the United States naval jurisdiction, unless otherwise specifically provided by law.

"(a) All officers and soldiers belonging to the Regular Army of the United States; all volunteers, from the dates of their muster or acceptance into the military service of the United States; and all other persons lawfully called, drafted or ordered into, or to duty or for training in, the said service, from the dates they are required by the terms of the call, draft or order to obey the same;

"(b) Cadets;

"(c) Officers and soldiers of the Marine Corps when detached for service with the armies of the United States by order of the President: Provided, That an officer or soldier of the Marine Corps when so detached may be tried by military court-martial for an offense committed against the laws for the government of the naval service prior to his detachment, and for an offense committed against these articles he may be tried by a naval court-martial after such detachment ceases;

"(d) All retainers to the camp and all persons accompanying or serving with the armies of the United States without the territorial jurisdiction of the United States, and in time of war all such retainers and persons accompanying or serving with the armies of the United States in the field, both within and without the territorial jurisdiction of the United States, though not otherwise subject to these articles;

"(e) All persons under sentence adjudged by courts-martial;

"(f) All persons admitted into the Regular Army Soldiers' Home at Washington, District of Columbia.

"II. COURTS-MARTIAL.

"Art. 3. Courts-martial Classified. Courts-martial shall be of three kinds, namely:

"First, general courts-martial;

"Second, special courts-martial; and

"Third, summary courts-martial.

"A. COMPOSITION.

"Art. 4. Who May Serve on Courts-martial. All officers in the military service of the United States, and officers of the Marine Corps when detached for service with the Army by order of the President, shall be competent to serve on courts-martial for the trial of any persons who may lawfully be brought before such courts for trial.

[Note: This article became effective on August 29, 1916.]

"Art. 5. General Courts-martial. General courts-martial may consist of any number of officers from five to thirteen, inclusive; but they shall not consist of less than thirteen, when that number can be convened without manifest injury to the service.

"Art. 6. Special Courts-martial. Special courts-martial may consist of any number of officers from three to five, inclusive.

"Art. 7. Summary Courts-martial. A summary court-martial shall consist of one officer.

"B. BY WHOM APPOINTED.

"Art. 8. General Courts-martial. The President of the United States, the commanding officer of a territorial division or department, the Superintendent of the Military Academy, the commanding officer of an army, an army corps, a division, or a separate brigade, and, when empowered by the President, the commanding officer of any district or of any force or body of troops may appoint general courts-martial; but when any such commander is the accuser or the prosecutor of the person or persons to be tried, the court shall be appointed by superior competent authority, and no officer shall be eligible to sit as a member of such court when he is the accuser or a witness for the prosecution.

"Art. 9. Special Courts-martial. The commanding officer of a district, garrison, fort, camp, or other place where troops are on duty, and the commanding officer of a brigade, regiment, detached battalion, or other detached command may appoint special courts-martial; but when any such commanding officer is the accuser or the prosecutor of the person or persons to be tried, the court shall be appointed by superior authority, and may in any case be appointed by superior authority when by the latter deemed desirable; and no officer shall be eligible to sit as a member of such court when he is the accuser or a witness for the prosecution.

"Art. 10. Summary Courts-martial. The commanding officer of a garrison, fort, camp, or other place where troops are on duty, and the commanding officer of a regiment, detached battalion, detached company, or other detachment may appoint summary courts-martial; but such summary courts-martial may in any case be appointed by superior authority when by the latter deemed desirable: Provided, That when but one officer is present with a command he shall be the summary court-martial of that command and shall hear and determine cases brought before him.

"Art. 11. Appointment of Judge Advocates. For each general or special court-martial the authority appointing the court shall appoint a judge advocate, and for each general court-martial one or more assistant judge advocates when necessary.

"C. JURISDICTION.

"Art. 12. General Courts-martial. General courts-martial shall have power to try any person subject to military law for any crime or offense made punishable by these articles and any other person who by the law of war is subject to trial by military tribunals: Provided, That no officer shall be brought

to trial before a general court-martial appointed by the Superintendent of the Military Academy.

"Art. 13. Special Courts-martial. Special courts-martial shall have power to try any person subject to military law, except an officer, for any crime or offense not capital made punishable by these articles: Provided, That the President may, by regulations, which he may modify from time to time, except from the jurisdiction of special courts-martial any class or classes of persons subject to military law.

"Special courts-martial shall not have power to adjudge dishonorable discharge, nor confinement in excess of six months, nor to adjudge forfeiture of more than six months' pay.

[Note: This article became effective on August 29, 1916.]

"Art. 14. Summary Courts-martial. Summary courts-martial shall have power to try any person subject to military law, except an officer, a cadet, or a soldier holding the privileges of a certificate of eligibility to promotion, for any crime or offense not capital made punishable by these articles: Provided, That noncommissioned officers shall not, if they object thereto, be brought to trial before a summary court-martial without the authority of the officer competent to bring them to trial before a general court-martial: Provided further, That the President may, by regulations, which he may modify from time to time, except from the jurisdiction of summary courts-martial any class or classes of persons subject to military law.

"Summary courts-martial shall not have power to adjudge confinement in excess of three months, nor to adjudge the forfeiture of more than three months' pay: Provided, That when the summary court officer is also the commanding officer no sentence of such summary court-martial adjudging confinement at hard labor or forfeiture of pay, or both, for a period in excess of one month shall be carried into execution until the same shall have been approved by superior authority.

[Note: This article became effective on August 29, 1916.]

"Art. 15. Not Exclusive. The provisions of these articles conferring jurisdiction upon courts-martial shall not be construed as depriving military commissions, provost courts, or other military tribunals of concurrent jurisdiction in respect of offenders or offenses that by the law of war may be lawfully triable by such military commissions, provost courts, or other military tribunals.

[Note: This article became effective on August 29, 1916.]

"Art. 16. Officers; How Triable. Officers shall be triable only by general courts-martial, and in no case shall an officer, when it can be avoided, be tried by officers inferior to him in rank.

"D. PROCEDURE.

"Art. 17. Judge Advocate to Prosecute. The judge advocate of a general or special court-martial shall prosecute in the name of the United States, and shall, under the direction of the court, prepare the record of its proceedings. The accused shall have the right to be represented before the court by counsel of his own selection for his defense, if such counsel be reasonably available, but should he, for any reason, be unrepresented by counsel, the judge advocate shall from time to time throughout the proceedings advise the accused of his legal rights.

"Art. 18. Challenges. Members of a general or special court-martial may be challenged by the accused, but only for cause stated to the court. The court shall determine the relevancy and validity thereof, and shall not receive a challenge to more than one member at a time.

"Art. 19. Oaths. The judge advocate of a general or special court-martial shall administer to the members of the court, before they proceed upon any trial, the following oath or affirmation: 'You, A. B., do swear (or affirm) that you will well and truly try and determine, according to the evidence, the matter now before you, between the United States of America and the person to be tried, and that you will duly administer justice, without partiality, favor, or affection, according to the provisions of the rules and articles for the government of the armies of the United States, and if any doubt should arise, not explained by said articles, then according to your conscience, the best of your understanding, and the custom of war in like cases; and you do further swear (or affirm) that you will not divulge the findings or sentence of the court until they shall be published by the proper authority, except to the judge advocate and assistant judge advocate; neither will you disclose or discover the vote or opinion of any particular member of the court-martial, unless required to give evidence thereof as a witness by a court of justice in due course of law. So help you God.'

"When the oath or affirmation has been administered to the members of a general or special court-martial, the president of the court shall administer to the judge advocate and to each assistant judge advocate, if any, an oath or affirmation in the following form: 'You, A. B., do swear (or affirm) that you will not divulge the findings or sentence of the court to any but the proper authority until they shall be duly disclosed by the same. So help you God.'

"All persons who give evidence before a court-martial shall be examined on oath or affirmation in the following form: 'You swear (or affirm) that the evidence you shall give in the case now in hearing shall be the truth, the whole truth, and nothing but the truth. So help you God.'

"Every reporter of the proceedings of a court-martial shall, before entering upon his duties, make oath or affirmation in the following form: 'You swear (or affirm) that you will faithfully perform the duties of reporter to this court. So help you God.'

"Every interpreter in the trial of any case before a court-martial shall, before entering upon his duties, make oath or affirmation in the following form: 'You swear (or affirm) that you will truly interpret in the case now in hearing. So help you God.'

"In case of affirmation the closing sentence of adjuration will be omitted.

"Art. 20. Continuances. A court-martial may, for reasonable cause, grant a continuance to either party for such time and as often as may appear to be just.

"Art. 21. Refusal to Plead. When the accused, arraigned before a court-martial, from obstinacy and deliberate design stands mute or answers foreign to the purpose, the court may proceed to trial and judgment as if he had pleaded not guilty.

"Art. 22. Process to Obtain Witnesses. Every judge advocate of a general or special court-martial and every summary court-martial shall have power to issue the like process to compel witnesses to appear and testify which courts of the United States, having criminal jurisdiction, may lawfully issue; but such process shall run to any part of the United States, its Territories, and possessions.

"Art. 23. Refusal to Appear or Testify. Every person not subject to military law who, being duly subpoenaed to appear as a witness before any military court, commission, court of inquiry, or board, or before any officer, military or civil, designated to take a deposition to be read in evidence before such court, commission, court of inquiry, or board, willfully neglects or refuses to appear, or refuses to qualify as a witness, or to testify, or produce documentary evidence which such person may have been legally subpoenaed to produce,

shall be deemed guilty of a misdemeanor, for which such person shall be punished on information in the district court of the United States or in a court of original criminal jurisdiction in any of the territorial possessions of the United States, jurisdiction being hereby conferred upon such courts for such purpose; and it shall be the duty of the United States district attorney or the officer prosecuting for the Government in any such court of original criminal jurisdiction, on the certification of the facts to him by the military court, commission, court of inquiry, or board, to file an information against and prosecute the person so offending, and the punishment of such person, on conviction, shall be a fine of not more than \$500 or imprisonment not to exceed six months, or both, at the discretion of the court: Provided, That the fees of such witness and his mileage, at the rates allowed to witnesses attending the courts of the United States, shall be duly paid or tendered said witness, such amounts to be paid out of the appropriation for the compensation of witnesses.

"Art. 24. Compulsory Self-incrimination Prohibited. No witness before a military court, commission, court of inquiry, or board, or before any officer, military or civil, designated to take a deposition to be read in evidence before a military court, commission, court of inquiry, or board, shall be compelled to incriminate himself or to answer any questions which may tend to incriminate or degrade him.

"Art. 25. Depositions—When Admissible. A duly authenticated deposition taken upon reasonable notice to the opposite party may be read in evidence before any military court or commission in any case not capital, or in any proceeding before a court of inquiry or a military board, if such deposition be taken when the witness resides, is found, or is about to go beyond the State, Territory, or District in which the court, commission, or board is ordered to sit, or beyond the distance of one hundred miles from the place of trial or hearing, or when it appears to the satisfaction of the court, commission, board, or appointing authority that the witness, by reason of age, sickness, bodily infirmity, imprisonment, or other reasonable cause, is unable to appear and testify in person at the place of trial or hearing: Provided, That testimony by deposition may be adduced for the defense in capital cases.

"Art. 26. Depositions—Before Whom Taken. Depositions to be read in evidence before military courts, commissions, courts of inquiry, or military boards, or for other use in military administration, may be taken before and authenticated by any officer, military or civil, authorized by the laws of the United States or by the laws of the place where the deposition is taken to administer oaths.

"Art. 27. Courts of Inquiry—Records of When Admissible. The record of the proceedings of a court of inquiry may be read in evidence before any court-martial or military commission in any case not capital nor extending to the dismissal of an officer, and may also be read in evidence in any proceeding before a court of inquiry or a military board: Provided, That such evidence may be adduced by the defense in capital cases or cases extending to the dismissal of an officer.

"Art. 28. Resignation Without Acceptance Does Not Release Officer. Any officer who, having tendered his resignation and prior to due notice of the acceptance of the same, quits his post or proper duties without leave and with intent to absent himself permanently therefrom shall be deemed a deserter.

"Art. 29. Enlistment Without Discharge. Any soldier who, without having first received a regular discharge, again enlists in the Army, or in the militia when in the service of the United States, or in the Navy or Marine Corps of the United States, or in any foreign army, shall be deemed to have deserted the

service of the United States; and, where the enlistment is in one of the forces of the United States mentioned above, to have fraudulently enlisted therein.

[Note: This article became effective on August 29, 1916.]

"Art. 30. Closed Sessions. Whenever a general or special court-martial shall sit in closed session, the judge advocate and the assistant judge advocate, if any, shall withdraw; and when their legal advice or their assistance in referring to the recorded evidence is required, it shall be obtained in open court and in the presence of the accused and of his counsel if there be any.

"Art. 31. Order of Voting. Members of a general or special court-martial, in giving their votes, shall begin with the junior in rank.

"Art. 32. Contempts. A court-martial may punish at discretion, subject to the limitations contained in article fourteen, any person who uses any menacing words, signs, or gestures in its presence, or who disturbs its proceedings by any riot or disorder.

"Art. 33. Records—General Courts-martial. Each general court-martial shall keep a separate record of its proceedings in the trial of each case brought before it, and such record shall be authenticated by the signature of the president and the judge advocate; but in case the record can not be authenticated by the judge advocate, by reason of his death, disability, or absence, it shall be signed by the president and an assistant judge advocate, if any; and if there be no assistant judge advocate, or in case of his death, disability, or absence, then by the president and one other member of the court.

"Art. 34. Records—Special and Summary Courts-martial. Each special court-martial and each summary court-martial shall keep a record of its proceedings, separate for each case, which record shall contain such matter and be authenticated in such manner as may be required by regulations which the President may from time to time prescribe.

"Art. 35. Disposition of Records—General Courts-martial. The judge advocate of each general court-martial shall, with such expedition as circumstances may permit, forward to the appointing authority or to his successor in command the original record of the proceedings of such court in the trial of each case. All records of such proceedings shall, after having been finally acted upon, be transmitted to the Judge Advocate General of the Army.

"Art. 36. Disposition of Records—Special and Summary Courts-martial. After having been acted upon by the officer appointing the court, or by the officer commanding for the time being, the record of each trial by special court-martial and a report of each trial by summary court-martial shall be transmitted to such general headquarters as the President may designate in regulations, there to be filed in the office of the judge advocate. When no longer of use, records of special and summary courts-martial may be destroyed.

"Art. 37. Irregularities—Effect of. The proceedings of a court-martial shall not be held invalid, nor the findings or sentence disapproved, in any case on the ground of improper admission or rejection of evidence or for any error as to any matter of pleading or procedure unless in the opinion of the reviewing or confirming authority, after an examination of the entire proceedings, it shall appear that the error complained of has injuriously affected the substantial rights of an accused: Provided, That the act or omission upon which the accused has been tried constitutes an offense denounced and made punishable by one or more of these articles: Provided, further, That the omission of the words 'hard labor' in any sentence of a court-martial adjudging imprisonment or confinement shall not be construed as depriving the authorities executing such sentence of imprisonment or confinement of the power to require hard labor as a part of the punishment in any case where it is authorized by the Executive order prescribing maximum punishments.

"Art. 38. President May Prescribe Rules. The President may by regula-

tions, which he may modify from time to time, prescribe the procedure, including modes of proof, in cases before courts-martial, courts of inquiry, military commissions, and other military tribunals: Provided, That nothing contrary to or inconsistent with these articles shall be so prescribed: Provided further, That all rules made in pursuance of this article shall be laid before the Congress annually.

"E. LIMITATIONS UPON PROSECUTIONS.

"Art. 39. As to Time. Except for desertion committed in time of war, or for mutiny or murder, no person subject to military law shall be liable to be tried or punished by a court-martial for any crime or offense committed more than two years before the arraignment of such person: Provided, That for desertion in time of peace or for any crime or offense punishable under articles ninety-three and ninety-four of this code the period of limitations upon trial and punishment by court-martial shall be three years: Provided further, That the period of any absence of the accused from the jurisdiction of the United States, and also any period during which by reason of some manifest impediment the accused shall not have been amenable to military justice, shall be excluded in computing the aforesaid periods of limitation: And provided further, That this article shall not have the effect to authorize the trial or punishment for any crime or offense barred by the provisions of existing law.

"Art. 40. As to Number. No person shall be tried a second time for the same offense.

"F. PUNISHMENTS.

"Art. 41. Certain Kinds Prohibited. Punishment by flogging, or by branding, marking, or tattooing on the body is prohibited.

"Art. 42. Places of Confinement—When Lawful. Except for desertion in time of war, repeated desertion in time of peace, and mutiny, no person shall under the sentence of a court-martial be punished by confinement in a penitentiary unless an act or omission of which he is convicted is recognized as an offense of a civil nature by some statute of the United States, or at the common law as the same exists in the District of Columbia, or by way of commutation of a death sentence, and unless, also, the period of confinement authorized and adjudged by such court-martial is one year or more: Provided, That when a sentence of confinement is adjudged by a court-martial upon conviction of two or more acts or omissions any one of which is punishable under these articles by confinement in a penitentiary, the entire sentence of confinement may be executed in a penitentiary: Provided further, That penitentiary confinement hereby authorized may be served in any penitentiary directly or indirectly under the jurisdiction of the United States: Provided further, That persons sentenced to dishonorable discharge and to confinement not in a penitentiary shall be confined in the United States Disciplinary Barracks or elsewhere as the Secretary of War or the reviewing authority may direct, but not in a penitentiary.

"Art. 43. Death Sentence—When Lawful. No person shall, by general court-martial, be convicted of an offense for which the death penalty is made mandatory by law, nor sentenced to suffer death, except by the concurrence of two-thirds of the members of said court-martial and for an offense in these articles expressly made punishable by death. All other convictions and sentences, whether by general or special court-martial, may be determined by a majority of the members present.

"Art. 44. Cowardice; Fraud—Accessory Penalty. When an officer is dismissed from the service for cowardice or fraud, the crime, punishment, name, and place of abode of the delinquent shall be published in the newspapers in

and about the camp and in the State from which the offender came or where he usually resides; and after such publication it shall be scandalous for an officer to associate with him.

"Art. 45. Maximum Limits. Whenever the punishment for a crime or offense made punishable by these articles is left to the discretion of the court-martial, the punishment shall not, in time of peace, exceed such limit or limits as the President may from time to time prescribe.

"G. ACTION BY APPOINTING OR SUPERIOR AUTHORITY.

"Art. 46. Approval and Execution of Sentence. No sentence of a court-martial shall be carried into execution until the same shall have been approved by the officer appointing the court or by the officer commanding for the time being.

"Art. 47. Powers Incident to Power to Approve. The power to approve the sentence of a court-martial shall be held to include:

"(a) The power to approve or disapprove a finding and to approve only so much of a finding of guilty of a particular offense as involves a finding of guilty of a lesser included offense when, in the opinion of the authority having power to approve, the evidence of record requires a finding of only the lesser degree of guilt; and

"(b) The power to approve or disapprove the whole or any part of the sentence.

[Note: This article became effective on August 29, 1916.]

"Art. 48. Confirmation—When Required. In addition to the approval required by article forty-six, confirmation by the President is required in the following cases before the sentence of a court-martial is carried into execution, namely:

"(a) Any sentence respecting a general officer;

"(b) Any sentence extending to the dismissal of an officer, except that in time of war a sentence extending to the dismissal of an officer below the grade of brigadier general may be carried into execution upon confirmation by the commanding general of the Army in the field or by the commanding general of the territorial department or division;

"(c) Any sentence extending to the suspension or dismissal of a cadet; and

"(d) Any sentence of death, except in the cases of persons convicted in time of war of murder, rape, mutiny, desertion, or as spies; and in such excepted cases a sentence of death may be carried into execution upon confirmation by the commanding general of the Army in the field or by the commanding general of the territorial department or division.

"When the authority competent to confirm the sentence has already acted as the approving authority no additional confirmation by him is necessary.

"Art. 49. Powers Incident to Power to Confirm. The power to confirm the sentence of a court-martial shall be held to include:

"(a) The power to confirm or disapprove a finding, and to confirm so much only of a finding of guilty of a particular offense as involves a finding of guilty of a lesser included offense when, in the opinion of the authority having power to confirm, the evidence of record requires a finding of only the lesser degree of guilt; and

"(b) The power to confirm or disapprove the whole or any part of the sentence.

[Note: This article became effective on August 29, 1916.]

"Art. 50. Mitigation or Remission of Sentences. The power to order the execution of the sentence adjudged by a court-martial shall be held to include, inter alia, the power to mitigate or remit the whole or any part of the sentence,

but no sentence of dismissal of an officer and no sentence of death shall be mitigated or remitted by any authority inferior to the President.

"Any unexecuted portion of a sentence adjudged by a court-martial may be mitigated or remitted by the military authority competent to appoint, for the command, exclusive of penitentiaries and the United States Disciplinary Barracks, in which the person under sentence is held, a court of the kind that imposed the sentence, and the same power may be exercised by superior military authority; but no sentence extending to the dismissal of an officer or loss of files, no sentence of death, and no sentence approved or confirmed by the President shall be remitted or mitigated by any other authority.

"The power of remission and mitigation shall extend to all uncollected forfeitures adjudged by sentence of a court-martial.

"Art. 51. Suspension of Sentences of Dismissal or Death. The authority competent to order the execution of a sentence of dismissal of an officer or a sentence of death may suspend such sentence until the pleasure of the President be known, and in case of such suspension a copy of the order of suspension, together with a copy of the record of trial, shall immediately be transmitted to the President.

"Art. 52. Suspension of Sentences of Dishonorable Discharge. The authority competent to order the execution of a sentence, including dishonorable discharge, may suspend the execution of the dishonorable discharge until the soldier's release from confinement; but the order of suspension may be vacated at any time and the execution of the dishonorable discharge directed by the officer having general court-martial jurisdiction over the command, exclusive of penitentiaries and the United States Disciplinary Barracks, in which the soldier is held or by the Secretary of War.

"Art. 53. Suspension of Sentences of Forfeiture or Confinement. The authority competent to order the execution of a sentence adjudged by a court-martial may, if the sentence involve neither dismissal nor dishonorable discharge, suspend the execution of the sentence in so far as it relates to the forfeiture of pay or to confinement, or to both; and the person under sentence may be restored to duty during the suspension of confinement. At any time within one year after the date of the order of suspension such order may, for sufficient cause, be vacated and the execution of the sentence directed by the military authority competent to order the execution of like sentences in the command, exclusive of penitentiaries and the United States Disciplinary Barracks, to which the person under sentence belongs or in which he may be found; but if the order of suspension be not vacated within one year after the date thereof the suspended sentence shall be held to have been remitted.

"III. PUNITIVE ARTICLES.

"A. ENLISTMENT; MUSTER; RETURNS.

"Art. 54. Fraudulent Enlistment. Any person who shall procure himself to be enlisted in the military service of the United States by means of willful misrepresentation or concealment as to his qualifications for enlistment, and shall receive pay or allowances under such enlistment, shall be punished as a court-martial may direct.

"Art. 55. Officer Making Unlawful Enlistment. Any officer who knowingly enlists or musters into the military service any person whose enlistment or muster in is prohibited by law, regulations, or orders shall be dismissed from the service or suffer such other punishment as a court-martial may direct.

"Art. 56. Muster Rolls—False Muster. At every muster of a regiment, troop, battery, or company the commanding officer thereof shall give to the mustering officer certificates, signed by himself, stating how long absent officers

have been absent and the reasons of their absence. And the commanding officer of every troop, battery, or company shall give like certificates, stating how long absent noncommissioned officers and private soldiers have been absent and the reasons of their absence. Such reasons and time of absence shall be inserted in the muster rolls opposite the names of the respective absent officers and soldiers, and the certificates, together with the muster rolls, shall be transmitted by the mustering officer to the Department of War as speedily as the distance of the place and muster will admit. Any officer who knowingly makes a false muster of man or animal, or who signs or directs or allows the signing of any muster roll knowing the same to contain a false muster or false statement as to the absence or pay of an officer or soldier, or who wrongfully takes money or other consideration on mustering in a regiment, company, or other organization, or on signing muster rolls, or who knowingly musters as an officer or soldier a person who is not such officer or soldier, shall be dismissed from the service and suffer such other punishment as a court-martial may direct.

"Art. 57. False Returns—Omission to Render Returns. Every officer commanding a regiment, an independent troop, battery, or company, or a garrison, shall, in the beginning of every month, transmit through the proper channels, to the Department of War, an exact return of the same, specifying the names of the officers then absent from their posts, with the reasons for and the time of their absence. Every officer whose duty it is to render to the War Department or other superior authority a return of the state of the troops under his command, or of the arms, ammunitions, clothing, funds, or other property thereunto belonging, who knowingly makes a false return thereof shall be dismissed from the service and suffer such other punishment as a court-martial may direct. And any officer who, through neglect or design, omits to render such return shall be punished as a court-martial may direct.

"B. DESERTION; DESERTING; ABSENCE WITHOUT LEAVE.

"Art. 58. Desertion. Any person subject to military law who deserts or attempts to desert the service of the United States shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct, and, if the offense be committed at any other time, any punishment, excepting death, that a court-martial may direct.

"Art. 59. Advising or Aiding Another to Desert. Any person subject to military law who advises or persuades or knowingly assists another to desert the service of the United States shall, if the offense be committed in time of war, suffer death, or such other punishment as a court-martial may direct, and, if the offense be committed at any other time, any punishment, excepting death, that a court-martial may direct.

"Art. 60. Entertaining a Deserter. Any officer who, after having discovered that a soldier in his command is a deserter from the military or naval service or from the Marine Corps, retains such deserter in his command without informing superior authority or the commander of the organization to which the deserter belongs, shall be punished as a court-martial may direct.

"Art. 61. Absence Without Leave. Any person subject to military law who fails to repair at the fixed time to the properly appointed place of duty, or goes from the same without proper leave, or absents himself from his command, guard, quarters, station, or camp without proper leave, shall be punished as a court-martial may direct.

"C. DISRESPECT; INSUBORDINATION; MUTINY.

"Art. 62. Disrespect Toward the President, Vice President, Congress, Secretary of War, Governors, Legislatures. Any officer who uses contemptuous or disrespectful words against the President, Vice President, the Congress of

the United States, the Secretary of War, or the governor or legislature of any State, Territory, or other possession of the United States in which he is quartered shall be dismissed from the service or suffer such other punishment as a court-martial may direct. Any other person subject to military law who so offends shall be punished as a court-martial may direct.

"Art. 63. Disrespect Toward Superior Officer. Any person subject to military law who behaves himself with disrespect toward his superior officer shall be punished as a court-martial may direct.

"Art. 64. Assaulting or Willfully Disobeying Superior Officer. Any person subject to military law who, on any pretense whatsoever, strikes his superior officer or draws or lifts up any weapon or offers any violence against him, being in the execution of his office, or willfully disobeys any lawful command of his superior officer, shall suffer death or such other punishment as a court-martial may direct.

"Art. 65. Insubordinate Conduct Toward Noncommissioned Officer. Any soldier who strikes or assaults, or who attempts or threatens to strike or assault, or willfully disobeys the lawful order of a noncommissioned officer while in the execution of his office, or uses threatening or insulting language, or behaves in an insubordinate or disrespectful manner toward a noncommissioned officer while in the execution of his office, shall be punished as a court-martial may direct.

"Art. 66. Mutiny or Sedition. Any person subject to military law who attempts to create or who begins, excites, causes, or joins in any mutiny or sedition in any company, party, post, camp, detachment, guard, or other command shall suffer death or such other punishment as a court-martial may direct.

"Art. 67. Failure to Suppress Mutiny or Sedition. Any officer or soldier who, being present at any mutiny or sedition, does not use his utmost endeavor to suppress the same, or knowing or having reason to believe that a mutiny or sedition is to take place, does not without delay give information thereof to his commanding officer shall suffer death or such other punishment as a court-martial may direct.

"Art. 68. Quarrels; Frays; Disorders. All officers and noncommissioned officers have power to part and quell all quarrels, frays, and disorders among persons subject to military law and to order officers who take part in the same into arrest, and other persons subject to military law who take part in the same into arrest or confinement, as circumstances may require, until their proper superior officer is acquainted therewith. And whosoever, being so ordered, refuses to obey such officer or noncommissioned officer or draws a weapon upon or otherwise threatens or does violence to him shall be punished as a court-martial may direct.

"D. ARREST; CONFINEMENT.

"Art. 69. Arrest or Confinement of Accused Persons. An officer charged with crime or with a serious offense under these articles shall be placed in arrest by the commanding officer, and in exceptional cases an officer so charged may be placed in confinement by the same authority. A soldier charged with crime or with a serious offense under these articles shall be placed in confinement, and when charged with a minor offense he may be placed in arrest. Any other person subject to military law charged with crime or with a serious offense under these articles shall be placed in confinement or in arrest, as circumstances may require; and when charged with a minor offense such person may be placed in arrest. Any person placed in arrest under the provisions of this article shall thereby be restricted to his barracks, quarters, or tent, unless such limits shall be enlarged by proper authority. Any officer

who breaks his arrest or who escapes from confinement before he is set at liberty by proper authority shall be dismissed from the service or suffer such other punishment as a court-martial may direct; and any other person subject to military law who escapes from confinement or who breaks his arrest before he is set at liberty by proper authority shall be punished as a court-martial may direct.

"Art. 70. Investigation of and Action Upon Charges. No person put in arrest shall be continued in confinement more than eight days, or until such time as a court-martial can be assembled. When any person is put in arrest for the purpose of trial, except at remote military posts or stations, the officer by whose order he is arrested shall see that a copy of the charges on which he is to be tried is served upon him within eight days after his arrest, and that he is brought to trial within ten days thereafter, unless the necessities of the service prevent such trial; and then he shall be brought to trial within thirty days after the expiration of said ten days. If a copy of the charges be not served, or the arrested person be not brought to trial, as herein required, the arrest shall cease. But persons released from arrest, under the provisions of this article, may be tried, whenever the exigencies of the service shall permit, within twelve months after such release from arrest: Provided, That in time of peace no person shall, against his objections, be brought to trial before a general court-martial within a period of five days subsequent to the service of charges upon him.

"Art. 71. Refusal to Receive and Keep Prisoners. No provost marshal or commander of a guard shall refuse to receive or keep any prisoner committed to his charge by an officer belonging to the forces of the United States, provided the officer committing shall, at the time, deliver an account in writing, signed by himself, of the crime or offense charged against the prisoner. Any officer or soldier so refusing shall be punished as a court-martial may direct.

"Art. 72. Report of Prisoners Received. Every commander of a guard to whose charge a prisoner is committed shall, within twenty-four hours after such confinement, or as soon as he is relieved from his guard, report in writing to the commanding officer the name of such prisoner, the offense charged against him, and the name of the officer committing him; and if he fails to make such report he shall be punished as a court-martial may direct.

"Art. 73. Releasing Prisoner Without Proper Authority. Any person subject to military law who, without proper authority, releases any prisoner duly committed to his charge, or who through neglect or design suffers any prisoner so committed to escape, shall be punished as a court-martial may direct.

"Art. 74. Delivery of Offenders to Civil Authorities. When any person subject to military law, except one who is held by the military authorities to answer, or who is awaiting trial or result of trial, or who is undergoing sentence for a crime or offense punishable under these articles, is accused of a crime or offense committed within the geographical limits of the States of the Union and the District of Columbia, and punishable by the laws of the land, the commanding officer is required, except in time of war, upon application duly made, to use his utmost endeavor to deliver over such accused person to the civil authorities, or to aid the officers of justice in apprehending and securing him, in order that he may be brought to trial. Any commanding officer who upon such application refuses or willfully neglects, except in time of war, to deliver over such accused person to the civil authorities or to aid the officers of justice in apprehending and securing him shall be dismissed from the service or suffer such other punishment as a court-martial may direct.

"When, under the provisions of this article, delivery is made to the civil authorities of an offender undergoing sentence of a court-martial, such delivery,

if followed by conviction, shall be held to interrupt the execution of the sentence of the court-martial, and the offender shall be returned to military custody, after having answered to the civil authorities for his offense, for the completion of the said court-martial sentence.

"E. WAR OFFENSES.

"Art. 75. Misbehavior Before the Enemy. Any officer or soldier who misbehaves himself before the enemy, runs away, or shamefully abandons or delivers up any fort, post, camp, guard, or other command which it is his duty to defend, or speaks words inducing others to do the like, or casts away his arms or ammunition, or quits his post or colors to plunder or pillage, or by any means whatsoever occasions false alarms in camp, garrison, or quarters, shall suffer death or such other punishment as a court-martial may direct.

"Art. 76. Subordinates Compelling Commander to Surrender. If any commander of any garrison, fort, post, camp, guard, or other command is compelled, by the officers or soldiers under his command, to give it up to the enemy or to abandon it, the officers or soldiers so offending shall suffer death or such other punishment as a court-martial may direct.

"Art. 77. Improper Use of Countersign. Any person subject to military law who makes known the parole or countersign to any person not entitled to receive it according to the rules and discipline of war, or gives a parole or countersign different from that which he receives, shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct.

"Art. 78. Forcing a Safeguard. Any person subject to military law who, in time of war, forces a safeguard shall suffer death or such other punishment as a court-martial may direct.

"Art. 79. Captured Property to be Secured for Public Service. All public property taken from the enemy is the property of the United States and shall be secured for the service of the United States, and any person subject to military law who neglects to secure such property or is guilty of wrongful appropriation thereof shall be punished as a court-martial may direct.

"Art. 80. Dealing in Captured or Abandoned Property. Any person subject to military law who buys, sells, trades, or in any way deals in or disposes of captured or abandoned property, whereby he shall receive or expect any profit, benefit, or advantage to himself or to any other person directly or indirectly connected with himself, or who fails whenever such property comes into his possession or custody or within his control to give notice thereof to the proper authority and to turn over such property to the proper authority without delay, shall, on conviction thereof, be punished by fine or imprisonment, or by such other punishment as a court-martial, military commission, or other military tribunal may adjudge, or by any or all of said penalties.

"Art. 81. Relieving, Corresponding With, or Aiding the Enemy. Whosoever relieves the enemy with arms, ammunition, supplies, money, or other thing, or knowingly harbors or protects or holds correspondence with or gives intelligence to the enemy, either directly or indirectly, shall suffer death, or such other punishment as a court-martial or military commission may direct.

"Art. 82. Spies. Any person who in time of war shall be found lurking or acting as a spy in or about any of the fortifications, posts, quarters, or encampments of any of the armies of the United States, or elsewhere, shall be tried by a general court-martial or by a military commission, and shall, on conviction thereof, suffer death.

"F. MISCELLANEOUS CRIMES AND OFFENSES.

"Art. 83. Military Property—Willful or Negligent Loss, Damage, or Wrongful Disposition. Any person subject to military law who willfully, or through neglect, suffers to be lost, spoiled, damaged, or wrongfully disposed of, any

military property belonging to the United States shall make good the loss or damage and suffer such punishment as a court-martial may direct.

"Art. 84. Waste or Unlawful Disposition of Military Property Issued to Soldiers. Any soldier who sells or wrongfully disposes of or willfully or through neglect injures or loses any horse, arms, ammunition, accouterments, equipment, clothing, or other property issued for use in the military service, shall be punished as a court-martial may direct.

"Art. 85. Drunk on Duty. Any officer who is found drunk on duty shall, if the offense be committed in time of war, be dismissed from the service and suffer such other punishment as a court-martial may direct; and if the offense be committed in time of peace, he shall be punished as a court-martial may direct. Any person subject to military law, except an officer, who is found drunk on duty shall be punished as a court-martial may direct.

"Art. 86. Misbehavior of Sentinel. Any sentinel who is found drunk or sleeping upon his post, or who leaves it before he is regularly relieved, shall, if the offense be committed in time of war, suffer death or such other punishment as a court-martial may direct; and if the offense be committed in time of peace, he shall suffer any punishment, except death, that a court-martial may direct.

"Art. 87. Personal Interest in Sale of Provisions. Any officer commanding in any garrison, fort, barracks, camp, or other place where troops of the United States may be serving who, for his private advantage, lays any duty or imposition upon or is interested in the sale of any victuals or other necessities of life brought into such garrison, fort, barracks, camp, or other place for the use of the troops, shall be dismissed from the service and suffer such other punishment as a court-martial may direct.

"Art. 88. Intimidation of Persons Bringing Provisions. Any person subject to military law who abuses, intimidates, does violence to, or wrongfully interferes with any person bringing provisions, supplies, or other necessities to the camp, garrison or quarters of the forces of the United States shall suffer such punishment as a court-martial may direct.

"Art. 89. Good Order to be Maintained and Wrongs Redressed. All persons subject to military law are to behave themselves orderly in quarters, garrison, camp, and on the march; and any person subject to military law who commits any waste or spoil, or willfully destroys any property whatsoever (unless by order of his commanding officer), or commits any kind of depredation or riot, shall be punished as a court-martial may direct. Any commanding officer who, upon complaint made to him, refuses or omits to see reparation made to the party injured, in so far as the offender's pay shall go toward such reparation, as provided for in article one hundred and five, shall be dismissed from the service, or otherwise punished, as a court-martial may direct.

"Art. 90. Provoking Speeches or Gestures. No person subject to military law shall use any reproachful or provoking speeches or gestures to another; and any person subject to military law who offends against the provisions of this article shall be punished as a court-martial may direct.

"Art. 91. Dueling. Any person subject to military law who fights or promotes or is concerned in or connives at fighting a duel, or who having knowledge of a challenge sent or about to be sent fails to report the fact promptly to the proper authority shall, if an officer, be dismissed from the service or suffer such other punishment as a court-martial may direct; and if any other person subject to military law, shall suffer such punishment as a court-martial may direct.

"Art. 92. Murder—Rape. Any person subject to military law who commits

murder or rape shall suffer death or imprisonment for life, as a court-martial may direct; but no person shall be tried by court-martial for murder or rape committed within the geographical limits of the States of the Union and the District of Columbia in time of peace.

[Note: This article became effective on August 29, 1916.]

"Art. 93. Various Crimes. Any person subject to military law who commits manslaughter, mayhem, arson, burglary, robbery, larceny, embezzlement, perjury, assault with intent to commit any felony, or assault with intent to do bodily harm, shall be punished as a court-martial may direct.

"Art. 94. Frauds Against the Government. Any person subject to military law who makes or causes to be made any claim against the United States or any officer thereof, knowing such claim to be false or fraudulent; or

"Who presents or causes to be presented to any person in the civil or military service thereof, for approval or payment, any claim against the United States, or any officer thereof, knowing such claim to be false or fraudulent; or

"Who enters into any agreement or conspiracy to defraud the United States by obtaining, or aiding others to obtain, the allowance or payment of any false or fraudulent claim; or

"Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or against any officer thereof, makes or uses, or procures, or advises the making or use of, any writing or other paper knowing the same to contain any false or fraudulent statements; or

"Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, makes, or procures, or advises the making of, any oath to any fact or to any writing or other paper knowing such oath to be false; or

"Who, for the purpose of obtaining, or aiding others to obtain, the approval, allowance, or payment of any claim against the United States or any officer thereof, forges or counterfeits, or procures, or advises the forging or counterfeiting of any signature upon any writing or other paper, or uses, or procures, or advises the use of any such signature, knowing the same to be forged or counterfeited; or

"Who, having charge, possession, custody, or control of any money or other property of the United States, furnished or intended for the military service thereof, knowingly delivers, or causes to be delivered, to any person having authority to receive the same, any amount thereof less than that for which he receives a certificate or receipt; or

"Who, being authorized to make or deliver any paper certifying the receipt of any property of the United States furnished or intended for the military service thereof, makes or delivers to any person such writing, without having full knowledge of the truth of the statements therein contained and with intent to defraud the United States; or

"Who steals, embezzles, knowingly and willfully misappropriates, applies to his own use or benefit, or wrongfully or knowingly sells or disposes of any ordnance, arms, equipments, ammunition, clothing, subsistence stores, money, or other property of the United States furnished or intended for the military service thereof; or

"Who knowingly purchases or receives in pledge for any obligation or indebtedness from any soldier, officer, or other person who is a part of or employed in said forces or service, any ordnance, arms, equipment, ammunition, clothing, subsistence stores, or other property of the United States. such soldier, officer, or other person not having lawful right to sell or pledge the same;

" Shall, on conviction thereof, be punished by fine or imprisonment, or by such other punishment as a court-martial may adjudge, or by any or all of said penalties. And if any person, being guilty of any of the offenses aforesaid while in the military service of the United States, receives his discharge or is dismissed from the service, he shall continue to be liable to be arrested and held for trial and sentence by a court-martial in the same manner and to the same extent as if he had not received such discharge nor been dismissed.

"Art. 95. Conduct Unbecoming an Officer and Gentleman. Any officer or cadet who is convicted of conduct unbecoming an officer and a gentleman shall be dismissed from the service.

"Art. 96. General Article. Though not mentioned in these articles, all disorders and neglects to the prejudice of good order and military discipline, all conduct of a nature to bring discredit upon the military service, and all crimes or offenses not capital, of which persons subject to military law may be guilty, shall be taken cognizance of by a general or special or summary court-martial, according to the nature and degree of the offense, and punished at the discretion of such court.

" IV. COURTS OF INQUIRY.

"Art. 97. When and by Whom Ordered. A court of inquiry to examine into the nature of any transaction of or accusation or imputation against any officer or soldier may be ordered by the President or by any commanding officer; but a court of inquiry shall not be ordered by any commanding officer except upon the request of the officer or soldier whose conduct is to be inquired into.

"Art. 98. Composition. A court of inquiry shall consist of three or more officers. For each court of inquiry the authority appointing the court shall appoint a recorder.

"Art. 99. Challenges. Members of a court of inquiry may be challenged by the party whose conduct is to be inquired into, but only for cause stated to the court. The court shall determine the relevancy and validity of any challenge, and shall not receive a challenge to more than one member at a time. The party whose conduct is being inquired into shall have the right to be represented before the court by counsel of his own selection, if such counsel be reasonably available.

"Art. 100. Oath of Members and Recorders. The recorder of a court of inquiry shall administer to the members the following oath: 'You, A. B., do swear (or affirm) that you will well and truly examine and inquire, according to the evidence, into the matter now before you, without partiality, favor, affection, prejudice, or hope of reward. So help you God.' After which the president of the court shall administer to the recorder the following oath: 'You, A. B., do swear (or affirm) that you will, according to your best abilities, accurately and impartially record the proceedings of the court and the evidence to be given in the case in hearing. So help you God.'

" In case of affirmation the closing sentence of adjuration will be omitted.

"Art. 101. Powers; Procedure. A court of inquiry and the recorder thereof shall have the same power to summon and examine witnesses as is given to courts-martial and the judge advocate thereof. Such witnesses shall take the same oath or affirmation that is taken by witnesses before courts-martial. A reporter or an interpreter for a court of inquiry shall, before entering upon his duties, take the oath or affirmation required of a reporter or an interpreter for a court-martial. The party whose conduct is being inquired into or his counsel, if any, shall be permitted to examine and cross-examine witnesses so as fully to investigate the circumstances in question.

"Art. 102. Opinion on Merits of Case. A court of inquiry shall not give an opinion on the merits of the case inquired into unless specially ordered to do so.

"Art. 103. Record of Proceedings—How Authenticated. Each court of inquiry shall keep a record of its proceedings, which shall be authenticated by the signature of the president and the recorder thereof, and be forwarded to the convening authority. In case the record can not be authenticated by the recorder, by reason of his death, disability, or absence, it shall be signed by the president and by one other member of the court.

"V. MISCELLANEOUS PROVISIONS.

"Art. 104. Disciplinary Powers of Commanding Officers. Under such regulations as the President may prescribe, and which he may from time to time revoke, alter, or add to, the commanding officer of any detachment, company, or higher command may, for minor offenses not denied by the accused, impose disciplinary punishments upon persons of his command without the intervention of a court-martial, unless the accused demands trial by court-martial.

"The disciplinary punishments authorized by this article may include admonition, reprimand, withholding of privileges, extra fatigue, and restriction to certain specified limits, but shall not include forfeiture of pay or confinement under guard. A person punished under authority of this article, who deems his punishment unjust or disproportionate to the offense, may, through the proper channel, appeal to the next superior authority, but may in the meantime be required to undergo the punishment adjudged. The commanding officer who imposes the punishment, his successor in command, and superior authority shall have power to mitigate or remit any unexecuted portion of the punishment. The imposition and enforcement of disciplinary punishment under authority of this article for any act or omission shall not be a bar to trial by court-martial for a crime or offense growing out of the same act or omission; but the fact that a disciplinary punishment has been enforced may be shown by the accused upon trial, and when so shown shall be considered in determining the measure of punishment to be adjudged in the event of a finding of guilty.

"Art. 105. Injuries to Person or Property—Redress of. Whenever complaint is made to any commanding officer that damage has been done to the property of any person or that his property has been wrongfully taken by persons subject to military law, such complaint shall be investigated by a board consisting of any number of officers from one to three, which board shall be convened by the commanding officer and shall have, for the purpose of such investigation, power to summon witnesses and examine them upon oath or affirmation, to receive depositions or other documentary evidence, and to assess the damages sustained against the responsible parties. The assessment of damages made by such board shall be subject to the approval of the commanding officer, and in the amount approved by him shall be stopped against the pay of the offenders. And the order of such commanding officer directing stoppages herein authorized shall be conclusive on any disbursing officer for the payment by him to the injured parties of the stoppages so ordered.

"Where the offenders can not be ascertained, but the organization or detachment to which they belong is known, stoppages to the amount of damages inflicted may be made and assessed in such proportion as may be deemed just upon the individual members thereof who are shown to have been present with such organization or detachment at the time the damages complained of were inflicted as determined by the approved findings of the board.

"Art. 106. Arrest of Deserters by Civil Officials. It shall be lawful for any civil officer having authority under the laws of the United States, or of any State, Territory, District, or possession of the United States, to arrest offenders, summarily to arrest a deserter from the military service of the United States and deliver him into the custody of the military authorities of the United States.

"Art. 107. Soldiers to Make Good Time Lost. Every soldier who in an existing or subsequent enlistment deserts the service of the United States or without proper authority absents himself from his organization, station, or duty for more than one day, or who is confined for more than one day under sentence, or while awaiting trial and disposition of his case, if the trial results in conviction, or through the intemperate use of drugs or alcoholic liquor, or through disease or injury the result of his own misconduct, renders himself unable for more than one day to perform duty, shall be liable to serve, after his return to a full-duty status, for such period as shall, with the time he may have served prior to such desertion, unauthorized absence, confinement, or inability to perform duty, amount to the full term of that part of his enlistment period which he is required to serve with his organization before being furloughed to the Army reserve.

"Art. 108. Soldiers—Separation from the Service. No enlisted man, lawfully inducted into the military service of the United States, shall be discharged from said service without a certificate of discharge, signed by a field officer of the regiment or other organization to which the enlisted man belongs or by the commanding officer when no such field officer is present; and no enlisted man shall be discharged from said service before his term of service has expired, except by order of the President, the Secretary of War, the commanding officer of a department, or by sentence of a general court-martial.

"Art. 109. Oath of Enlistment. At the time of his enlistment every soldier shall take the following oath or affirmation: 'I, ———, do solemnly swear (or affirm) that I will bear true faith and allegiance to the United States of America; that I will serve them honestly and faithfully against all their enemies whomsoever; and that I will obey the orders of the President of the United States and the orders of the officers appointed over me, according to the Rules and Articles of War.' This oath or affirmation may be taken before any officer.

"Art. 110. Certain Articles to be Read and Explained. Articles one, two, and twenty-nine, fifty-four to ninety-six, inclusive, and one hundred and four to one hundred and nine, inclusive, shall be read and explained to every soldier at the time of his enlistment or muster in, or within six days thereafter, and shall be read and explained once every six months to the soldiers of every garrison, regiment, or company in the service of the United States.

"Art. 111. Copy of Record of Trial. Every person tried by a general court-martial shall, on demand therefor, made by himself or by any person in his behalf, be entitled to a copy of the record of the trial.

"Art. 112. Effects of Deceased Persons—Disposition of. In case of the death of any person subject to military law, the commanding officer of the place of command will permit the legal representative or widow of the deceased, if present, to take possession of all his effects then in camp or quarters, and if no legal representative or widow be present, the commanding officer shall direct a summary court to secure all such effects; and said summary court shall have authority to convert such effects into cash, by public or private sale, not earlier than thirty days after the death of the deceased, and to collect and receive any debts due decedent's estate by local debtors; and as soon as practicable after converting such effects into cash said summary court shall

deposit with the proper officer, to be designated in regulations, any cash belonging to decedent's estate, and shall transmit a receipt for such deposit, accompanied by any will or other papers of value belonging to the deceased, an inventory of the effects secured by said summary court, and a full account of his transactions to the War Department for transmission to the Auditor for the War Department for action as authorized by law in the settlement of the accounts of deceased officers or enlisted men of the Army; but if in the meantime the legal representative, or widow, shall present himself or herself to take possession of decedent's estate, the said summary court shall turn over to him or her all effects not sold and cash belonging to said estate, together with an inventory and account, and make to the War Department a full report of his transactions.

"The provisions of this article shall be applicable to inmates of the United States Soldiers' Home who die in any United States military hospital outside of the District of Columbia where sent from the home for treatment.

"Art. 113. Inquests. When at any post, fort, camp, or other place garrisoned by the military forces of the United States and under the exclusive jurisdiction of the United States, any person shall have been found dead under circumstances which appear to require investigation, the commanding officer will designate and direct a summary court-martial to investigate the circumstances attending the death; and, for this purpose, such summary court-martial shall have power to summon witnesses and examine them upon oath or affirmation. He shall promptly transmit to the post or other commander a report of his investigation and of his findings as to the cause of the death.

"Art. 114. Authority to Administer Oaths. Any judge advocate or acting judge advocate, the president of a general or special court-martial, any summary court-martial, the judge advocate or any assistant judge advocate of a general or special court-martial, the president or the recorder of a court of inquiry or of a military board, any officer designated to take a deposition, any officer detailed to conduct an investigation, and the adjutant of any command shall have power to administer oaths for the purposes of the administration of military justice and for other purposes of military administration; and in foreign places where the Army may be serving shall have the general powers of a notary public or of a consul of the United States in the administration of oaths, the execution and acknowledgment of legal instruments, the attestation of documents, and all other forms of notarial acts to be executed by persons subject to military law.

"Art. 115. Appointment of Reporters and Interpreters. Under such regulations as the Secretary of War may from time to time prescribe, the president of a court-martial or military commission, or a court of inquiry shall have power to appoint a reporter, who shall record the proceedings of and testimony taken before such court or commission and may set down the same, in the first instance, in shorthand. Under like regulations the president of a court-martial or military commission, or court of inquiry, or a summary court, may appoint an interpreter, who shall interpret for the court or commission.

"Art. 116. Powers of Assistant Judge Advocates. An assistant judge advocate of a general court-martial shall be competent to perform any duty devolved by law, regulation, or the custom of the service upon the judge advocate of the court.

"Art. 117. Removal of Civil Suits. When any civil or criminal prosecution is commenced in any court of a State against any officer, soldier, or other person in the military service of the United States on account of any act done under color of his office or status, or in respect to which he claims any right, title, or authority under any law of the United States respecting the military

forces thereof, or under the law of war, such suit or prosecution may at any time before the trial or final hearing thereof be removed for trial into the district court of the United States in the district where the same is pending in the manner prescribed in section thirty-three of the Act entitled 'An Act to codify, revise, and amend the laws relating to the judiciary,' approved March three, nineteen hundred and eleven, and the cause shall thereupon be entered on the docket of said district court and shall proceed therein as if the cause had been originally commenced in said district court and the same proceedings had been taken in such suit or prosecution in said district court as shall have been had therein in said State court prior to its removal, and said district court shall have full power to hear and determine said cause.

"Art. 118. Officers, Separation from Service. No officer shall be discharged or dismissed from the service except by order of the President or by sentence of a general court-martial; and in time of peace no officer shall be dismissed except in pursuance of the sentence of a court-martial or in mitigation thereof; but the President may at any time drop from the rolls of the Army any officer who has been absent from duty three months without leave or who has been absent in confinement in a prison or penitentiary for three months after final conviction by a court of competent jurisdiction.

"Art. 119. Rank and Precedence Among Regulars, Militia, and Volunteers. That in time of war or public danger, when two or more officers of the same grade are on duty in the same field, department, or command, or of organizations thereof, the President may assign the command of the forces of such field, department, or command, or of any organization thereof, without regard to seniority of rank in the same grade. In the absence of such assignment by the President, officers of the same grade shall rank and have precedence in the following order, without regard to date of rank or commission as between officers of different classes, namely: First, officers of the Regular Army and officers of the Marine Corps detached for service with the Army by order of the President; second, officers of forces drafted or called into the service of the United States; and, third, officers of the volunteer forces: Provided, That officers of the Regular Army holding commissions in forces drafted or called into the service of the United States or in the volunteer forces shall rank and have precedence under said commissions as if they were commissions in the Regular Army; the rank of officers of the Regular Army under commissions in the National Guard as such shall not, for the purposes of this article, be held to antedate the acceptance of such officers into the service of the United States under said commissions.

"Art. 120. Command When Different Corps or Commands Happen to Join. When different corps or commands of the military forces of the United States happen to join or do duty together the officer highest in rank of the line of the Regular Army, Marine Corps, forces drafted or called into the service of the United States, or Volunteers, there on duty, shall, subject to the provisions of the last preceding article, command the whole and give orders for what is needful in the service, unless otherwise directed by the President.

"Art. 121. Complaints of Wrongs. Any officer or soldier who believes himself wronged by his commanding officer, and, upon due application to such commander, is refused redress, may complain to the general commanding in the locality where the officer against whom the complaint is made is stationed. The general shall examine into said complaint and take proper measures for redressing the wrong complained of; and he shall, as soon as possible, transmit to the Department of War a true statement of such complaint, with the proceedings had thereon."

Sec. 4. The provisions of section three of this Act shall take effect and be

in force on and after the first day of March, nineteen hundred and seventeen: Provided, That articles four, thirteen, fourteen, fifteen, twenty-nine, forty-seven, forty-nine, and ninety-two shall take effect immediately upon the approval of this Act.

Sec. 5. That all offenses committed and all penalties, forfeitures, fines, or liabilities incurred prior to the taking effect of this Act, under any law embraced in or modified, changed, or repealed by this Act, may be prosecuted, punished, and enforced in the same manner and with the same effect as if this Act had not been passed.

Sec. 6. All laws and parts of laws in so far as they are inconsistent with this Act are hereby repealed.

Act of August 29, 1916 (39 Stat., 650-670).

APPENDIX 2.

SYSTEM OF COURTS-MARTIAL FOR NATIONAL GUARD NOT IN THE SERVICE OF THE UNITED STATES.

Sec. 102. Except in organizations in the service of the United States, courts-martial in the National Guard shall be of three kinds, namely, general courts-martial, special courts-martial, and summary courts-martial. They shall be constituted like, and have cognizance of the same subjects, and possess like powers, except as to punishments, as similar courts provided for by the laws and regulations governing the Army of the United States, and the proceedings of courts-martial of the National Guard shall follow the forms and modes of procedure prescribed for said similar courts.

Sec. 103. General courts-martial of the National Guard not in the service of the United States may be convened by orders of the President, or of the governors of the respective States and Territories, or by the commanding general of the National Guard of the District of Columbia, and such courts shall have the power to impose fines not exceeding \$200; to sentence to forfeiture of pay and allowances; to a reprimand; to dismissal or dishonorable discharge from the service; to reduction of noncommissioned officers to the ranks; or any two or more of such punishments may be combined in the sentences imposed by such courts.

Sec. 104. In the National Guard, not in the service of the United States, the commanding officer of each garrison, fort, post, camp, or other place, brigade, regiment, detached battalion, or other detached command, may appoint special courts-martial for his command; but such special courts-martial may in any case be appointed by superior authority when by the latter deemed desirable. Special courts-martial shall have power to try any person subject to military law, except a commissioned officer, for any crime or offense made punishable by the military laws of the United States, and such special courts-martial shall have the same powers of punishment as do general courts-martial, except that fines imposed by such courts shall not exceed \$100.

Sec. 105. In the National Guard, not in the service of the United States, the commanding officer of each garrison, fort, post, or other place, regiment or corps, detached battalion, company, or other detachment of the National Guard may appoint for such place or command a summary court to consist of one officer, who shall have power to administer oaths and to try the enlisted men of such place or command for breaches of discipline and violations of laws governing such organizations; and said court, when satisfied of the guilt of such soldier, may impose fines not exceeding \$25 for any single

offense; may sentence noncommissioned officers to reduction to the ranks; may sentence to forfeiture of pay and allowances. The proceedings of such court shall be informal, and the minutes thereof shall be the same as prescribed for summary courts of the Army of the United States.

Sec. 106. All courts-martial of the National Guard, not in the service of the United States, including summary courts, shall have power to sentence to confinement in lieu of fines authorized to be imposed: Provided, That such sentences of confinement shall not exceed one day for each dollar of fine authorized.

Sec. 107. No sentence of dismissal from the service or dishonorable discharge, imposed by a National Guard court-martial, not in the service of the United States, shall be executed until approved by the governor of the State or Territory concerned, or by the commanding general of the National Guard of the District of Columbia.

Sec. 108. In the National Guard, not in the service of the United States, presidents of courts-martial and summary court officers shall have power to issue warrants to arrest accused persons and to bring them before the court for trial whenever such persons shall have disobeyed an order in writing from the convening authority to appear before such court, a copy of the charge or charges having been delivered to the accused with such order, and to issue subpoenas and subpoenas duces tecum and to enforce by attachment attendance of witnesses and the production of books and papers, and to sentence for a refusal to be sworn or to answer as provided in actions before civil courts.

All processes and sentences of said courts shall be executed by such civil officers as may be prescribed by the laws of the several States and Territories, and in any State where no provision shall have been made for such action, and in the Territories and the District of Columbia, such processes and sentences shall be executed by a United States marshal or his duly appointed deputy, and it shall be the duty of any United States marshal to execute all such processes and sentences and make return thereof to the officer issuing or imposing the same. (Act of June 3, 1916, 39 Stat., 208, 209.)

APPENDIX 3.

[FRONT.]

Charge sheet

No. in summary court record _____.

(Place.)

(Date.)

(Surname.)

(Christian name.)

(Rank and organization.)

Date current enlistment, _____ Rate of pay, _____.

Previous service, _____

(Give dates, with character given on each discharge.)

Date of { Arrest: _____ No. of previous convictions, _____
 { Confinement: _____

Witnesses:

Charge —: Violation of the _____ article of war.

Specification —: In that, etc.

Form No. 594, A. G. O.

[BACK.]

Pleas: _____.

Findings: _____.

Sentence: _____.

Days in { Arrest: _____.
Confinement: _____.

Maximum punishment: _____.

[Note: The above spaces are intended only for use for record purposes at the headquarters of the officer appointing the special or general court-martial, and it is not intended that they shall be filled in by summary courts, trial judge advocates, etc.]

INSTRUCTIONS.

(M. C. M., pars. 75, 76, 79, 306.)

1. Submission of Charges. All charges for trial by court-martial will be prepared in triplicate, using the prescribed charge sheet as a first sheet and using such additional sheets of ordinary paper as are required. They will be accompanied—

(a) Except when trial is to be had by summary court, by a brief statement of the substance of all material testimony expected from each material witness, both those for the prosecution and those for the defense, together with all available and necessary information as to any other actual or probable testimony or evidence in the case; and

(b) In the case of a soldier, by properly authenticated evidence of convictions, if any, of an offense or offenses committed by him during his current enlistment and within one year next preceding the date of the alleged commission by him of any offense set forth in the charges.

They will be forwarded by the officer preferring them to the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs, and will by him and by each superior commander into whose hands they may come either be referred to a court-martial within his jurisdiction for trial, forwarded to the next superior authority exercising court-martial jurisdiction over the command to which the accused belongs or pertains, or otherwise disposed of as circumstances may appear to require.

2. Investigation of Charges. If the officer immediately exercising summary court-martial jurisdiction over the command to which the accused belongs or pertains decides to forward the charges to superior authority, he will, before so doing, either carefully investigate them himself or will cause an officer other than the officer preferring the charges carefully to investigate them and to report to him, orally or otherwise, the result of such investigation. The officer investigating the charges will afford to the accused an opportunity to make any statement, offer any evidence, or present any matter in extenuation that he may desire to have considered in connection with the accusations against him. If the accused desires to submit nothing, the indorsement will so state. In his indorsement forwarding the charges to superior authority he will include:

(a) The name of the officer who investigated the charges;

(b) The opinion of both such officer and himself as to whether the several charges can be sustained;

(c) The substance of such material statement, if any, as the accused may have voluntarily made in connection with the case during the investigation thereof;

(d) A summary of the extenuating circumstances, if any, connected with the case; and

(e) His recommendation of action to be taken.

3. Disposition of Copies of Charges. (a) When trial is had by summary court the charges will be completed as the record of trial, a copy thereof will be completed as a copy of the summary court record for the company or other commander, and the other copy will, with the least practicable delay after action has been taken on the sentence, be completed and transmitted as the required report of trial to the officer exercising general court-martial jurisdiction over the command, there to be filed in the office of the judge advocate for a period of two years, at the end of which time it may be destroyed; and

(b) When trial is to be had by special or general court-martial the charges and one copy thereof will be referred to the trial judge advocate, the copy to be furnished by him to the accused or his counsel, and the other copy will be used for record purposes in the office of the officer appointing the trial court, the top fold of the copy of the charge sheet, in case of trial by general court-martial, being detached at the proper time and forwarded with the record of trial to the Judge Advocate General of the Army.

4. Disposition of Evidence of Previous Convictions. (a) The evidence of a previous conviction referred to a summary court or to the judge advocate of a special court will, after trial, be returned by him to the appointing authority and will, after action by the latter on the case, be returned to the company or detachment to which it pertains;

(b) The evidence of a previous conviction referred to the judge advocate of a general court-martial will, if a company record, after trial be returned by him direct to the company or detachment to which it pertains, and a certified copy thereof will be attached to the record of trial.

[Note: This form supersedes the blank form for record of trial by summary court (Form No. 99, A. G. O.), the blank form for report of trial by summary court (Form No. 59, A. G. O.), and the blank form for statement of service (Form No. 15, A. G. O.).]

APPENDIX 4.

FORMS FOR CHARGES AND SPECIFICATIONS.

INSTRUCTIONS.

The forms for charges and specifications set forth below constitute a general guide for use in the drafting of charges and specifications under the several articles of war, not only for offenses specifically provided for in the forms but also for like offenses not specifically mentioned therein. In preparing charges the following general rules should be observed:

(a) When there is more than one charge the charges will be numbered, using the Roman numerals, viz., I, II, etc.

(b) When there is more than one specification under a charge the specifications under that charge will be numbered, using the Arabic numerals, viz., 1, 2, etc.

(c) The form provided for the charge will not in any case be abbreviated, added to, or deviated from.

(d) The several forms provided for specifications will be added to or deviated from when circumstances require such addition or deviation, and in charging minor offenses with a view to trial by summary court they may in proper cases be abbreviated.

(e) The words inclosed in parentheses or brackets, or both, in the forms for specifications may or may not be used, as circumstances require.

(f) The blanks inclosed in parentheses in the forms for specifications indicate that a proper substitute may be used.

(g) The name of the accused as entered in the specification should, except in a case in which the jurisdiction of the court over the person is not dependent upon his being a person subject to military law (e. g., see A. W., 81 and 82), be accompanied by such descriptive language as will show that he is a person subject to military law and therefore subject to the jurisdiction of the court, as "Pvt. John Doe, Company ———, ——— Infantry"; "Pvt. John Doe, ——— ——— United States Marine Corps, detached for service with the Army, by order of the President"; "John Doe, a retainer to the camp"; "John Doe, a person accompanying the Army of the United States without the territorial jurisdiction of the United States"; "John Doe, a person serving with the Army of the United States in the field"; "John Doe, a general prisoner"; "John Doe, a person under a sentence adjudged by a court-martial."

(h) The place and date of the commission of the alleged offense will ordinarily be stated in the body of the specification and not in a separate line at the end thereof.

(i) The words "officer preferring charge," or words of similar import, will not be used in connection with the signature of the officer who subscribes the charges.

SPECIMEN CHARGES.

[To be placed on charge sheet, Appendix 3.]

Charge I: Violation of the 54th Article of War.

Specification: In that Pvt. Richard Roe, Company A, Second Infantry, alias Pvt. John Doe, Company F, Twenty-ninth Infantry, did, without a discharge from said Company A, Second Infantry, procure himself to be enlisted in the military service of the United States at Fort Jay, N. Y., on the 24th day of July, 1917, under the name of John Doe, by willfully concealing from Capt. William White, Medical Corps, a recruiting officer, the fact of his prior enlistment in said Company A, Second Infantry, and has at Fort Jay, N. Y., since said date, received allowances under said enlistment.

Charge II: Violation of the 58th Article of War.

Specification: In that Pvt. Richard Roe, Company A, Second Infantry, alias Pvt. John Doe, Company F, Twenty-ninth Infantry, did, at Fort Jay, N. Y., on or about the 6th day of March, 1917, desert the service of the United States, and did remain absent in desertion until he was apprehended at Fort Jay, N. Y., on or about July 24, 1917.

Charge III: Violation of the 96th Article of War.

Specification 1: In that Pvt. Richard Roe, Company A, Second Infantry, alias Pvt. John Doe, Company F, Twenty-ninth Infantry, did, at Fort Jay, N. Y., on or about March 6, 1917, strike in the face with his fist Pvt. John W. Davis, Third Company, Fort Hamilton, then a sentinel in the execution of his duty.

Specification 2: In that Pvt. Richard Roe, Company A, Second Infantry, alias Pvt. John Doe, Company F, Twenty-ninth Infantry, having at Fort Jay, N. Y., on or about the 6th day of March, 1917, received a lawful order to halt from Pvt. John W. Davis, Third Company, Fort Hamilton, then a sentinel in the execution of his duty, did willfully disobey the same.

JOHN JONES,

Captain, C. A. C.

FORMS.

Charge: Violation of the 54th Article of War.

1. Specification: In that Pvt. —, Company —, — Infantry, alias Pvt. —, Company —, — Infantry, did, without a discharge from said — Infantry, procure himself to be enlisted in the military service of the United States, at —, on the — day of —, 19—, under the name of —, (by willfully and falsely representing to —, a recruiting officer, that he had never been enlisted in the service of the United States and) by willfully concealing from (—, a) (said) recruit officer (,) the fact of his prior enlistment in said — Infantry; and has, at — and since said date, received (pay) (allowances) (pay and allowances) under said enlistment.

2. Specification: In that — did procure himself to be enlisted in the military service of the United States, at —, on the — day of —, 19—, (by willfully and falsely representing to —, a recruiting officer, that he had never been discharged from the service of the United States and) by willfully concealing from (—, a) (said) recruiting officer the fact that (, under the name of —,) he had been discharged [(dishonorably from —, on —, pursuant to sentence of court-martial) (from —, on —, by reason of —)] [convicted of a felony, to wit, —] [—]; and has, at — and since said enlistment, received (pay) (allowance) (pay and allowances) thereunder.

3. Specification: In that — did procure himself to be enlisted in the military service of the United States, at —, on the — day of —, 19—, [by willfully and falsely representing to —, a recruiting officer, that he had never been imprisoned in any (jail) (reformatory) (penitentiary) and] by willfully concealing from (—, a) (said) recruiting officer (,) the fact that (, under the name of —,) he had been imprisoned in a (reformatory) (jail) (penitentiary) under a sentence of a civil court; and has, at — and since said enlistment, received (pay) (allowances) (pay and allowances) thereunder.

4. Specification: In that — did procure himself to be enlisted in the military service of the United States, at —, on the — day of —, 19—, (by willfully and falsely representing to —, a recruiting officer, that he was — years of age and) by willfully concealing from (—, a) (said) recruiting officer (,) the fact that he was then (under the age of eighteen years) (a married man) (—); and has, at — and since said enlistment, received (pay) (allowances) (pay and allowances) thereunder.

Charge: Violation of the 55th Article of War.

5. Specification: In that — did at —, on —, unlawfully (enlist) (muster) into the military service of the United States one —, who, as he, the said —, then well knew, was (a) (an) (insane) (intoxicated) (—) person (who had been convicted of a felony) (under the age of 16 years) (—).

Charge: Violation of the 56th Article of War.

6. Specification: In that — did, at —, on the — day of —, 19—, (sign) (allow — to sign) (direct — to sign) the muster roll of —, for the period — to —, 19—, he, the said —, then well knowing that the said muster roll contained the name of — as soldier and a member of said company and as present for duty therewith, and that the said — was (not a soldier) (not a member of said company) (not present

for duty) but (a civilian) (a member of company —) (wholly absent from military duty).

7. Specification: In that — did, at —, on the — day of —, 19—, (sign) (allow — to sign) (direct — to sign) the muster roll of —, for the period — to —, 19—, he, the said —, then well knowing that said muster roll contained a statement that —, a private of said —, was present and mustered, and that said statement was false in that said — was then absent without leave.

8. Specification: In that — did, at —, on the — day of —, 19—, falsely muster as (present) (—) —, when he well knew that said — was not (present) (—), but (absent with leave) (—).

9. Specification: In that — did, at —, on the — day of —, 19—, falsely muster as a — of Company —, — the Infantry, one —, who, as he, the said —, then well knew, was not a soldier, but (a civilian) (—).

10. Specification: In that — did, at —, on the — day of —, 19—, sign the muster roll of —, for the period — to —, 19—, knowing at the time that said muster roll contained a statement that — was (present) (—), and knowing at the time that said — was not (present) (—), but (absent with leave) (—).

11. Specification: In that — did, at —, on or about the — day of —, 19—, wrongfully take from — (the sum of \$—) (—), as a consideration to him —, for knowingly permitting the muster-in roll of — on the mustering in of that — to falsely show as (mustered in) (—), —, who, as he, the said —, then well knew, was (were) not (mustered in) (—).

12. Specification: In that — did, at —, on or about the — day of —, 19—, wrongfully take from — the sum of \$—, as a consideration to him —, for allowing the muster roll of —, for the period of — to —, 19—, to show — as (present and mustered) (—), when, as he, the said —, then well knew, he (they) was (were) not present and mustered as shown on said muster roll.

Charge: Violation of the 57th Article of War.

13. Specification: In that —, being in command of —, and it being his duty to render to the — a return of the state of (the troops under his command) (the — thereto belonging) for the period — to —, did, at —, on the — day of —, 19—, make a return of — for said period, which he then knew to be false in that it showed — as (absent with leave) (—), whereas the said — was, as he, the said —, then well knew, (absent without leave) (—).

14. Specification: In that —, being in command of —, and it being his duty to render to the — a return of the state of (the troops under his command) (the — thereto belonging) for the period — to —, did (on and after the — day of —, 19—) (from — until —), through (neglect) (design), omit to render such return.

Charge: Violation of the 58th Article of War.

15. Specification: In that — did, at —, on or about the — day of —, 19—, attempt to desert the service of the United States by seeking passage to — on the steamship —.

16. Specification: In that — did, at —, on or about the — day of —, 19—, in the (execution of a conspiracy to desert the service of the United States previously entered into with — and —) (presence of —, which the forces of which he was a member were then opposing) attempt to desert the service of the United States.

17. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, desert the service of the United States, and did remain absent in desertion until he (was apprehended) (surrendered himself) at ——— on or about the ——— day of ———, 19—.

18. Specification: In that ——— did, at ——— on or about the ——— day of ———, 19—, in the (execution of a conspiracy to desert the service of the United States previously entered into with ——— and ———) (presence of ———, which the forces of which the accused was a member were then opposing), desert the service of the United States and did remain absent in desertion until he (was apprehended) (surrendered himself) at ——— on or about the ——— day of ———, 19—.

19. Specification: In that ——— and ——— did, at ———, on or about the ——— day of ———, 19—, acting jointly, in pursuance of a common intent and in the execution of a conspiracy to desert the service of the United States previously entered into by them (and in the presence of ———, which the forces of which they were members were then opposing), desert the service of the United States and did remain absent in desertion until they (were apprehended) (surrendered themselves) at ——— on or about the ——— day of ———, 19—.

Charge: Violation of the 59th Article of War.

20. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, (advise) (persuade) ——— to desert the service of the United States by (saying to him ——— ——— ———, or words to that effect) (offering him a position as ——— at ———).

21. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, knowingly assist ——— to desert the service of the United States (by supplying him with a railroad ticket from ——— to ———) (———), he, the said ———, then well knowing that the said ——— intended to use the (railroad ticket) (———) so supplied him in furtherance of his plans to desert.

Charge: Violation of the 60th Article of War.

22. Specification: In that ———, having discovered that ———, a soldier in his command, was a deserter from the (military service) (naval service) (Marine Corps) did, at ———, from about the ——— day of ———, to about the ——— day of ———, 19—, retain said deserter in his command without informing superior authority or the commander of the organization to which the deserter belonged of the presence of said deserter in his command.

Charge: Violation of the 61st Article of War.

23. Specification: In that ———, did, at ———, without proper leave, absent himself from his ——— from about ———, 19—, to about ———, 19—.

24. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, fail to repair at the fixed time to the properly appointed place (of assembly) for ———.

25. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, without proper leave, go from the properly appointed place (of assembly) for ———, after having repaired thereto for the performance of said duty.

Charge: Violation of the 62d Article of War.

26. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, use (orally and publicly) (———) the following (contemptuous) (disrespectful) (contemptuous and disrespectful) words against the ——— of the (United States) (——— in which he was then quartered), to wit: ——— ——— ———, or words to that effect.

Charge: Violation of the 63d Article of War.

27. Specification: In that ——— did, at ———, on or about the ——— day

of —, 19—, behave himself with disrespect toward —, his superior officer, by (saying to him —, or words to that effect) (contemptuously turning from and leaving him while he was talking to him the said —) (—).

Charge: Violation of the 64th Article of War.

28. Specification: In that —, having received a lawful command from —, his superior officer, to —, did at —, on or about the — day of —, 19—, willfully disobey the same.

29. Specification: In that — did, at —, on or about the — day of —, 19—, willfully (draw) (lift up) a — against —, his superior officer, who was then in the execution of his office.

30. Specification: In that — did, at —, on or about the — day of —, 19—, willfully strike —, his superior officer, who was then in the execution of his office, (in) (on) the —, with (a) (his) —.

[Note: For assaults upon officers amounting to felonies see A. W. 93.]

Charge: Violation of the 65th Article of War.

31. Specification: In that —, having received a lawful order from —, who was then in the execution of his office, to —, did at —, on or about the — day of —, 19—, willfully disobey the same.

32. Specification: In that — did, at —, on or about the — day of —, 19—, (attempt) (threaten) to (strike) (—) — [(in) (on) the —] with (a) (his) —, while said — was in the execution of his office.

33. Specification: In that — did, at —, on or about the — day of —, 19—, behave in an (insubordinate) (disrespectful) (insubordinate and disrespectful) manner toward —, who was then in the execution of his office, by (saying to him —, or words to that effect) (—).

34. Specification: In that — did, at —, on or about the — day of —, 19—, willfully (strike) (assault) —, who was then in the execution of his office, by — him (in) (on) the — with (a) (his) —.

[Note: For assaults upon noncommissioned officers amounting to felonies see A. W. 93.]

Charge: Violation of the 66th Article of War.

35. Specification: In that — did, at —, on or about the — day of —, 19—, attempt to create a mutiny in — by urging the members of said — to refuse to obey the order of —, their (commanding) (superior) officer, to —.

36. Specification: In that — did, at —, on or about the — day of —, 19—, cause a mutiny in — by unlawfully assuming control over about — soldiers of said command, and in the execution of such control causing said soldiers to disregard and defy the lawful orders of —, their (commanding) (superior) officer, to (assemble for drill) (—).

37. Specification: In that — did, at —, on or about the — day of —, 19—, voluntarily join in a mutiny which had been begun in — against the authority of —, the commanding officer thereof, and did, in combination with sundry other members of said — assembled on the (parade ground) (—), refuse to (disperse) (do any further duty) (assemble for drill) (—).

Charge: Violation of the 67th Article of War.

38. Specification: In that —, being at — and knowing on the — day of —, 19—, that certain members of — proposed and intended to begin and join in a mutiny against the commanding officer of that —, at — o'clock (a.) (p.) m. on the following day, did fail (wholly) to give

information of said intended mutiny to his commanding officer (until the hour of — on the — day of —, 19—).

39. Specification: In that — did, at —, on or about the — day of —, 19—, join with other members of the — and sundry citizens in an attempt to break into a jail and release a prisoner, did assault and beat the police officers and other civil authorities, and did commit other disorders until overpowered and restrained by a detachment of — sent from the post of — and compelled to return to his quarters.

40. Specifications: In that —, being present at a mutiny among the soldiers of — against the authority of —, the commanding officer thereof, did fail to use his utmost endeavor to suppress the same, in that, having commanded the men of his own company to return to their quarters, he took no means to compel their obedience or reduce them to discipline upon their refusal to obey said command.

Charge: Violation of the 68th Article of War.

41. Specification: In that —, being engaged in a (quarrel) (fray) (disorder) and having been ordered into (arrest) (confinement) by —, did, at —, on or about the — day of —, 19—, [(refuse to obey) (draw a — upon) the said —] [threaten the said — by (saying to him —, or words to that effect) (—)].

Charge: Violation of the 69th Article of War.

42. Specification: In that —, having been placed in (arrest) (confinement) by his (commanding officer) (—) on account of being charged with a (crime) (offense), did at —, on or about the — day of —, 19—, (break his arrest) (escape from said confinement) before he was set at liberty by proper authority.

Charge: Violation of the 71st Article of War.

43. Specification: In that —, being on duty as — at — on or about the — day of —, 19—, did refuse to (receive) (keep) one —, a prisoner duly committed to his charge by —, who, at the time of committing said prisoner, delivered to the said — an account in writing, signed by himself, of the (crime) (offense) charged against said prisoner.

Charge: Violation of the 72d Article of War.

44. Specification: In that —, (having been) (being) on duty as commander of the guard at —, did, on or about the — day of —, 19—, fail to report in writing to the commanding officer of that — (as soon as relieved from his guard) (within 24 hours after the confinement of said prisoner) the name of —, a prisoner committed to his charge, the offense charged against him, and the name of the officer committing him.

Charge: Violation of the 73d Article of War.

45. Specification: In that — did, at —, on or about the — day of —, 19—, [without proper authority release] [through (design) (neglect) (suffer)] —, a prisoner duly committed to his charge to escape.

Charge: Violation of the 74th Article of War.

46. Specification: In that —, being at the time the commanding officer at —, and an application having been duly made to him by the — of — for the (delivery) (apprehension and securing) of —, a (soldier) (officer) under his command, who was accused of a (crime) (offense) committed against the laws of —, did, at —, on the — day of —, 19—, refuse to (deliver said — to said — of —) (aid the said — of — in apprehending and securing the said —).

Charge: Violation of the 75th Article of War.

47. Specification: In that — did, at —, on or about the — day of —, 19—, in disregard of his duty and shamefully (abandon) (deliver up

to the enemy) —, which (it was his duty) (he had been ordered by —, his proper superior officer), to defend.

48. Specification: In that —, while on duty before the enemy, did at —, on the — day of —, 19—, cast away his (rifle) (ammunition) (—).

49. Specification: In that —, being (present with) (in command of) his — while it was engaged with the enemy, did at —, on or about the — day of —, 19—, abandon the said — and (seek safety in the rear) (—), and did fail to rejoin it until (the engagement was concluded) (—).

50. Specification: In that — did, while on duty before the enemy, cause a false alarm in the (camp) (garrison) (quarters) (—) at —, on or about the — day of —, 19—, by needlessly and without authority causing the call to arms to be sounded.

51. Specification: In that — did, while on duty before the enemy, quit his (company) (post) (—), at —, on the — day of —, 19—, for the purpose of (pillaging) (plundering) (pillaging and plundering), and did commit plunder and pillage on the property of one —, a citizen, by forcibly entering the house of said —, against his will, and taking therefrom and appropriating money and effects of the said — of the value of \$—.

52. Specification: In that — did, at —, on or about the — day of —, 19—, run away from his (company) (—), which was then engaged with the enemy, and did not return thereto until (after the engagement had been concluded) (—).

53. Specification: In that —, being an (officer) (soldier) of a force charged with the duty of defending — against an enemy then before it, did at —, on or about the — day of —, 19—, (induce) (seek to (induce) (soldiers) (soldiers and officers) of that force to shamefully (abandon) (deliver up) to the enemy that —, which it was their duty to defend, by saying to said (soldiers) (soldiers and officers) —, or words to that effect.

54. Specification: In that — did, at —, on or about the — day of —, 19—, say to —, who was then, with his company, engaged with the enemy, —, or words to that effect, thereby (inducing) (seeking to induce) said — to [(run away from) (shamefully abandon) his (post)] (—).

55. Specification: In that — did, at —, on or about the — day of —, 19—, say to —, who was then on outpost duty before the enemy, —, or words to that effect, thereby (inducing) (seeking to induce) the said — to [(run away from) (abandon) his (post)] (—).

Charge: Violation of the 76th Article of War.

56. Specification: In that —, being an (officer) (soldier) under the command of —, commanding the (fort) (post) (camp) (guard) (—) of —, which was then threatened by the enemy, did at —, on or about the — day of —, 19—, in combination with other (officers) (soldiers) (officers and soldiers) of said command, by — compel said — to (surrender) (abandon) said (fort) (post) (camp) (guard) (—) of — to the enemy.

57. Specification: In that —, —, and —, being (officers) (soldiers) (officers and soldiers) under the command of —, who was then commanding the (fort) (post) (camp) (guard) (—) of —, which was then threatened by the enemy, did, at —, on or about the — day of —, 19—, acting jointly and in concert, refuse to perform further duty in defense of said (fort) (post) (camp) (guard) (—) of —, and thereby compel the said — to (abandon it) (give it up) to the enemy.

Charge: Violation of the 77th Article of War.

58. Specification: In that —, having received as the proper (countersign) (parole) the word —, did at —, on or about the — day of —, 19—, give to —, a person to whom he knew it was his duty to give the proper (countersign) (parole), the different word — as the proper (countersign) (parole).

59. Specification: In that — did, at —, on or about the — day of —, 19—, make known the (countersign) (parole), to wit, —, to —, known by him, —, to be a person not entitled to receive it.

Charge: Violation of the 78th Article of War.

60. Specification: In that — did, at —, on or about the — day of —, 19—, violate a safeguard, known by him to have been placed over the premises occupied by —, at —, by (overwhelming the guard posted for the protection of the same and violently entering said premises and committing waste and plunder therein) (—).

Charge: Violation of the 79th Article of War.

61. Specification: In that — did, at —, on or about the — day of —, 19—, wrongfully appropriate to (his own use) (—) the following public property taken from the enemy, viz.: — of the value of about \$— and — of the value of about \$—, and all of the total value of about \$—.

62. Specification: In that — did, at —, on or about the — day of —, 19—, neglect to secure for the service of the United States the following property which had been taken from the enemy, viz.: — of the value of about \$— and — of the value of about \$—, and all of the total value of about \$—.

Charge: Violation of the 80th Article of War.

63. Specification: In that — did, at —, on or about the — day of —, 19—, unlawfully (buy) (sell) (—) the following articles of (captured) (abandoned) property, namely: — of the value of about \$— and — of the value of about \$—, and all of the total value of about \$—, thereby [(accepting) (receiving) (accepting and receiving)] [(profit) (benefit) (advantage) (profit, benefit and advantage)] to (himself) [—, his (brother) (—)].

64. Specification: In that — did, at —, on or about the — day of —, 19—, fail to give notice to proper authority that the following (captured) (abandoned) property had come into his (possession) (custody) (control), namely: — of the value of about \$— and — of the value of about \$—, and all of the total value of about \$—.

65. Specification: In that — did, at —, on or about the — day of —, 19—, fail to turn over to the proper authority without delay the following (captured) (abandoned) property which had come into his (possession) (custody) (control), namely: — of the value of about \$— and — of the value of about \$—, and all of the total value of about \$—.

Charge: Violation of the 81st Article of War.

66. Specification: In that — did, at —, on or about the — day of —, 19—, inform a patrol of the enemy's forces of the whereabouts of a military patrol of the United States forces.

67. Specification: In that — did, at —, on or about the — day of —, 19—, knowingly (harbor) (protect) (harbor and protect) —, a person whom he, the said —, then knew to be a member of the enemy's forces, and who was then being sought by a patrol of the United States forces, by (concealing the said member of the enemy's forces in his house) (—).

68. Specification: In that — did, at —, on or about the — day

of —, 19—, directly (hold correspondence with) (give intelligence to) (hold correspondence with and give intelligence to) the enemy by writing and transmitting secretly through the lines to one —, whom he, the said —, then knew to be an (officer) (—) of the enemy's army, a communication (in words and figures as follows) (substantially as follows), to wit.

69. Specification: In that — did, at —, on or about the — day of —, 19—, furnish and deliver to certain members of the enemy's army —, of the value of about \$—, and —, of the value of about \$—, all of the total value of \$—, he then well knowing that the persons to whom said goods were furnished and delivered were enemies of the United States.

Charge: Violation of the 82d Article of War.

70. Specification: In that — did, at —, on or about the — day of —, 19—, (lurk) (act) (lurk and act) as a spy in and about —, the (fortification) (post) (quarters) (encampment) of the Army of the United States there situated, and did there (collect) (attempt to collect) material information in regard to the (numbers) (resources) (operations) (—) of the military forces of the United States, with intent to impart the same to the enemy.

Charge: Violation of the 83d Article of War.

71. Specification: In that — did, at —, on or about the — day of —, 19—, (through neglect) (willfully) suffer —, of the value of \$—, military property belonging to the United States, to be (lost) (spoiled by —) (damaged by —) [wrongfully disposed of by (sale to —) (—)].

Charge: Violation of the 84th Article of War.

72. Specification: In that — did, at —, on or about the — day of —, 19— [(through neglect) (willfully) injure by —] (lose) —, of the value of \$—, issued for use in the military service of the United States.

73. Specification: In that — did at —, on or about the — day of —, 19—, (unlawfully sell to —) (wrongfully dispose of by —) — of the value of \$—, issued for use in the military service of the United States.

Charge: Violation of the 85th Article of War.

74. Specification: In that — was, (in time of war), found drunk while on duty as —, at —, on or about the — day of —, 19—.

Charge: Violation of the 86th Article of War.

75. Specification: In that —, being on guard and posted as a sentinel (in time of war), at —, on or about the — day of —, 19—, was found sleeping on his post.

76. Specification: In that —, being on guard and posted as a sentinel (in time of war), at —, on or about the — day of —, 19—, left his post before he was regularly relieved.

Charge: Violation of the 87th Article of War.

77. Specification: In that —, who was then commanding —, did on or about the — day of —, 19—, become financially interested in the sale of —, brought into said — for the use of the troops thereat by —, by (receiving) (entering into an agreement to receive) from the said — (— per cent of the profits on said sales) (the sum of \$—) as a consideration for the privilege (of —) extended by him to said —.

78. Specification: In that —, who was then commanding —, did, on or about the — day of —, 19—, lay a (duty) (imposition) (duty and imposition) of (— per cent) (—) on the proceeds of all sales of — brought into said —, and did appropriate the moneys collected on account

of said (duty) (imposition) (duty and imposition) to (his own use and benefit) (——).

Charge: Violation of the 88th Article of War.

79. Specification: In that —— did, on or about the —— day of ——, 19——, do violence to ——, an inhabitant of the country, who was bringing (supplies) (provisions) (——) to the (camp) (garrison) (quarters) of the forces of the United States there situated, by striking and beating the said ——.

80. Specification: In that ——, and ——, acting jointly and in concert, did, on or about the —— day of ——, 19——, interfere with ——, an inhabitant of the country, who was bringing (provisions) (supplies) (——) to the (camp) (garrison) (quarters) of the forces of the United States there situated by preventing the said —— from passing over a road leading into said ——, (——).

81. Specification: In that —— did, on or about the —— day of ——, 19——, intimidate ——, an inhabitant of the country, who was bringing (provisions) (supplies) (——) into the (camp) (garrison) (quarters) of the forces of the United States there situated, by [threatening to kill the said —— if he continued to bring (provisions) (supplies) (——) into said (camp) (garrison) (quarters)] (——).

Charge: Violation of the 89th Article of War.

82. Specification: In that —— did at ——, on or about the —— day of ——, 19——, commit a depredation upon (an) (a) (orchard) (——) belonging to —— and situated near the said ——, by [entering the same against the will of the said —— and (removing growing fruit from trees, the property of ——) (——)].

83. Specification: In that —— and —— did at ——, on or about the —— day of ——, 19——, commit a riot in the public streets of said —— by (resisting and fighting against the peace officers of that ——) (——).

84. Specification: In that —— did at ——, on or about the —— day of ——, 19——, willfully destroy a growing crop of oats in a field belonging to —— by (permitting the horses of his troop to graze in said field) (——).

85. Specification: In that —— did at ——, on or about the —— day of ——, 19——, without the authority of his commanding officer (destroy a building belonging to ——) (——).

86. Specification: In that ——, who was then commanding ——, at ——, did, on the —— day of ——, 19——, complaint being made to him that ——, a —— of his command, had (damaged) (destroyed) (damaged and destroyed) (——) ——, the property of ——, refuse to see reparation made to the said —— so far as said ——'s pay would go toward such reparation and as provided for in the 105th Article of War.

Charge: Violation of the 90th Article of War.

87. Specification: In that —— did at ——, on or about the —— day of ——, 19——, use a (reproachful) (provoking) (reproachful and provoking) speech against ——, to wit: ——, or words to that effect, and did accompany said speech with a provoking gesture, to wit (shaking his closed fist in the face of the said ——) (——).

Charge: Violation of the 91st Article of War.

88. Specification: In that ——, being officer of the day at —— and having knowledge that —— and —— intended and were about to engage in a duel near that ——, did on or about the —— day of ——, 19——, connive at the fighting of said duel by knowingly permitting ——, one of the parties to said proposed duel, to leave the post and go toward the place appointed for said duel and at the time and at the hour which he, ——, then knew had been appointed therefor.

89. Specification: In that —, being officer of the day at —, and having knowledge on or about the — day of —, 19—, that a challenge to fight a duel had been sent by — to —, did fail to report the fact promptly to the proper authority.

90. Specification: In that — and — did at —, on or about the — day of —, 19—, fight a duel, using, as weapons therefor, (swords) (pistols) (—).

91. Specification: In that — did at —, on or about the — day of —, 19—, promote a duel between — and — by knowingly acting as a messenger for — and knowingly carrying from said — to said — a challenge to fight a duel.

Charge: Violation of the 92d Article of War.

92. Specification: In that — did, at —, on or about the — day of —, 19—, with malice aforethought, willfully, deliberately, feloniously, unlawfully, and with premeditation kill one —, a human being by (shooting him with a rifle) (—).

93. Specification: In that — did, at —, on or about the — day of —, 19—, forcibly and feloniously against her will, have carnal knowledge of —.

Charge: Violation of the 93d Article of War.

94. Specification: In that — did, at —, on or about the — day of —, 19—, willfully, maliciously, and feloniously burn the (dwelling house) (—) of —.

95. Specification: In that — did, at —, on or about the — day of —, 19—, with intent to (do him bodily harm), (commit a felony, viz., —) feloniously (strike) (—) (in) (on) the — with a —.

96. Specification: In that — did, at —, on or about the — day of —, 19—, in the nighttime break into and enter the (dwelling house) (—) of —, with intent to commit a felony, viz., —.

97. Specification: In that — did, at —, on or about the — day of —, 19—, fraudulently convert to his own use and benefit —, value about \$—, the property of —, intrusted to him (by the said —) (for — by —).

98. Specification: In that — did, at —, on or about the — day of —, 19—, feloniously take, steal, and carry away —, value about \$—, the property of —.

99. Specification: In that — did, at —, on or about the — day of —, 19—, willfully, feloniously, and unlawfully kill —, by — him (in) (on) the — with a —.

100. Specification: In that — did, at —, on or about the — day of —, 19—, unlawfully, willfully, and feloniously cut off the (hand) (arm) (—) of —. (For the offense of maiming, see Specification No. 173.)

101. Specification: In that — (having) (did, on the — day of —, 19—) in a (trial by court-martial of —) (deposition for use in a trial by court-martial of —) (—) (taken) (take) an oath, before a competent (tribunal) (officer) (person) that [he would (testify) (declare) (depose) (certify) truly] [a (declaration) (deposition) (certificate) (—) subscribed by him was true] [did at — on or about the — day of —, 19—, willfully and contrary to such oath, (state) (subscribe a statement) in substance that —] which (statement) (declaration) (deposition) (certificate) was a material matter and which statement he did not then believe to be true.

102. Specification: In that — did, at —, on or about the — day of —, 19—, by (force and violence) (putting him in fear) feloniously take from the (person) (presence) of —, —, value about \$—.

Charge: Violation of the 94th Article of War.

103. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, (make) (cause to be made by ———) a claim against the (United States) (Quartermaster at ———) (——) in the amount of \$——, for (private property alleged to have been (lost) (destroyed) in the military service) (——), which claim was (false) (fraudulent) (false and fraudulent) in that ——— and was then known by the said ——— to be (false) (fraudulent) (false and fraudulent).

104. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, (present) (cause to be presented by ———) for (approval) (payment) (approval and payment) a claim against the (United States) (Quartermaster at ———) (——) in the amount of \$——, for (services alleged to have been rendered to the United States by ———) (——), which claim was (false) (fraudulent) (false and fraudulent) in that ——— and was then known by the said ——— to be (false) (fraudulent) (false and fraudulent).

105. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, enter into an (agreement) (conspiracy) (agreement and conspiracy) with ———, to defraud the United States by (obtaining) (aiding ——— to obtain) the (allowance) (payment) (allowance and payment) of a (false) (fraudulent) (false and fraudulent) claim against the United States in the amount of \$——, for (supplies) (——) alleged to have been furnished to the United States by ———, which claim was (false) (fraudulent) (false and fraudulent) in that ——— and was then known by the said ——— to be (false) (fraudulent) (false and fraudulent).

106. Specification: In that ———, for the purpose of (obtaining) (aiding others to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at ———) (——), did, at ———, on or about the ——— day of ———, 19—, (make) (use) (make and use) a ———, which said ———, as he, ———, then knew contained a statement that ———, which statement was (false) (fraudulent) (false and fraudulent) in that ——— and was then known by the said ——— to be (false) (fraudulent) (false and fraudulent).

107. Specification: In that ———, for the purpose of (obtaining) (aiding others to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at ———) (——), did, at ———, on or about the ——— day of ———, 19—, (advise) (procure) (advise and procure) the (making) (use) (making and use) of a ——— by ———, which said ———, as he then knew, contained a statement that ———, which statement was (false) (fraudulent) (false and fraudulent) in that ———, and was then known by the said ——— to be (false) (fraudulent) (false and fraudulent).

108. Specification: In that ———, for the purpose of (obtaining) (aiding others to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at ———) (——), did, at ———, on or about the ——— day of ———, 19—, (make) (procure the making of) (advise the making of) (advise and procure the making of) an oath by ——— that ———, which said oath was false in that ———, and was then known by the said ——— to be false.

109. Specification: In that ———, for the purpose of (obtaining) (aiding others to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at ———) (——), did, at ———, on or about the ——— day of ———, 19—, (forge) (——) (forge and counterfeit) (the signature of ——— upon a ——— words and figure

110. Specification: In that —, for the purpose of (obtaining) (aiding — to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at —) (—), did, at —, on or about the — day of —, 19—, (advise) (procure) (advise and procure) the (forging) (counterfeiting) (forging and counterfeiting) by — of (the signature of — upon a —) (a —) in words and figures as follows: —.

111. Specification: In that —, for the purpose of (obtaining) (aiding others to obtain) the (approval) (allowance) (payment) (approval, allowance, and payment) of a claim against the (United States) (Quartermaster at —) (—), did, at —, on or about the — day of —, 19—, (use) (advise the use of) (procure the use of) a — in words and figures as follows: — (the same) (the signature thereon) being (forged) (counterfeited) (forged and counterfeited), and then known by the said — to be (forged) (counterfeited) (forged and counterfeited).

112. Specification: In that —, having (charge) (possession) (custody) (control) of (money) (—) of the United States, (furnished) (intended) (furnished and intended) for the military service thereof, did, at —, on or about the — day of —, 19—, knowingly (deliver) (cause to be delivered) to —, the said —, having authority to receive the same, (an) (a) (amount) (number) (quantity) which, as he, —, then knew was (— dollars — cents) (—) less than the (amount) (number) (quantity) for which he received a (certificate) (receipt), from the said —.

113. Specification: In that —, being authorized to (make) (deliver) (make and deliver) a paper certifying the receipt of property of the United States (furnished) (intended) (furnished and intended) for the military service thereof, did, at —, on or about the — day of —, 19—, (make) (deliver) (make and deliver) to — a writing in words and figures as follows: —, without having full knowledge of the truth of the statements therein contained and with the intent to defraud the United States.

114. Specification: In that — did, at —, on or about the — day of —, 19— (feloniously take, steal, and carry away) (embezzle) (knowingly and willfully misappropriate) (apply to his own use) (apply to his own benefit) (apply to his own use and benefit) (wrongfully sell) (knowingly and without proper authority sell) (wrongfully and knowingly sell), — of the value of about \$—, property of the United States (furnished) (intended) (furnished and intended) for the military service thereof.

115. Specification: In that — did, at —, on or about the — day of —, 19—, knowingly (purchase) (receive in pledge) from —, (in) (employed in) the military service of the United States for an (obligation) (indebtedness) —, of the value of about \$—, property of the United States, the said — not having the lawful right to (sell) (pledge) the same.

Charge: Violation of the 95th Article of War.

116. Specification: In that —, being indebted to various creditors in the sum of about \$— and being without either means or probable means with which to liquidate within a reasonable time said indebtedness, did, at —, on or about the — day of —, 19—, unnecessarily contract with — a further indebtedness of about \$—.

117. Specification: In that — was, at —, on or about the — day of —, 19—, so (drunk) (disorderly) (drunk and disorderly) while in uniform, in the presence and hearing of several persons, as to disgrace the military service.

118. Specification: In that —, having assigned to — his claim (against

the United States) for pay in full for the month of —, 19—, did, at —, on or about the — day of —, 19—, assign to — a second claim against the United States for pay in full for the said month of —, 19—, which second claim was by him known to be false and fraudulent.

119. Specification: In that —, being indebted to — in the sum of \$— for —, which amount became due and payable (on) (about) (on or about) —, did, at —, on or about the — day of —, 19—, without due cause fail and neglect to pay said debt, notwithstanding the fact that he had been repeatedly requested by the said — to pay the amount thereof, thereby bringing discredit upon the military service.

120. Specification: In that —, having on or about the — day of 19— become indebted to — in the sum of about \$— for —, and having failed without due cause to liquidate said indebtedness, and having on or about the — day of —, 19—, promised in writing to said — that he would on or about the — day of —, 19—, (settle such indebtedness in full) (pay on such indebtedness the sum of \$—), did, without due cause, at —, on or about the — day of 19—, to the disgrace of the military service, fail to keep said promise.

121. Specification: In that —, having made and executed in due form his voucher for pay as — for the month of —, 19—, and having duly assigned the said voucher to —, did at — on or about the — day of —, 19—, while the said voucher and the assignment thereof remained in force and effect, falsely certify with his official signature to the correctness of another voucher for pay for the said month of —, 19—, duly made, executed, and assigned to —, which said certificate was in words as follows: —.

122. Specification: In that — did, at —, on or about the — day of —, 19—, with intent to deceive —, officially (report) (state) to the said —, that —, which (report) (statement) was (known by the said — to be untrue) (believed by the said — to be untrue) (made by the said — with disregard of a knowledge of the facts) (made by the said — as true when he did not know it to be true) in that —.

123. Specification: In that —, with intent to defraud —, did, at —, on or about the — day of —, 19—, unlawfully pretend to — that —, well knowing that said pretenses were false, and by means thereof did fraudulently obtain from the said — (the sum of \$—) (merchandise of the value \$—) (—).

124. Specification: In that —, having at —, on or about the — day of —, 19—, voluntarily given his pledge in words and figures as follows: —, which pledge was accepted by his commanding officer —, did, at —, on or about the — day of —, 19—, in disregard of his honor violate said pledge by —.

Charge: Violation of the 96th Article of War.

125. Specification: In that —, being on guard as a —, did, at —, on or about the — day of —, 19—, abandon his guard.

[Note: This form will be used only in case where absence from guard is coupled with an intent not to return during the tour of duty. Ordinary absence from guard duty will be charged under A. W. 61.]

126. Specification: In that — did, at —, on or about the — day of —, 19—, [kick a public (horse) (—) in the belly] (—).

127. Specification: In that —, a (sentinel) (overseer) (—), being in charge of prisoners, did, at —, on or about the — day of —, 19—, allow —, a prisoner under his charge, to (go to) (enter) (go to and enter) an unauthorized place, to wit: —.

128. Specification: In that —, a (sentinel) (overseer) (—), being in charge of prisoners, did, at —, on or about the — day of —, 19—, allow —, a prisoner under his charge, to (hold unauthorized conversation with —) (loiter) (neglect his task by —) (obtain —) (—).

129. Specification: In that —, a (sentinel) (overseer) (—), being in charge of prisoners and having received a lawful order from —, to require a prisoner under his charge to —, did, at —, on or about the — day of —, 19—, fail to obey the same.

130. Specification: In that — did, at —, on or about the — day of —, 19—, without authority, appear in civilian clothing.

131. Specification: In that — did, at —, on or about the — day of —, 19—, appear (at) (on) — (without his —) (with his — not buttoned) (in an unclean —) (—).

132. Specification: In that — did, at —, on or about the — day of —, 19—, attempt to (strike) (—) — (in) (on) the — with —.

[Note: For assaults upon officers and noncommissioned officers amounting to felonies see A. W. 93.]

133. Specification: In that — did, at —, on or about the — day of —, 19—, (strike) (—) — (in) (on) the — with —.

[Note: See note under Specification 132.]

134. Specification: In that — did, at — (on or about the — day of —, 19—), (between — and —), with the intention of evading his (duty) (—) as a (soldier) (—), feign (illness), (disability), (insanity), (—).

135. Specification: In that — did, at —, on or about the — day of —, 19— (attempt to), (threaten to) (strike) (—) —, a sentinel in the execution of his duty, [(in) (on) the —] with —.

136. Specification: In that — did, at —, on or about the — day of —, 19—, strike (—) —, a sentinel in the execution of his duty, (in) (on) the — with —.

137. Specification: In that —, a prisoner in confinement serving sentence in the post guard house, (—), did, at —, on or about the — day of —, 19—, (escape) (attempt to escape) from such confinement.

138. Specification: In that —, a prisoner, did, at —, on or about the — day of —, 19—, use the following disrespectful language to —, a sentinel in the execution of his duty: “—,” or words to that effect.

139. Specification: In that —, having been restricted to the limits of —, did, at —, on or about the — day of —, 19—, break the same by going to —.

140. Specification: In that — did, at —, on or about the — day of —, 19—, unlawfully carry a concealed weapon, viz., a —.

141. Specification: In that —, did, at —, on or about the — day of —, 19—, (urinate) (defecate) (—) (on the floor of the squad room) (—).

142. Specification: In that — did, at —, on or about the — day of —, 19—, willfully and unlawfully [(conceal) (remove) (mutilate) (obliterate) (destroy)] [attempt to (conceal) (remove) (mutilate) (obliterate) (destroy)] [take and carry away with intent to (conceal) (remove) (mutilate) (obliterate) (destroy) (steal)] a public record, to wit: (the descriptive list of —) (—).

143. Specification: In that —, a prisoner in confinement in the post guard house, (—), did, at —, on or about the — day of —,

19—, conspire with ——— and ——— to escape from such confinement. (For joint charge see par. 69.)

144. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, willfully destroy ———, value about \$———, property of the United States.

145. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, through carelessness, discharge a (service rifle) (———) in his (squad room) (in his tent) (———).

146. Specification: In that ———, having received a lawful order from ———, a sentinel in the execution of his duty, to ———, did, at ———, on or about the ——— day of ———, 19—, (fail to obey) (willfully disobey) the same.

147. Specification: In that ——— was, at ———, on or about the ——— day of ———, 19—, (drunk) (disorderly) (drunk and disorderly) in (camp) (post) (quarters) (———).

148. Specification: In that ——— was, at ———, on or about the ——— day of ———, 19—, (drunk) (disorderly) (drunk and disorderly) in uniform and did thereby bring discredit upon the military service.

149. Specification: In that ———, a sentinel (———) in charge of prisoners, did, at ———, on or about the ——— day of ———, 19—, drink intoxicating liquor with ———, a prisoner under his charge.

150. Specification: In that ———, a prisoner, was, at ———, on or about the ——— day of ———, 19—, found drunk.

151. Specification: In that ———, having received a lawful order from ——— to ———, the said ——— being in the execution of his office, did, at ———, on or about the ——— day of ———, 19—, fail to obey the same.

152. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, violate (standing orders) (regulations) of ——— by ———.

153. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, wrongfully use ———, a narcotic drug.

154. Specification: In that ———, being indebted to ——— in the sum of \$———, which amount became due and payable (on) (about) ———, did, at ———, on or about the ——— day of ———, 19—, without due cause, fail and neglect to pay said debt, notwithstanding the fact that he had been repeatedly requested by the said ——— to pay the amount thereof, thereby bringing discredit upon the military service.

155. Specification: In that ———, having been directed to report for prophylactic treatment at (the post hospital) (———) did, at ———, on or about the ——— day of ———, 19—, fail to report as directed.

156. Specification: In that ——— did, at ———, on or about the ——— day of ———, 19—, with intent to deceive ———, officially (report) (state) to the said ———, that ———, which (report) (statement) was (known by the said ——— to be untrue) (believed by the said ——— to be untrue) (made by the said ——— with disregard of a knowledge of the facts) (made by the said ——— as true when he did not know it to be true) in that ———.

157. Specification: In that ———, (having) (did on the ——— day of ———, 19—,) in a (trial by court-martial of ———) (deposition for use in a trial by court-martial of ———) (———) (taken) (take) an oath, before a competent (tribunal) (officer) (person) that [(he would testify) (declare) (depose) (certify) (truly)] [a (declaration) (deposition) (certificate) (———) subscribed by him was true] did, at ———, on or about the ——— day of ———, 19—, willfully and contrary to such oath, (state) (subscribe a statement) in substance that ———, which (statement) (declaration) (deposition) (certificate) (———) he did not then believe to be true.

{Note: For charging perjury see Specification No. 101.]

158. Specification: In that — did, at —, on or about the — day of —, 19—, with intent to defraud, feloniously forge (in its entirety) [by (altering —) (erasing —) (adding —)] a certain (check) (—) in the following words and figures —.

159. Specification: In that (Sergeant) (Corporal) — did, at —, on or about the — day of —, 19—, gamble with Privates — and —.

160. Specification: In that — did, at —, on or about the — day of —, 19—, gamble in quarters, in violation of orders.

161. Specification: In that — did, at —, on or about the — day of —, 19—, while (at a barrack window) (—) indecently expose to public view his (—).

162. Specification: In that — (for and in behalf of one —) did, at —, on or about the — day of —, 19—, loan to — \$—, under an agreement whereby he, the said —, was to receive for the use of said money for — (months) (days) interest at the rate of — per cent per (annum) (month) (the sum of \$—), thereby (demanding) (receiving) (demanding and receiving) an usurious rate of interest for said loan.

163. Specification: In that —, while posted as a sentinel, did, at —, on or about the — day of —, 19—, loiter on his post.

164. Specification: In that —, with intent to defraud, did, at —, on or about the — day of —, 19—, unlawfully pretend to — that —, well knowing that said pretenses were false and by means thereof did fraudulently obtain from the said — (the sum of \$—) (merchandise of the value of \$—) (—).

165. Specification: In that —, while suffering (with) (from) —, did, at —, on or about the — day of —, 19—, refuse to submit to the (dental or medical treatment) (surgical operation) prescribed by —, the attending (dental) surgeon for the (disease) (injury), the said (treatment) (operation) consisting in —, being necessary and being without appreciable risk to his life.

166. Specification: In that — did, at —, on or about the — day of —, 19—, willfully maim himself in the — by (shooting himself with —) (—), thereby unfitting himself for the full performance of military service.

167. Specification: In that —, while posted as a sentinel, did, at —, on or about the — day of —, 19—, sit down on his post.

168. Specification: In that — did, at —, on or about the — day of —, 19—, commit sodomy upon the person of one —.

[Note: If the acts alleged do not amount to sodomy as defined in par. 443, the acts committed will be accurately described in the specification.]

169. Specification: In that — did, at —, on or about the — day of —, 19—, while accompanying his organization on (a practice march) (maneuvers) straggle.

170. Specification: In that — did, at —, on or about the — day of —, 19—, procure one — to commit perjury, by inducing him, —, to take an oath before a competent (tribunal) (officer) (person) in a (trial by court-martial of —) (deposition for use in a trial by court-martial of —) (—) that he, the said —, would (testify) (declare) (depose) (certify) truly [a (declaration) (deposition) (certificate) (—) subscribed by him was true], willfully and contrary to such oath, and, by testifying (stating, etc.) as follows: —, which testimony (declaration, etc.) was (material) (a material matter) and which he, —, did not then believe to be true.

171. Specification: In that — did, at —, on —, with intent to

defraud, feloniously utter to — as true a certain (written instrument) (—), in the following words and figures, “—,” the said — well knowing that the said (instrument) (—) was forged.

172. Specification: In that —, a prisoner on parole, did, at —, on or about the — day of —, 19—, break his parole by —.

173. Specification: In that — did, at —, on or about the — day of —, 19—, with intent to (maim) (disfigure) —, willfully and feloniously [(cut) (bite) (—) the (nose) (ear) (—) of] [(throw) (pour) corrosive acid (—) upon] the said —. (For mayhem, see Specification No. 100.)

APPENDIX 5.

SUGGESTIONS FOR TRIAL JUDGE ADVOCATES.

The judge advocate of a general or special court-martial shall prosecute in the name of the United States, and shall, under the direction of the court, prepare the record of its proceedings. (A. W. 17.)

The following notes, indicating more or less in proper sequence certain action usually proper to be taken by a trial judge advocate, may be found useful:

1. UPON RECEIPT BY AN OFFICER OF AN ORDER APPOINTING HIM JUDGE ADVOCATE OF A COURT-MARTIAL.

(a) Examine the order carefully and take appropriate action to cause the correction of any substantial irregularity therein.

(b) Examine and study such portions of the Manual for Courts-Martial, Digest of Opinions of the Judge Advocates General, Army Regulations, and War Department or other orders affecting courts-martial as may appear desirable. He should, in this connection, give particular attention to the duties of trial judge advocates, to the procedure of courts-martial, and to the matter of evidence.

2. UPON RECEIPT OF CHARGES IN A CASE.

(a) Prepare an envelope to contain the papers pertaining thereto.

(b) Examine the charges and all papers received to see that none appear to be missing, that the charges appear to be correctly drawn, that the evidence of previous convictions is complete and correct, especially as to dates, authentication, proper signatures, etc.

(c) Make authorized necessary changes in charges and take proper action in connection with defects, if any, found in evidence of previous convictions.

(d) Report to the appointing authority necessary or desirable changes which the judge advocate is not authorized to make.

(e) Furnish the accused, if he so desires, a copy of the charges; and, if he desires to state, ascertain from him how he intends to plead.

(f) Ascertain whether accused desires counsel; and if so, ascertain whether he wishes a particular person; and if so, whom.

(g) Arrange for counsel, if desired to do so.

(h) Prepare case for trial, investigating it thoroughly, and determining upon plan of prosecution.

- (i) Arrange with president date and time of meeting of court.
- (j) Arrange for court-martial room, see that it is in order, provided with necessary tables, chairs, stationery, and room to be heated, if necessary.
- (k) Notify all members of date and time of meeting and arrange for presence of other necessary persons, including the accused and his counsel, reporter, interpreter, if required, and witnesses.
- (l) Arrange to have at trial such books, etc., as may be required. The following are frequently found necessary or useful:
 - Manual for Courts-Martial.
 - Digest of Opinions, Judge Advocates General.
 - Standard Text on Military Law.
 - Ordnance Price List.
 - Clothing Price List.
- (m) Determine maximum punishment, if any, imposable upon conviction of each of the several offenses charged, and note same on slip for use of court in the event of a conviction.

3. UPON THE ASSEMBLING OF THE COURT.

- (a) Note officers present and absent.
- (b) When court appears to be ready to proceed, announce the readiness of the prosecution to proceed with trial of ———, who desires to introduce ——— as counsel, or does not desire to introduce counsel.
- (c) Swear reporter, if any.
- (d) If a general court-martial, ask accused if he desires a copy of the record of his trial. If he does not, do not have copy made; if he wishes copy, direct reporter to prepare one.
- (e) Read aloud to accused the order appointing the court and each modifying order.
- (f) Ask accused if he objects to being tried by any member present named in the order or orders.
- (g) After action on challenge, if any made, has been had, again ask the accused whether he objects as above. Continue this until accused has no further objection.
- (h) Swear members of court.
- (i) Be sworn by president.
- (j) Read charges and specifications aloud slowly to the accused, and, having done so, ask him how he pleads to the first specification, first charge—if necessary rereading to him the specification; then how he pleads to the second specification, first charge, etc.; then to the first charge, etc.
- (k) If there be a plea of guilty, the president makes to accused the required explanations and asks him the required questions.
- (l) Read to court from chapter on punitive articles the gist of each of the several offenses charged.
- (m) Introduce and swear witnesses for the prosecution. In some cases it may be desirable to acquaint the court with the particular specification with which the testimony of a particular witness is connected.
- (n) In all cases attempt to establish by evidence each of the several specifications, except such elements as may be the subjects of judicial notice or as are admitted.
- (o) Examine each witness, having careful regard for the rules of evidence.

- (p) Offer opportunity to cross-examine.
- (q) Re-examine, if desirable.
- (r) Ask court if there are any questions by the court.
- (s) If any witness is recalled, remind him that he is still under oath.
- (t) When the prosecution has nothing further to offer for the time, announce that the prosecution rests.
- (u) Swear witnesses for defense, in succession, and cross-examine so far as desirable.
- (v) After defense rests, swear and examine witnesses, if any, in rebuttal for prosecution.
- (w) If the accused neither testifies nor makes a statement, the president makes to him the required explanation and asks him the required questions.
- (x) Offer accused opportunity to make a statement.
- (y) Make closing statement, if any.

4. ADJOURNMENT DURING TRIAL.

- (a) Note time of adjournment.
- (b) Arrange, if practicable, to have completed record of proceedings to date ready before next assembling of court.
- (c) Subscribe the record of proceedings for the day.

5. FINDINGS.

(a) After both prosecution and defense have concluded, the court closes for findings, and in the case of a person not a soldier to award sentence upon conviction.

(b) Upon conviction of a soldier, the court opens for the purpose of receiving evidence of previous convictions, if there be any.

(1) Read aloud duly authenticated evidence of previous convictions referred to the court by the appointing authority.

(2) Invite attention of court to any apparent irregularity in the evidence of previous convictions.

(3) Ask the accused whether the evidence of the several previous convictions and the statement of service as shown on the charge sheet are correct.

(4) Invite the attention of the court to any apparent irregularity in the findings.

6. SENTENCE.

(a) The court will then close to determine upon and award the sentence.

(b) After awarding sentence the court notifies the judge advocate of the same.

(c) Invite the attention of the court to any apparent irregularity in the sentence.

7. ADJOURNMENT AT CLOSE OF TRIAL.

(a) After sentence has been awarded the court either proceeds to other business or adjourns.

(b) Note time of proceeding to other business or of adjournment.

8. AFTER TRIAL.

(a) Complete vouchers for civilian witnesses and deliver same, if practicable, before the witness leaves.

(b) Take proper measures to insure the security of the findings and sentence, if recorded, and that they are not disclosed to any but the proper authority.

(c) When record is received back from reporter:

(1) Examine carefully to see that it is in proper form, complete, and correct as to both form and substance.

(2) Make proper notation on index sheet as to copy of record.

(3) See that copies of evidence of previous convictions are correct, certify same, and return originals to organizations.

(4) If not so attached, attach index sheet and all exhibits.

(5) See that record is securely bound.

(d) Enter findings and sentence.

(e) If findings and sentence are typewritten, add proper certificate.

(f) Authenticate record.

(g) Have president authenticate record.

(h) Certify original voucher and send it to reporter or to a near disbursing quartermaster, and inclose copy with record.

(i) Verify completeness and correctness of record by seeing that, so far as necessary in the particular case, each requirement stated in Chapter XV, Section I, paragraph 357 (b) has been complied with.

(j) Indorse and forward charges, accompanied by record of trial and all other papers received with the case, to the appointing authority.

9. WEEKLY REPORT.

Each Saturday report through the president of the court and the commanding officer all charges which have not been returned to the appointing authority, showing date of receipt of each and reasons for delay in trial.

10. RECORD WHICH MAY BE KEPT.

It is suggested that when deemed desirable at least the following record be kept by the trial judge advocate in each case. This record may be conveniently kept on an envelope to be used as a container for the charges and various papers:

Date of receipt by him of charges or other papers.

Date of preliminary consultation by him with the accused.

How accused intends to plead, if stated by him.

Counsel:

Desired?

If so, name.

If so, date on which commanding officer so informed.

Date on which judge advocate informed of appointment of counsel.

Result of examination in preparing for trial, and dates and other necessary facts pertaining to each other incident connected with the case, such as mailing interrogatories, subpoenaing witnesses, etc.

Date of trial.

Date and hour record received back from reporter.

Date and hour record forwarded to appointing authority.

Date of return to commanding officer of evidence of previous convictions, if any, to be so returned.

APPENDIX 6.

FORM FOR RECORD OF TRIAL BY GENERAL COURT-MARTIAL AND REVISION PROCEEDINGS.RECORD OF TRIAL BY GENERAL COURT-MARTIAL¹ OF

INDEX.

Page.

| | |
|-------------------------------------|-------|
| Arraignment..... | ..... |
| Pleas..... | ..... |
| Statement by accused..... | ..... |
| Address by counsel..... | ..... |
| Reply by judge advocate..... | ..... |
| Findings..... | ..... |
| Previous convictions submitted..... | ..... |
| Sentence (or acquittal)..... | ..... |
| Proceedings in revision..... | ..... |

Testimony.

| Name of witness. | Direct. | Cross. | Redirect. | Examination by court. | Recalled. |
|------------------|---------|--------|-----------|-----------------------|-----------|
| | Page. | Page. | Page. | Page. | Page. |
| | | | | | |
| | | | | | |
| | | | | | |

Exhibits.

| | Number. | Page where introduced. |
|-----------------------------|---------|------------------------|
| Deposition of Capt.———..... | | |
| Deposition of Pvt.———..... | | |
| Letter of———..... | | |

Carbon copy of the record { not desired by accused.²
furnished the accused.

¹ See "Courts-martial, Records of trial, Chap. XV." The record will be clear and legible and, if practicable, without erasure or interlineation.

Erasures or interlineations will be authenticated by the initials of the judge advocate or of the president, or, in a proper case, of the assistant judge advocate.

The pages of the record will be numbered at the bottom, and margins of 1 inch will be left at the top, bottom, and left side of each page.

² Line out inappropriate words.

Proceedings of a general court-martial which convened at ———, ———, pursuant to the following order:

(Here insert a literal copy of the order appointing the court and, following it, copies of any orders modifying the detail.)

Fort ———, ———,
—————, 19—.

The court met pursuant to the foregoing order at ——— o'clock —. m.

PRESENT.³

Maj. ———, 5th Cavalry.

Capt. ———, Medical Corps.

First Lieut. ———, 10th Infantry.

First Lieut. ———, 5th Cavalry.

Second Lieut. ———, Coast Artillery Corps.

First Lieut. ———, 5th Cavalry, judge advocate.

Second Lieut. ———, 29th Infantry, assistant judge advocate.

ABSENT.⁴

Capt. ———, Coast Artillery Corps (detached service).

Second Lieut. ———, 10th Infantry (leave of absence).

The court proceeded to the trial of Private ———, Company ———, ——— Infantry, who, on appearing before the court, stated that he did not desire counsel or introduced ——— as counsel.

————— was sworn as reporter.

Capt. ——— announced that he was the accuser and was excused and withdrew.

(If an interpreter is to be used he should be sworn when his services are required.)⁵

The order appointing the court (and the order or orders modifying the detail, if any) was (or were) read to the accused, and he was asked if he objected to being tried by any member present named therein; to which he replied in the negative; or

Defense: (Insert statement.)⁶

Captain ———:

(Insert the statement of the challenged member, who ordinarily should respond to the challenge by briefly admitting or denying the grounds of the challenge. Should the accused, after the statement, desire to call upon the member to testify as to his competency, the record should continue:)⁷

³ In the record of the proceedings of a court-martial at its organization for the trial of a case the officers detailed as members, judge advocate, and assistant judge advocate will be noted by name as present or absent. In the record of the proceedings of subsequent sessions in the same case (except in proceedings in revision) the following form of words will be used, subject to such modification as the facts may require: "Present, all the members of the court, the judge advocate, and the assistant judge advocate." When the absence of an officer who has not qualified or who has been relieved or excused as a member has been accounted for, no further note will be made of it.

⁴ A member of a court-martial who knows, or has reason to believe, that he will, for proper reason, be absent from a session of the court, will inform the judge advocate accordingly. When a member of a court-martial is absent from a session thereof, the judge advocate will cause that fact, together with the reason for such absence, if known to him, to be shown in the record of the proceedings. If the reason for such absence is not known to the judge advocate, he will cause the record to show the member as absent, cause unknown.

⁵ Not to be copied into the record.

The accused having requested that the challenged member be sworn as to his competency to act as a member of the court, ——— was sworn by the judge advocate and testified as follows:

The court was closed, and on being opened the president announced in the presence of the accused and his counsel that the challenge was not sustained or that the challenge was sustained.

If the challenge is sustained: ——— then withdrew.

The accused was asked if he objected to any other member present, to which he replied in the negative, or

Defense:

(Insert objection in full, record, and continue as before until accused replies in the negative.)^a

The members of the court, the judge advocate, and the assistant judge advocate were then sworn.

(If delay is desired, request should now be made and the proceedings recorded. If no continuance is requested, the record should continue:)^a

The accused was then arraigned upon the following charges and specifications:^a

Charge I: Violation of the ——— article of war.

Specification: In that, etc.

Charge II: Violation of the ——— article of war.

Specification 1: In that, etc.

Specification 2: In that, etc.

———, Capt. ——— Infantry.

To which the accused pleaded:^a

To the specification, Charge I: Guilty or Not guilty.

To Charge I: Guilty or Not guilty.

To Specification 1, Charge II: Guilty or Not guilty.

To Specification 2, Charge II: Guilty or Not guilty.

To Charge II: Guilty or Not guilty.

The paragraphs of the Manual for Courts-martial that set out the gist of each of the several offenses were read to the court by the judge advocate.

Sergt. John Jones, Company ———, ——— Infantry, a witness for the prosecution, was sworn and testified as follows:

Questions by prosecution:

Q. Do you know the accused? If so, state who he is.

A. I do; Pvt. ———, Company ———, ——— Infantry.

(The succeeding questions of the prosecution and their answers should follow in order.)^a

^a All words that precede the charge proper are not parts of the charges and will not be copied into the record, but the name, rank, and organization of the officer subscribing the charges will be copied into the record after the charges and specifications.

^a In case the accused pleads guilty in whole or in part to any charge or specification, the record will show the explanation of the president and the reply of the accused required by par. 154 (d).

^a The record should set forth fully all the testimony introduced upon the trial, the oral portion as nearly as practicable in the precise words of the witness. If the court should decide to strike out any part, it will not be literally stricken out or omitted from the record, but will not be thereafter considered as part of the evidence.

Questions by defense:

Q. _____?

A. _____.

(If the defense declines to cross-examine the witness, the record should state:)*

The defense declined to cross-examine the witness.

Questions by prosecution:

Q. _____?

A. _____.

Questions by defense:

Q. _____?

A. _____.

Questions by court:

Q. _____?

A. _____.

Prosecution: (Insert objection.)*

Member: (Insert reply, etc.)*

(If the accused or another member object, the record would proceed in a corresponding way.)*

The court was closed, and on being opened the president announced in the presence of the accused and his counsel that the objection was sustained or was not sustained.

(In the latter case the record should continue:)*

The question was then repeated:

A. _____.

(If the court considers it necessary to hear the testimony of the witness read or the witness desires to have any part of his testimony read for correction, the record will show the fact and the corrections, if any.)*

(After the proper foundation for the introduction of a writing has been laid the record will continue.)*

Prosecution: "I offer in evidence the" (Describe the writing or other proposed exhibit.)*

Defense: (Insert his reply. If there is no objection the record will continue.)*

The paper (or other proposed exhibit*) was then received in evidence and is appended marked—* (insert the number of the exhibit*).

(If there is objection the record will continue by stating any further remarks of the prosecution.)*

The court was closed, and on being opened the president announced in the presence of the accused and his counsel that the objection was sustained (or was not sustained).

(If the objection is not sustained the record will continue as in the case where there is no objection. If the objection is sustained there will be no further entry.)*

(If it is the defense that seeks to introduce the writing, the record would proceed in a corresponding manner.)*

(At the close of the prosecution the record should continue.)*

* All documents and papers made part of the proceedings, or copies of them, will be securely fastened (but not pasted) to the record, in the order of their introduction, after the space left for the remarks of the reviewing authority, and marked "1," "2," "3," etc., so as to afford easy reference. Documents or other writings, or matter excluded by the court will not ordinarily be appended to the record, but the record should simply specify the character of the writings and the grounds upon which they were ruled out.

Prosecution: The prosecution rests.

(If the court adjourns to meet another day the record should continue.)⁷

The court then, at — o'clock —. m., adjourned to meet at — o'clock —. m. on —.

_____,
First Lieutenant, 5th Cavalry, Judge Advocate.
Fort _____, _____, 19—.

The court met, pursuant to adjournment, at — o'clock —. m.

Present:

All the members of the court, the judge advocate, and the assistant judge advocate.⁸

The accused, his counsel, and the reporter were also present.

(If the proceedings of the previous day are required to be read, the fact will be recorded in the following form:)⁹

The proceedings of _____ were read and approved, or corrected, as follows:

(In the latter case enumerate corrections, giving page and line on which they occur.)⁹

Corpl. John Smith, Company _____, _____ Infantry, a witness for the defense, was sworn and testified as follows:

Questions by prosecution:

(When considered desirable, the first question may be as to the identity of the witness.)⁹

Q. Do you know the accused? If so, state who he is.

A. _____.

Questions by defense:

Q. _____?

A. _____.

(Should the accused testify in his own behalf, the record will continue.)⁹

The accused, at his own request, was sworn and testified as follows:

Questions by defense:

Q. _____?

A. _____.

(If the defense offers no other witness, the record should continue.)⁹

The defense had no further testimony to offer and no statement to make, or, having no further testimony to offer, made the following verbal statement.

Or, having no further testimony to offer, submitted a written statement which was read to the court, and is hereto appended and marked —.¹¹

Or, requested until — o'clock —. m. to prepare his defense.

(If the court takes a recess during the time asked for, the record will continue.)⁹

The court then took a recess until — o'clock —. m., at which hour the members of the court, the judge advocate, the assistant judge advocate, the accused, his counsel, and the reporter, resumed their seats.

(Or, if the court has other business before it, the record may continue.)⁹

The court then proceeded to other business, and at — o'clock —. m. resumed the trial of this case, at which hour, etc.

Defense: (Insert statement).⁹

Or, The defense read to the court a statement, which is hereto appended and marked —.¹¹

¹⁰ If any member is absent, if not already accounted for, add "Except—" (giving cause of absence, if known).

¹¹ The statement of the accused, or argument in his defense, and all pleas to the jurisdiction in bar of trial or in abatement, when in writing, should be signed by the accused himself, referred to in proceedings as having been submitted by him, and appended to the record.

The prosecution: (Insert statement).

Or, The prosecution read to the court a statement, which is hereto appended and marked —.

The court was closed, and finds the accused:

Of the specification, Charge I: Guilty or Not guilty.

Of Charge I: Guilty or Not guilty.

Of Specification 1, Charge II: Guilty, except the words "——," substituting therefor the words "——"; of the excepted words, "Not guilty" and of the substituted words "Guilty."

Of Specification 2, Charge II: Guilty or Not guilty.

Of Charge II: Guilty or Not guilty, or Not guilty, but guilty of ——.

(If a soldier is found guilty, the record should continue.)^b

The court was opened and the judge advocate stated, in the presence of the accused and his counsel, that he had no evidence of previous convictions to submit.

Or, read the evidence of —— previous convictions,^c copies of which are hereto appended and marked "4," "5," etc.

(If the defense has any statement to make in regard to the previous convictions or statement of service, it will be recorded.)^d

The court was closed, and sentences the accused to ——.

(No previous convictions, or accused acquitted.)^e

The court sentences the accused, Private ——, —— Infantry, to ——, etc., or acquits the accused.

The court, at — m., was opened and proceeded to other business.

Or, adjourned until — m., the —— instant.

Or, adjourned to meet at the call of the president.

_____,
Major, 5th Cavalry, President.

_____,
First Lieutenant, 5th Cavalry, Judge Advocate. ——.^f

(At least two blank sheets will be inserted after the adjournment and before the exhibits for the decision and orders of the reviewing authority.)^g

BINDING AND BRIEF.

(The papers forming the complete record will be securely bound together at the top (easily removed clips or paper fasteners will not be used) and the record folded in four folds and briefed on the first fold, as follows:)^h

Private, Company ——, —— Infantry.

Trial by general court-martial.

.....
^h When the proof produced is the copy furnished to the company or other commander it will be returned to him and a copy of it attached to the record, if the trial be by general court-martial. The copy should be bound with the record as an exhibit.

ⁱ In case of the death, disability, or absence of the judge advocate, see A. W. 33. When the judge advocate records the findings and sentence by the use of a typewriting medium he will certify immediately after the authentication of the record as follows: "I certify that I recorded the findings and sentence of the court." When the record is completed the judge advocate will forward it without delay to the appointing authority as an inclosure to the indorsement of the judge advocate, returning the original charges.

FORM FOR REVISION OF RECORD.¹⁴Fort _____,
_____, 19__.

The court reconvened at _____ o'clock —. m., pursuant to the following indorsement:

(Insert copy of indorsement.)⁸

PRESENT.¹⁵

Maj. _____, 5th Cavalry.

Capt. _____, Medical Corps.

First Lieut. _____, 10th Infantry.

First Lieut. _____, 5th Cavalry.

Second Lieut. _____, Coast Artillery Corps.

First Lieut. _____, 5th Cavalry, judge advocate.

Second Lieut. _____, 29th Infantry, assistant judge advocate.

ABSENT.

(Insert names of absentees and state cause of absence, if known.)⁶

The judge advocate read to the court the foregoing indorsement of the convening authority.¹⁶

The court was closed and revokes its former findings and sentence, and finds the accused, etc.

Or, revokes its former sentence and sentences the accused, etc.

Or, respectfully adheres to its former findings and sentence.

Or, amends the record by, etc.¹⁷

The judge advocate was then recalled and the court at _____, —. m., etc.

Major, 5th Cavalry, President.

_____,
First Lieutenant, 5th Cavalry, Judge Advocate.

(The record of revision will be appended to the original proceedings, following them immediately, before the exhibits, and will be forwarded by indorsement on the charges to the appointing authority.)⁹

APPENDIX 7.

FORM FOR RECORD OF TRIAL BY A SPECIAL COURT-MARTIAL.

Fort _____,
_____, 19__.

The special court-martial appointed by paragraph _____, Special Orders, No. _____, Headquarters _____, _____, 19__,¹ as modified by paragraph _____, Special Orders, No. _____, Headquarters _____, met at _____, —. m.

¹⁰See "Record of revision," par. 357, ante. The court is usually reconvened by indorsement on the charges returning them to the president of the court with the directions of the appointing authority.

¹¹The record should show the name of each member of the court present during the proceedings in revision.

¹²The judge advocate will also read any other indorsements that may be connected with the proceedings in revision.

¹³See par. 364.

¹⁴The number, source, and date of the order appointing the court and of each order modifying the detail will be stated.

PRESENT.

ABSENT.³

The court proceeded to the trial of Private —, Company —, — Infantry, who, on appearing before the court³ (stated that he did not desire counsel) (introduced — as counsel).

(— was sworn as reporter.)⁴

(Capt. —, because ineligible, was excused and withdrew.)

(First Lieuts. — and — were, upon challenge, excused and withdrew.)

The accused stated that he had no objection to trial by any member (remaining) present.

The members of the court and the judge advocate were sworn.

The accused was arraigned upon the following charges and specifications:

Charge I: Violation of the — article of war.

Specification: In that, etc.

Charge II: Violation of the — article of war.

Specification 1: In that, etc.

Specification 2: In that, etc.

—, —,
Captain, — Infantry.

PLEAS.⁵

To all specifications and charges: —.⁶

To the Specification, Charge I: —.⁷

To Charge I: —.

To Specification 1, Charge II: —.

To Specification 2, Charge II: —.

To Charge II: —.

The following-named persons were sworn and testified:

Sergt. —, — Infantry.

Corpl. —, — Infantry.

Pvt. —, — Infantry.

The defense was given full opportunity to examine each witness.

(The depositions of the following-named persons were received in evidence and are hereto appended marked —, —, —.)

The accused (at his own request was sworn and testified) (made a statement to the court).

The accused stated that he had nothing further to offer.

The court was closed and finds the accused:

³ Statement of neither reason nor authority for the absence is required.

⁴ Words inclosed in parentheses will in a proper case be omitted.

⁵ A judge advocate of a special court may, when authorized by the appointing authority, employ a stenographic reporter, to be paid at the rates fixed in paragraph —.

⁶ If a special plea is made, the record will set out in full the proceedings had thereon, including all testimony taken thereon and statements made relative thereto, as well as the disposition thereof made by the court.

⁷ This or similar language will be used when the pleas to all the specifications and charges are the same.

⁸ For action when the accused pleads guilty in whole or in part and evidence is recorded, see par. 154 (d).

Of all specifications and charges: ____.*

Of the Specification, Charge I: ____.

Of Charge I: ____.

Of Specification 1, Charge II: ____.

Of Specification 2, Charge II: ____.

Of Charge II: ____.

(The court therefore acquits him.)

The court was opened and the judge advocate, in the presence of the accused (and his counsel) (stated that he had no evidence of previous convictions to submit) (read the evidence of ____ previous convictions).

(The court was closed and sentences the accused to ____.)

The court was opened and (proceeded to other business) (adjourned).*

_____, Major, ____ Infantry, President.

First Lieutenant, ____ Infantry, Judge Advocate.

Approved, _____, 191—

_____, Colonel, ____ Infantry, Commanding.

APPENDIX 8.

FORM FOR RECORD OF TRIAL BY SUMMARY COURT.

Charge Sheet.

No. in Summary Court Record ____.

| | | (Place.) | (Date.) |
|------------|-------------------|--------------------------|---------|
| (Surname.) | (Christian name.) | (Rank and organization.) | |

Date current enlistment: _____. Rate of pay: ____.

Previous service: _____

(Give dates, with character given on each discharge.)

Date of { Arrest: _____. No. of previous convictions: _____.
 { Confinement: _____.

Witnesses:

First Sergt. _____, Company _____, ____ Infantry.

Private _____, Company _____, ____ Infantry.

Charge I: Violation of the ____ article of war.

Specification: In that, etc.

Charge II: Violation of the ____ article of war.

Specification 1: In that, etc.

Specification 2: In that, etc.

[1st Ind.]

Headquarters _____, _____, 19—. To Capt. _____, ____ Infantry, Summary Court, for trial.

By order of Col. _____.

_____, Captain, ____ Infantry, Adjutant.

Findings: (If the findings as to all the specifications and charges are the same, a single proper entry, such as "Guilty," or "Not guilty," will be made.

*This or similar language will be used when the findings of the court on all the specifications and charges are the same.

*One copy only of the record will be made. It will not be indexed, will be briefed as is a general court-martial record, and will be securely bound.

If necessary, however, in order to show the facts, detailed entries will be made.)

Sentence: ———.

_____,
Captain, ——— Infantry, Summary Court.

Approved ———, 19—.

_____,
Colonel, ——— Infantry, Commanding.

APPENDIX 9.

FORMS FOR SENTENCES.

(For forms for action by reviewing authority on sentences by courts-martial, see Appendix 10.)

A sentence adjudged by a court-martial will, in a proper case, be expressed substantially in one or another of the forms following. When desirable, in a proper case, two or more of the forms may be combined.

1. To have his pay for ——— days detained.
2. To have two-thirds (or other fraction) of his pay per month for ——— months detained.
3. To forfeit ——— days' pay.
4. To forfeit two-thirds (or other fraction) of his pay per month for ——— months.
5. To perform hard labor for ——— days (or months).
6. To be confined at hard labor for ——— days (or months).
7. To be confined at hard labor, at such place as the reviewing authority may direct, for ——— days (or months or years).
8. To be confined at hard labor, at such place as the reviewing authority may direct, for ——— months and to forfeit two-thirds (or other fraction) of his pay per month for a like period.
9. To be dishonorably discharged the service and to forfeit all pay and allowances due or to become due.
10. To be dishonorably discharged the service, to forfeit all pay and allowances due or to become due while in confinement under this sentence, and to be confined at hard labor, at such place as the reviewing authority may direct, for ——— days (or months or years).
11. To be reduced to the ranks.
12. To vacate all rights and privileges arising from his certificate of eligibility.
13. To be admonished.
14. To be reprimanded.
15. To be restricted to the limits of his post (or other place) for ——— months.
16. To be suspended from duty for ——— months.
17. To be suspended from command for ——— months.
18. To be suspended from rank for ——— months.
19. To be reduced in rank ——— files.
20. To be reduced in rank so that his name shall appear in the lineal list of officers of his arm next below that of ———.
21. To be dismissed the service.
22. To pay to the United States a fine of ——— dollars and to be confined at hard labor, at such place as the reviewing authority may direct, until said fine is so paid, but for not more than ——— months (or years).
23. To pay to the United States a fine of ——— dollars, to be confined at

hard labor, at such place as the reviewing authority may direct, for ——— months (or years), and to be further confined at hard labor until said fine is so paid, but for not more than ——— months (or years), in addition to the ——— months (or years) hereinbefore adjudged.

24. To be confined at hard labor, at such place as the reviewing authority may direct, for the term of his natural life.

25. To be shot to death with musketry.

26. To be hanged by the neck until dead.

APPENDIX 10.

FORMS FOR ACTION BY REVIEWING AUTHORITY.

(For forms for sentences see Appendix 9.)

The following forms will serve as a general guide for reviewing authorities in recording, in cases in which such forms are appropriate, their action on sentences imposed by courts-martial. In a proper case the substance of two or more of the forms may be combined. Likewise, the action as recorded may contain proper matter additional to that set out in any of the several forms.

A. FORMS FOR ORIGINAL ACTION.

1 Approved (or disapproved) ———, 191—.

—————,
Colonel, ——— Infantry, Commanding.

2
Approved (or disapproved).
Headquarters ———, ———, 191—.

—————,
Colonel, ——— Infantry, Commanding.
3 Approved and suspended ———, 191—.

—————,
Colonel, ——— Infantry, Commanding.
4 Approved and forfeiture (or confinement) suspended, ———, 191—.

—————,
Colonel, ——— Infantry, Commanding.
5
Headquarters ———, ———, 191—.
In the foregoing case of ———, the sentence is approved and will be duly executed (or is disapproved).

—————,
Colonel, ——— Infantry, Commanding.
6
Headquarters ———, ———, 191—.
In the foregoing case of ——— the sentence is approved, but owing to the length of time the accused has been in confinement ——— days (or months) of the confinement imposed are remitted. As thus modified the sentence will be duly executed.

—————,
Colonel, ——— Infantry, Commanding.
7
Headquarters ———, ———, 191—.
In the foregoing case of ——— the findings of Specifications 1 and 2, Charge II, are disapproved. The sentence is approved and will be duly executed.

Colonel, ——— Infantry, Commanding.

8 Headquarters ———, ———, 191—.

In the foregoing case of ——— only so much of the findings of guilty of the specification of Charge I and of Charge I as involves a finding of guilty of absence without leave from ——— to ———, terminated by apprehension (or surrender) is approved. Only so much of the sentence as provides for ——— is approved and will be duly executed.

Colonel, ——— Infantry, Commanding.

9 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is approved, but the execution thereof is suspended.

Colonel, ——— Infantry, Commanding.

10 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is approved, but the execution thereof, in so far as it relates to forfeiture of pay (or to confinement) is suspended.

Colonel, ——— Infantry, Commanding.

11 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is approved and will be duly executed, but the execution of that portion thereof adjudging dishonorable discharge is suspended until the soldier's release from confinement. ——— is designated as the place of confinement.

Colonel, ——— Infantry, Commanding.

12 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is approved and will be duly executed. ——— is designated as the place of confinement.

Colonel, ——— Infantry, Commanding.

13 Headquarters ———, ———, 191—.

In the foregoing case of ——— it appears from the record of trial that the officer who had subscribed the charges participated as a member of the court in the findings and sentence. As such officer is prima facie the accuser in the case, and as the record of trial contains nothing to indicate that the court upon investigation arrived at a finding that he was not in fact such accuser, the proceedings are, in view of the provisions of the ——— article of war, invalid.

Colonel, ——— Infantry, Commanding.

14 Headquarters ———, ———, 191—.

In the foregoing case of ——— it appears from the record of trial that an officer who testified as a witness for the prosecution participated as a member of the court in the findings and sentence. In view of the provisions of the ——— article of war the proceedings are invalid.

Colonel, ——— Infantry, Commanding.

15 Headquarters ———, ———, 191—. To ———.

In the foregoing case of ——— the sentence is approved and the record of trial is forwarded for action under the forty-eighth article of war.

Colonel, ——— Infantry, Commanding.

16 Headquarters ———, ———, 191—. To the Judge Advocate General of the Army.

In the foregoing case of ——— the sentence is approved, but the execution thereof is suspended until the pleasure of the President be known, and the record of trial is forwarded for action under the fifty-first article of war.

Colonel, ——— Infantry, Commanding.

17 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is approved and will be duly executed at ——— on ———, 191—, under the direction of the commanding ———.

Colonel, ——— Infantry, Commanding.

18 Headquarters ———, ———, 191—.

In the foregoing case of ——— the sentence is confirmed and will be duly executed at ——— on ———, 191—, under the direction of the commanding ———.

Colonel, ——— Infantry, Commanding.

B. FORMS FOR ORDERS VACATING SUSPENSIONS.

Headquarters ———, ———, 191—.

1 So much of the order published in ——— Court-Martial Order No. —, ———, 191—, these headquarters, ———, 191— (or found in a record of trial by summary court approved ———, 191—), as suspends execution of sentence in the case of ——— is vacated and said sentence will be carried into execution.

By order of Col. ———,
———, Adjutant.

Headquarters ———, ———, 191—.

2 So much of the order published in ——— Court-Martial Order No. —, ———, 191—, these headquarters, ———, 191— (or found in a record of trial by summary court approved ———, 191—), as suspends execution of sentence to confinement (or forfeiture of pay) in the case of ——— is vacated and that part of said sentence will be carried into execution.

By order of Col. ———,
———, Adjutant.

Headquarters ———, ———, 191—.

3 So much of the order published in General Court-Martial Order No. —, ———, 191—, these headquarters, as suspends execution of sentence to dishonorable discharge of the case of ——— is vacated and that part of said sentence will be carried into execution.

By order of Col. ———,
———, Adjutant.

APPENDIX 11.

COURT-MARTIAL ORDERS.

A. FORM FOR GENERAL COURT-MARTIAL ORDER.

General Court-Martial
Order, No. 447.

Headquarters Eastern Department,
Governors Island, N. Y., July 27, 1919.

Before a general court-martial which convened at Fort Hamilton, N. Y., pursuant to paragraph 6, Special Orders, No. 93, Headquarters Eastern Department, April 24, 1919,¹ as modified by paragraph 7, Special Orders, No. 101, Headquarters Eastern Department, May 26, 1919, was arraigned and tried:

Private John Doe, Company F, 29th Infantry.

Charge I: Violation of the 58th Article of War.

Specification: In that Private John Doe, Company F, 29th Infantry, did at Fort Jay, N. Y., on or about March 27, 1917, desert the service of the United States and did remain absent in desertion until he was apprehended at Brooklyn, N. Y., on or about June 30, 1919.

Charge II: Violation of the 84th Article of War.

Specification: In that Private John Doe, Company F, 29th Infantry, did at Fort Jay, N. Y., on or about March 27, 1917, through neglect, lose one overcoat, olive drab, value \$14.84, and one blanket, light weight, value \$3.79, issued for use in the military service.

PLEAS.

To the specification, Charge I: "Not guilty."

To Charge I: "Not guilty."

To the specification, Charge II: "Not guilty."

To Charge II: "Not guilty."

Or

To all the specifications and charges: "Not guilty."²

FINDINGS.

Of the specification, Charge I: "Guilty."³

Of Charge I: "Guilty."

Of the specification, Charge II: "Guilty."

Of Charge II: "Guilty."

Or

Of all the specifications and charges: "Guilty."⁴

¹ The orders appointing the court and all orders modifying the convening order will be cited.

² Where the accused pleads guilty or not guilty to all the specifications, or is found guilty or not guilty of all, the form may be abbreviated as indicated.

³ If a special plea has been made and sustained by the court, the wording will be: "Plea in ——— (——) sustained by the court."

⁴ Where the accused pleads guilty or not guilty to all the specifications or is found guilty or not guilty of all, the form may be abbreviated as indicated.

SENTENCE.

To be dishonorably discharged the service; to forfeit all pay and allowances due, or to become due while in confinement under this sentence; and to be confined at hard labor at such place as the reviewing authority may direct for two years. (Four previous convictions considered.)

The sentence is approved and will be duly executed. The United States Disciplinary Barracks is designated as the place of confinement.

By command of _____,

_____,
Colonel, General Staff, Chief of Staff.

Official:

_____,
Adjutant General, Adjutant.

B. FORM FOR SPECIAL COURT-MARTIAL ORDER.

Special Court-Martial
Order No. 43.

Headquarters Fort Jay, N. Y., July 27, 1919.

Before a special court-martial which convened at Fort Jay, N. Y., pursuant to paragraph 6, Special Orders, No. 93, these headquarters, April 24, 1919, as modified by paragraph 7, Special Orders, No. 101, these headquarters, May 26, 1919, was arraigned and tried:

Private John Doe, Company F, 29th Infantry.

Charge I: Violation of the 58th Article of War.

Specification: In that Private John Doe, Company F, 29th Infantry, did at Fort Jay, N. Y., on or about March 27, 1917, desert the service of the United States and did remain absent in desertion until he was apprehended at Brooklyn, N. Y., on or about June 30, 1919.

Charge II: Violation of the 84th Article of War.

Specification: In that Private John Doe, Company F, 29th Infantry, did at Fort Jay, N. Y., on or about March 27, 1917, through neglect, lose one overcoat, olive drab, value \$14.84, and one blanket, light weight, value \$3.29, issued for use in the military service.

PLEAS.

To the specification, Charge I: "Not guilty."

To Charge I: "Not guilty."

To the specification, Charge II: "Not guilty."

To Charge II: "Not guilty."

Or

To all the specifications and charges: "Not guilty."

FINDINGS.

Of the specification, Charge I: "Guilty."*

Of Charge I: "Guilty."

Of the specification, Charge II: "Guilty."

* If a special plea has been made and sustained by the court, the wording will be: "Plea in _____ (_____) sustained by the court."

* If a special plea has been made and sustained by the court, the wording will be: "Plea in _____ (_____) sustained by the court."

Of Charge II: "Guilty."

Or

Of all the specifications and charges: "Guilty."¹

SENTENCE.

To be confined at hard labor for six months and to forfeit two-thirds of his pay per month for a like period. (Two previous convictions considered.)

The sentence is approved.

By order of _____,

Official: _____,

Adjutant.

_____,
Adjutant.

APPENDIX 12.

INTERROGATORIES AND DEPOSITION.

To be read in evidence before a ¹ _____, United States Army, appointed to meet at _____, by paragraph —, Special Orders, No. —, Headquarters _____, _____, 191—, in the case of (in the matter of)² _____.

_____, 191—. To _____:

Please cause to be taken on the interrogatories herein contained the deposition of _____, to be found at _____.

Headquarters _____, 191—. To _____, who will take or cause to be taken ⁴ the deposition of the person named above on the interrogatories herein contained.⁵

By _____ of _____:

_____, Adjutant.

First interrogatory: Are you in the military service of the United States? If so, what is your full name, rank, organization and station? If not, what is your full name, occupation and residence?

Answer: ⁶

Second interrogatory: _____.

Answer: _____.

¹ Where the accused pleads guilty or not guilty to all the specifications or is found guilty or not guilty of all, the form may be abbreviated as indicated.

² General (or special or summary) court-martial, or military commission, or court of inquiry, or military board.

³ Name, rank, and organization of the accused, or other proper words identifying the particular matter in which the deposition is desired to be used.

⁴ To be subscribed by the trial judge advocate or other proper person with his name, rank, organization, and official title, as "judge advocate," "summary court," "recorder," etc.

⁵ Strike out word or words not used.

⁶ If it is desired to give special instructions, or if a travel order is necessary, the remaining space will be used for the purpose.

⁷ If the spaces for answers are not sufficient, extra sheets may be inserted by the officer taking the deposition. In such case he will rewrite the interrogatories, writing the answers immediately below the respective interrogatories.

First cross-interrogatory: _____.

Answer: _____.

First interrogatory by the _____:

Answer: _____.

(Witness sign here) _____.

I certify that the above deposition was duly taken by me, and that the above-named witness, having been first duly sworn by me, gave the foregoing answers to the several interrogatories, and that he subscribed the foregoing deposition in my presence at _____, this _____ day of _____, 191—.

(Name) _____,

(Rank and organization) _____.

(Official character, as "summary court," "officer designated to take the deposition," "notary public," etc.) _____.

[BACK.]

INSTRUCTIONS.

1. Interrogatories, How Submitted. (a) The party desiring the deposition submits to the opposite party the interrogatories which he wishes propounded to the person whose deposition he desires, and the opposite party then submits to him such cross-interrogatories, if any, as he may desire. Such additional direct and cross-interrogatories may be submitted as desired; or

(b) The party desiring the deposition submits to the court, military commission, or board the interrogatories which he wishes propounded to the person whose deposition he desires. The opposite party then submits to the court, military commission, or board such cross-interrogatories, if any, as he may desire. The court, military commission, or board then submits such additional interrogatories as they may deem proper and desirable, and such additional direct and cross-interrogatories may be submitted as are desired; or

(c) Where the court, military commission, or board desires that the deposition of a particular person be obtained it will cause interrogatories to be prepared accordingly. The prosecution and defense (or other party or parties in interest) then submit such interrogatories as they may desire. Such additional interrogatories may be included as are desired by the court, military commission, or board, or by a party in interest. (M. C. M., par. 176.)

2. Procedure to Obtain Deposition. (a) All the interrogatories to be propounded to the person are entered upon the form for interrogatories and deposition, and the trial judge advocate, summary court, or recorder will take appropriate steps to cause the desired deposition to be taken with the least practicable delay. In the ordinary case he will either send the interrogatories to the commanding officer of the post, recruiting station, or other military command at or nearest which the person whose deposition is desired is stationed, resides, or is understood to be, or will send them to some other responsible person, preferably a person competent to administer oaths, at or near the place at which the person whose deposition is desired is understood to be. In a proper case the interrogatories may be sent to the department or other superior commander, or to the witness himself, and in any case they will, when necessary, be accompanied by a proper explanatory letter.

(b) When interrogatories are received by a commanding officer he will either take or cause to be taken the deposition thereon. He may send an intelligent enlisted man—preferably a noncommissioned officer, if available—to the neces-

sary place for the purpose of obtaining the deposition, or he may properly arrange by mail or otherwise that the deposition be taken. The deposition will be taken with the least practicable delay, and when taken will be sent at once direct to the judge advocate of the court-martial trying the case, or other proper person.

(c) If the witness whose deposition is desired is a civilian, the judge advocate, or other proper person sending interrogatories as above, will inclose with them a prepared voucher for the fees and mileage of the witness, leaving blank such spaces provided therein as it may be necessary to leave blank, accompanied by the required number of copies of the orders appointing the court, military commission, or board. The judge advocate, summary court, or recorder will also send with the interrogatories a duplicate subpoena requiring the witness to appear in person at a time and place to be fixed by the officer, military or civil, who is to take the deposition. If the name of this officer is not known, the space provided for it will be left blank. If a military officer takes the deposition, he will complete the witness voucher, certify it, and transmit it to the nearest disbursing quartermaster for payment. When the deposition is to be taken by a civil officer, he will be asked to obtain and furnish to the military officer requested or designated to cause the deposition to be taken the necessary data for the completion of the witness voucher, and the latter will complete the voucher, certify it, and transmit it to the nearest disbursing quartermaster for payment. In the case of a military witness, a subpoena will not accompany the interrogatories, but the officer before whom the deposition is to be taken will take the necessary steps to have the witness appear at the proper time and place. (M. C. M., par. 177.)

3. Payment of Civilian Witnesses, Etc. (a) A civilian, not in Government employ, duly summoned to appear as a witness before a military court, commission or board, or at a place where his deposition is to be taken for use before such military court, commission or board, will receive \$1.50 for each day of his actual attendance before such military court, commission or board, or for the purpose of having his deposition taken, and 5 cents a mile for going from his place of residence to the place of trial or of the taking of his deposition, and 5 cents a mile for returning, except as follows:

(1) In Porto Rico and Cuba he will receive \$1.50 a day while in attendance as above stated, and 15 cents for each mile necessarily traveled over stage line or by private conveyance, and 10 cents for each mile over any railway or steamship line.

(2) In Alaska, east of the one hundred and forty-first degree of west longitude, he will receive \$2 a day while in attendance as above stated, and 10 cents a mile; and west of said degree \$4 a day and 15 cents a mile.

(3) In the States of Wyoming, Montana, Washington, Oregon, California, Nevada, Idaho, Colorado, Utah, New Mexico, and Arizona he will receive \$3 a day for the time of actual attendance as above stated, and for the time necessarily occupied in going to and returning from the same, and 15 cents for each mile necessarily traveled over any stage line or by private conveyance, and 5 cents for each mile by any railway or steamship. (M. C. M., par. 185.)

(b) Civil officers before whom depositions are taken for use in the military service will be paid the fees allowed by the law of the place where the depositions are taken. (M. C. M., par. 181.)

4. Articles of War.

Art. 26. Depositions—Before Whom Taken. Depositions to be read in evidence before military courts, commissions, courts of inquiry, or military boards, or for other use in military administration, may be taken before and authenti-

cated by any officer, military or civil, authorized by the laws of the United States or by the laws of the place where the deposition is taken to administer oaths.

Art. 114. Authority to Administer Oaths. Any judge advocate or acting judge advocate, the president of a general or special court-martial, any summary court-martial, the judge advocate or any assistant judge advocate of a general or special court-martial, the president or the recorder of a court of inquiry or of a military board, any officer designated to take a deposition, any officer detailed to conduct an investigation, and the adjutant of any command shall have power to administer oaths for the purposes of the administration of military justice and for other purposes of military administration; and in foreign places where the Army may be serving shall have the general powers of a notary public or of a consul of the United States in the administration of oaths, the execution and acknowledgment of legal instruments, the attestation of documents, and all other forms of notarial acts to be executed by persons subject to military law.

5. Taking Depositions in Foreign Country. If the evidence desired from a witness residing in a foreign country is necessary and material and is desired to be read before a court-martial, military commission, court of inquiry, or military board sitting within any of the States of the Union or the District of Columbia, interrogatories (accompanied by the necessary vouchers for fees and mileage) will ordinarily be forwarded through military channels to the Adjutant General of the Army. They will then be transmitted by the Secretary of War to the Secretary of State with the request that they be sent to the proper consul of the United States and the deposition of the witness taken. In the case of troops serving along the international boundaries outside of the United States proper, or in foreign countries, the officer exercising general court-martial jurisdiction may, in his discretion, detail an officer to take the deposition of a civilian witness or he may send the interrogatories direct to the consul of the United States nearest the place of residence of the witness with the request that the deposition be taken. In the latter case the interrogatories will be accompanied by the proper vouchers for the fees and mileage of the witness. (M. C. M., par. 182.)

APPENDIX, 13.

SUBPOENA FOR CIVILIAN WITNESS.

The President of the United States to ———, greeting:

You are hereby summoned and required to be and appear in person on the ——— day of ———, 191—, at ——— o'clock — m.,¹ before ———,² a ———,³ designated to take your deposition to be read in evidence before a '—— of the United States, at ———, appointed to meet by paragraph ———, Special Orders, No. ———, Headquarters ———, dated ———, 191—, then and there to testify and give evidence as a witness for the ——— in the case of⁴ ———,

¹ Line out when inappropriate "before ———, a ——— designated to take your deposition to be read in evidence."

² When used, enter name, rank, and organization, if any.

³ When used, enter official character, if any, such as judge advocate, summary court, notary public, etc.

⁴ General (or special, or summary) court-martial, etc.

⁵ Enter name, etc., of accused or other subject of investigation.

*and you are hereby required to bring with you, to be used in evidence in said case, the following described documents, to wit: ———.

And have you then and there this precept.

Dated at ——— this ——— day of ———, 19——.

—————
(To be subscribed by judge
advocate, recorder, etc.)

The witness is requested to subscribe on one copy of the subpoena the following and to return to the person serving the subpoena the copy thereof so subscribed.

I hereby accept service of the above subpoena.

Form No. 76, A. G. O.

—————
(Signature of witness.)

[BACK.]

Personally appeared before me the undersigned authority, ———, who, being first duly sworn according to law, deposes and says that at ——— on ———, 191——, he personally delivered to ——— in person a duplicate of the within subpoena.

Subscribed and sworn to before me at ——— this ——— day of ———, 191——.

—————
(Rank, organization, and official character.)

INSTRUCTIONS.

1. Article of War. (a) Process to obtain witnesses. Every judge advocate of a general or special court-martial and every summary court-martial shall have power to issue the like process to compel witnesses to appear and testify which courts of the United States, having criminal jurisdiction, may lawfully issue; but such process shall run to any part of the United States, its Territories, and possessions. (A. W. 22.)

(b) Refusal to Appear or Testify. Every person not subject to military law who, being duly subpoenaed to appear as a witness before any military court, commission, court of inquiry, or board, or before any officer, military or civil, designated to take a deposition to be read in evidence before such court, commission, court of inquiry, or board, willfully neglects or refuses to appear, or refuses to qualify as a witness, or to testify, or produce documentary evidence which such person may have been legally subpoenaed to produce, shall be deemed guilty of a misdemeanor, for which such person shall be punished on information in the district court of the United States or in a court of original criminal jurisdiction in any of the territorial possessions of the United States, jurisdiction being hereby conferred upon such courts for such purpose; and it shall be the duty of the United States district attorney or the officer prosecuting for the Government in any such court of original criminal jurisdiction, on the certification of the facts to him by the military court, commission, court of inquiry, or board, to file an information against and prosecute the person so offending, and the punishment of such person, on conviction, shall

*Line out when inappropriate "and you are hereby required to bring with you, to be read in evidence in said case, the following described documents, to wit."

be a fine of not more than \$500 or imprisonment not to exceed six months, or both, at the discretion of the court: Provided, That the fees of such witness and his mileage, at the rates allowed to witnesses attending the courts of the United States, shall be duly paid or tendered said witness, such amounts to be paid out of the appropriation for the compensation of witnesses. (A. W. 23.)

2. Tender of Fees Preliminary to Prosecution. In case a civilian witness is duly subpoenaed under the authority of A. W. 22 and willfully neglects or refuses to appear or refuses to qualify as a witness, or to testify or produce documentary evidence, which he may have been legally subpoenaed to produce, he will at once be tendered or paid by the nearest quartermaster one day's fees and mileage for the journeys to and from the court, and will thereupon be again called upon to comply with the requirements of the law. Upon failing the second time to comply with the requirements of the law, a complete report of the case will be made to the officer exercising general court-martial jurisdiction over the command with a view to presenting the facts to the Department of Justice for the punitive action contemplated in A. W. 23. (M. C. M. 172.)

3. Civilians Not in Government Employ. A civilian not in Government employ, duly summoned to appear as a witness before a military court, commission, or board, or at a place where his deposition is to be taken for use before such court, commission, or board, will receive \$1.50 for each day of his actual attendance before such court, commission, or board, or for the purpose of having his deposition taken, and 5 cents a mile for going from his place of residence to the place of trial or of the taking of his deposition, and 5 cents a mile for returning, except as follows:

(a) In Porto Rico and Cuba he will receive \$1.50 a day while in attendance, as above stated, and 15 cents for each mile necessarily traveled over stage line or by private conveyance, and 10 cents for each mile over any railway or steamship line.

(b) In Alaska east of the one hundred and forty-first degree of west longitude he will receive \$2 a day while in attendance as above stated and 10 cents a mile, and west of said degree \$4 a day and 15 cents a mile.

(c) In the States of Wyoming, Montana, Washington, Oregon, California, Nevada, Idaho, Colorado, Utah, New Mexico, and Arizona, will receive \$3 a day for the time of actual attendance as above stated and for the time necessarily occupied in going to and return from the same, and 15 cents for each mile necessarily traveled over any stage line or by private conveyance, and 5 cents for each mile by any railway or steamship. (M. C. M., par. 185.)

[Note: 1. Travel must be estimated by the shortest usually traveled route—by established lines of railroad, stage, or steamer—the time occupied to be determined by the official schedules, reasonable allowance being made for unavoidable detention.

2. These rates apply to the Philippine Islands. (See Cir. 45, A. G. O., 1902.)

3. A civilian not in Government employ, when furnished transportation on transport or other Government conveyance, is entitled to 57.142 per cent of 5 cents per mile (equal to 2.857 cents per mile). (Comp. Dec., Aug. 20, 1902, published in Cir. 45, A. G. O., 1902.)]

4. Civilians in Government Employ. Civilians in the employ of the Government when traveling upon summons as witnesses before military courts are entitled to transportation in kind from their place of residence to the place where the court is in session and return. If no transportation be furnished, they are entitled to reimbursement of the cost of travel actually performed by the shortest usually traveled route, including transfers to and from railway stations at rates not exceeding 50 cents for each transfer, and the cost of sleeping-car accommodations to which entitled or steamer berth when an extra

charge is made therefor. They are also entitled to reimbursement of the actual cost of meals and rooms at a rate not exceeding \$3 per day for each day actually and unavoidably consumed in travel or in attendance upon the court under the order or summons. No allowance will be made to them when attendance upon court does not require them to leave their stations. (M. C. M., par. 184.)

APPENDIX 14.

WARRANT OF ATTACHMENT.

United States
vs.
_____ }

The President of the United States to _____, greeting:

WHEREAS _____, of _____, was on the _____ day of _____ 191—, at _____, duly subpoenaed to appear and attend at _____, on the _____ day of _____, 191—, at _____ o'clock — m., before a _____ court-martial duly appointed by paragraph —, Special Orders, No. —, dated Headquarters _____, _____, 191—, to testify on the part of the _____ in the above-entitled case; and whereas he has failed to appear and attend before said _____ court-martial to testify, as by said subpoena required, and whereas he is a necessary and material witness in behalf of the _____ in the above-entitled case:

NOW, THEREFORE, by virtue of the power vested in me, the undersigned, as judge advocate of¹ said _____ court-martial, by article 22 of section 1342 of the Revised Statutes of the United States (39 Stat., 650), you are hereby commanded and empowered to apprehend and attach the said _____ wherever he may be found within the United States, its Territories, or possessions and forthwith bring him before the said _____ court-martial at _____ to testify as required by said subpoena.

Judge Advocate of said _____ Court-Martial.²

Dated _____,
_____, 191—.

Form No. 272, A. G. O.

APPENDIX 15.

FORM A.

HABEAS CORPUS BY UNITED STATES COURT (WHERE A WITNESS IS HELD UNDER A WARRANT OF ATTACHMENT).

RETURN TO WRIT.

In re _____ (name of party held).

(Writ of habeas corpus—Return of respondent.)

To the _____ (court or judge):

The respondent, Maj. _____, United States Infantry, upon whom has been served a writ of habeas corpus for the production of _____, respectfully makes return and states that he holds the said _____ by authority of the United States, pursuant to a warrant of attachment issued under section 3, act of August 29, 1916, twenty-second Article of War, by a

¹ If a summary court-martial, line out the words "judge advocate of."

² If a summary court-martial, line out and substitute the necessary words.

judge advocate or a lawfully convened general (or "special") court-martial (or "by a summary court-martial") and duly directed to him, the said respondent, for execution; that he is diligently and in good faith engaged in executing said warrant of attachment, and that he respectfully submits the same for the inspection of the court, together with the original subpoena and proof of service of the same, a copy¹ of the order appointing the court-martial, sworn to as such, before which the said _____ has been subpoenaed to testify, a copy of the charges and specifications in the case, sworn to as such, in which said _____ is a witness, and an affidavit of _____ showing that said _____ is a material witness in the case; that he has failed to appear and has offered no valid excuse for such failure.

In obedience, however, to the said writ of habeas corpus the respondent herewith produces before the court the body of the said _____; and for the reasons set forth in this return prays this honorable court to dismiss the said writ.

_____,
Major, _____ United States Infantry.

Dated, _____,
_____, 191—.

FORM B.

HABEAS CORPUS BY STATE COURT (WHERE WITNESS IS HELD UNDER A WARRANT OF ATTACHMENT).

RETURN TO WRIT.

(Make return as in case of writ by a United States court, except as to last paragraph, for which substitute as follows:)

And said respondent further makes return that he has not produced the body of the said _____, because he holds him by authority of the United States as above set forth, and that this court (or "your honor," as the case may be) is without jurisdiction in the premises, and he respectfully refers to the decisions of the Supreme Court of the United States in *Ableman v. Booth*, 21 Howard, 506, and *Tarble's case*, 13 Wallace, 397, as authority for his action, and prays this court (or "your honor") to dismiss the writ.

_____,
Major, _____ United States Infantry.

Dated _____,
_____, 191—.

FORM C.

HABEAS CORPUS BY UNITED STATES COURT (WHERE PRISONER IS HELD FOR TRIAL OR UNDER SENTENCE.)

RETURN TO WRIT.

In re _____ (name of party held).

(Writ of habeas corpus—Return of respondent.)

To the _____ (court or judge):

The respondent, Maj. _____, United States Infantry, upon whom has been served a writ of habeas corpus for the production of _____, respectfully makes return and states that he holds the said _____ by authority of the United States as a soldier in the United States Army (or "as

¹ The copy of the order appointing the court and of the charges will be sworn to by the judge advocate (or summary court-martial) before an officer authorized to administer oaths.

a general prisoner under sentence of general court-martial") under the following circumstances:

That the said _____ was duly enlisted as a soldier in the service of the United States at _____, on _____, 191—, for a term of _____ years. (If the offense is fraudulent enlistment, this recital should be omitted.)

(Here state the offense. If it is fraudulent enlistment by representing himself to be of the required age, it may be stated as follows:)

That on the _____ day of _____, 191—, at _____ the said _____, being under 18 years of age, did fraudulently enlist in the military service of the United States for the term of _____ years, by falsely representing himself to be over 18 years of age, to wit, _____ years and _____ months; and has, since said enlistment, received pay and allowances (or either) thereunder.

(If the offense is desertion, it may be stated substantially as follows:)

That the said _____ deserted said service at _____, on _____, 191—, and remained absent in desertion until he was apprehended at _____, _____, on _____, 191—, by _____, and was thereupon committed to the custody of the respondent as commanding officer of the post of _____.

The said _____ has been placed in confinement (or "arrest," as the case may be), and formal charges have been preferred against him for said offense, a copy of which, duly certified and verified,¹ is hereto annexed; and that he will be brought to trial thereon as soon as practicable before a court-martial, to be convened by the commanding general of the _____ Department (or "convened by Special Orders, No. —, dated Headquarters _____ Department, 191—, a copy of which, duly certified and verified,¹ is herein annexed").

(If the party held is a general prisoner, the following paragraph should be substituted for the preceding paragraph:)

That the said _____ was duly arraigned for said offense before a general court-martial, convened by Special Orders, No. _____, dated Headquarters _____ Department, 191—, was convicted thereof by said court, and was sentenced to be _____, which sentence was duly approved on the _____ day of _____, 191—, by the officer ordering the court (or "by the officer commanding said _____ Department for the time being") as required by the _____ article of war. A copy of the order promulgating said sentence, duly certified and verified,¹ is hereto attached.

In obedience, however, to the said writ of habeas corpus the respondent herewith produces before the court the body of the said _____, respectfully refers to the decisions cited in the annexed brief (if the case does not involve

¹ The copy of the charges will be certified by the adjutant and sworn to before an officer authorized to administer oaths for military administration, in the following form:

I hereby certify that the foregoing is a full and true copy of the original charges preferred against _____, and that the same are in the usual form of military charges and conform to the rules regulating military procedure.

_____, Adjutant.
Sworn to and subscribed before me this _____ day of _____, 191—.

_____,
Judge Advocate of Court-Martial
(Or "Summary Court-Martial").

The copy of the order convening the court or publishing the sentence will be certified and verified in a similar manner.

a minor under the required age the words "respectfully refers to the decisions cited in the annexed brief" will be omitted), and for the reasons set forth in this return prays this honorable court to dismiss the said writ.

Major, ——— United States Infantry.

Dated ———, ———,
————, 191—.

FORM D.

HABEAS CORPUS BY STATE COURT (WHERE PRISONER IS HELD FOR TRIAL OR UNDER SENTENCE).

RETURN TO WRIT.

(Make return as in case a writ by a United States court, except as to last paragraph, for which substitute the paragraph set out in Form B, Appendix 15.)
INSTRUCTIONS AS TO RETURNS TO WRITS OF HABEAS CORPUS.

The following instructions in regard to returns under A. R. 998 and 999, in the cases of soldiers who have committed military offenses and are held for trial or punishment therefor, and of general prisoners, are for the information and guidance of all concerned:

1. The return under A. R. 999 will be made in accordance with Form C (Appendix 15), and if the person whose release is sought has committed the offense of fraudulent enlistment by representing himself to be of the required age, will refer, as in last paragraph of that form, to the brief of authorities which follows these instructions, and a copy of that brief will be annexed to the return. Should the court order the discharge of the party, the officer making the return, or counsel, should note an appeal pending instructions from the War Department, and he will report to the Adjutant General of the Army the action taken by the court and forward a copy of the opinion of the court as soon as it can be obtained.

2. The return under A. R. 998 will be made in accordance with Form D (Appendix 15), but a copy of the brief of authorities is not intended to be attached to the returns to writs of habeas corpus issuing from a State court.

BRIEF TO BE FILED WITH A RETURN TO A WRIT OF HABEAS CORPUS ISSUED BY A UNITED STATES COURT IN THE CASE OF A SOLDIER WHOSE DISCHARGE IS SOUGHT ON THE GROUND OF MINORITY.

The right to avoid the contract of enlistment of a soldier on the ground of minority will be considered under the following heads: I. Under the common law; II. Under the statutes; III. Where the minor is held for punishment.

I.

UNDER THE COMMON LAW.

The enlistment of a minor is not avoidable by the minor nor by his parent or guardian at common law, but is only avoidable where the right to avoid it is conferred by statute.

This proposition is clearly established by the decision of the Supreme Court (In re Morrissey, 137 U. S. 157, 159), where the court said:

An enlistment is not a contract only, but effects a change of status. (Grimley's case, 137 U. S., 147.) It is not, therefore, like an ordinary

contract, voidable by the infant. At common law an enlistment was not voidable either by the infant or by his parents or guardians.

The court cites, in support of these statements, *Rex v. Rotherfield Greys* (1 Barn. & Cress., 345, 350; 8 Eng. C. L., 149); *Rex v. Lytchet Matraverse* (7 Barn. & Cress., 226, 231; 14 Eng. C. L., 107); *Commonwealth v. Gamble* (11 Serg. & Rawle (Pa. R.), 93); *U. S. v. Blakeney* (3 Grattan, 387, 405).

In *Rex v. Rotherfield Greys*, *supra*, it was said by Best, J.:

By the general policy of the law of England the parental authority continues until the child attains the age of twenty-one years; but the same policy also requires that a minor shall be at liberty to contract an engagement to serve the State. When such an engagement is contracted it becomes inconsistent with the duty which he owes to the public that the parental authority should continue. The parental authority, however, is suspended, but not destroyed. When the reason for its suspension ceases the parental authority returns.

In *Rex v. Lytchet Matraverse*, *supra*, Bayley, J., after quoting these views of Best, J., says:

Lawrence, J., in *Rex v. Roach* (6 T. R., 254), seems to take the same view of the subject and to consider the authority of the State paramount to that of the parent so long as the minor continues in the public service, but as soon as he leaves it then the parental authority is restored.

It is clear from these authorities and others which could be cited that at common law the enlistment of a minor of sufficient capacity to bear arms was valid regardless of age. The right of the State to the services of such minors is forcefully laid down in *Lanahan v. Birge* (30 Conn., 438). See also *Cooley's Constitutional Law*, page 99, where on the authority of *Ex parte Brown* (5 Cranch, C. C., 554), and *United States v. Bainbridge* (1 Mason, 71), it is said:

Minors may be enlisted without the consent of their parents or guardians when the law fails to require such consent.

II.

UNDER THE STATUTES.

The pertinent statutes are the following:

Sec. 1116, R. S. Recruits enlisting in the Army must be effective and able-bodied men, and between the ages of sixteen and thirty-five years at the time of their enlistment. This limitation as to age shall not apply to soldiers reenlisted.

This section was modified by the act of March 2, 1899 (30 Stat., 978), which provides:

That the limits of age for original enlistments in the Army shall be eighteen and thirty-five years.

Sec. 1117, R. S. No person under the age of twenty-one years shall be enlisted or mustered into the military service of the United States without the written consent of his parents or guardians: Provided, That such minor has such parents or guardians entitled to his custody and control.

This section is replaced by the provision of section 27, National-Defense Act of June 3, 1916 (39 Stat., 186), which reenacts it in the same words, substituting the age of 18 years for the age of 21.

Sec. 1118, R. S. No minor under the age of sixteen years, no insane or intoxicated person, no deserter from the military service of the United States, and no person who has been convicted of a felony shall be enlisted or mustered into the military service.

1. The statutes confer no right upon the minor to avoid his enlistment, cer-

tainly not if he be 16 years of age or over. No case has been found directly in point holding that a minor under 16 years of age, if of sufficient capacity to bear arms, may avoid his enlistment.

Section 1116, R. S., as amended, prescribing the age limits of original enlistment, was made for the benefit of the Government and not the minor. (In *re* Morrissey, 137 U. S., 157; In *re* Grimley, 137 U. S., 147; In *re* Wall, 8 Fed. Rep., 85; In *re* Davison, 21 Fed. Rep., 618; In *re* Zimmerman, 30 Fed. Rep., 176; In *re* Spencer, 40 Fed. Rep., 149; In *re* Lawler, 40 Fed. Rep., 233; *Solomon v. Davenport*, 87 Fed. Rep., 318; *Wagner v. Gibbon*, 24 Fed. Rep., 135.)

Section 1117, R. S., as amended, while recognizing the right of the parent to the services of the minor, confers no right in the minor to avoid his enlistment. See the cases cited above.

In the *Morrissey* case the Supreme Court of the United States said that the provision of section 1116, R. S.,

is for the benefit of the parent or guardian * * * but it gives no privilege to the minor * * * an enlistment is not a contract only, but effects a change of status. It is not, therefore, like an ordinary contract, voidable by the infant * * *. The contract of enlistment was good, so far as the petitioner is concerned. He was not only *de facto* but *de jure* a soldier—amenable to military jurisdiction.

Whether the designation of the age limit of 16 years in section 1118, R. S., is such as to make the enlistment of the minor under 16 years of age void or voidable by the minor has not been decided. On principle, the minor, if of sufficient capacity to render military service, should not be permitted to avoid his enlistment obtained through his fraudulent statements as to his age. However this may be, if the minor continued to serve and receive pay after passing that age he—

acquires the status of a soldier like one who was enlisted when over 16 years without the consent of his parents, and a court-martial has jurisdiction to try and sentence him to punishment for desertion, from which sentence he can not be discharged on habeas corpus on petition of himself or his parents. (*Ex parte Hubbard*, 182 Fed. Rep., 76.)

2. The statutes requiring the consent of the parent or guardian of a minor to his enlistment (section 1117, R. S., amended by section 27, act of June 3, 1916) impliedly confer upon the parent or guardian the right to avoid an enlistment entered into by a minor under the prescribed age without the required consent, where the minor is not held for trial or punishment for a military offense.

In support of this proposition see the cases cited under II, proposition 1.

3. A parent or guardian with knowledge of the enlistment of a minor under the prescribed age and acquiescing therein for a considerable period, may be held to be estopped from asserting the right to avoid the enlistment.

In support of this proposition see *Ex parte Dunakin* (202 Fed. Rep., 290), where it was held, quoting from the syllabi:

Where a minor enlisted without the consent of his parent or guardian, and his mother, who was his surviving parent, on learning of his enlistment shortly thereafter, did nothing to repudiate the same or to secure his release, and testified that she would have been reconciled to it, had he remained in the Army and not deserted, but that after his desertion she wanted to keep him out of the Army, her acts constituted an implied consent to his enlistment.

4. A minor fraudulently enlisting and remaining in the service after attaining the legal age of enlistment, or the age beyond which parental consent is not required, thereby validates his enlistment.

In support of this proposition see the case of *Ex parte Hubbard* (182 Fed. Rep., 76), where the court held, quoting the syllabus:

A minor enlisted in the Army when under the age of 16, who has continued to serve and receive pay after passing that age, acquires the status of a soldier like one who was enlisted when over 16 without the consent of his parents, and a court-martial has jurisdiction to try and sentence him to punishment for desertion, from which sentence he can not be discharged on habeas corpus on petition of himself or his parents.

III.

WHERE THE MINOR IS HELD FOR PUNISHMENT.

Neither the minor nor his parent nor guardian may avoid the enlistment where the soldier is held for trial or under sentence for a military offense.

In support of this proposition see the cases cited above under II, proposition 1, and also the following: *In re Kaufman* (41 Fed. Rep., 876); *In re Dohrendorf* (40 Fed. Rep., 148); *In re Cosenow* (37 Fed. Rep., 668); *In re Dowd* (90 Fed. Rep., 718); *In re Miller* (114 Fed. Rep., 838); *United States v. Reaves* (126 Fed. Rep., 127); *In re Lessard* (134 Fed. Rep., 305); *Ex parte Anderson* (16 Iowa, 595); *McConologue's Case* (107 Mass., 154, 170); *In re Carver* (142 Fed. Rep., 623); *In re Scott* (144 Fed. Rep., 79); *Dillingham v. Booker* (163 Fed. Rep., 696); *Ex parte Rock* (171 Fed. Rep., 240); *Ex parte Hubbard* (182 Fed. Rep., 76); *Ex parte Lewkowitz* (163 Fed. Rep., 646); *United States v. Williford* (220 Fed. Rep., 291).

The reasons given for these decisions are that the enlistment of a minor in the Army without the consent of his parent or guardian required by section 1117, R. S., "is not void, but voidable only"; that the soldier being not only *de facto* but *de jure* a soldier, he is subject to the Articles of War and may commit a military offense; and that if held for trial or punishment for a military offense, the interests of the public in the administration of justice are paramount to the right of the parent or guardian, and require that the soldier abide the consequences of his offense before the question of his discharge will be considered by the court. In the *Miller* case (114 Fed. Rep., 842), the court supported its holding by the analogy of a minor held for punishment for a civil offense, saying:

The common law, unaided by statute, fully recognizes the parents' right to the custody and services of their minor child; but it has never been held that they could, by the writ of habeas corpus or otherwise, obtain his custody and his immunity when he was held by an officer of a civil court of competent jurisdiction to answer a charge of crime. His enlistment having made the prisoner a soldier notwithstanding his minority, he is amenable to the military law just as the citizen who is a minor is amenable to the civil law. The parents can not prevent the law's enforcement in either case * * *.

The views here cited were approved in the *Reaves* case (126 Fed. Rep., 127), where upon full consideration of the authorities the Circuit Court of Appeals remanded *Reaves*, a minor, who had deserted from the Navy, to custody of the naval authorities as represented by the chief of police who had apprehended him. In the *Carver* case (142 Fed. Rep., 623), the syllabus is as follows:

A minor under the age of 18 years who unlawfully enlisted in the Army without the consent of his father can not be discharged from the service on a writ of habeas corpus sued out by his father so long as he is under arrest for desertion nor until he has been discharged from such custody or has served the sentence imposed on him by the military tribunal.

In the Lewkowitz case (163 Fed. Rep., 646), the syllabus reads:

A minor who by misrepresenting his age has fraudulently enlisted in the Army without the consent of his parents and thereby subjected himself to punishment under military law will not be relieved from such punishment by the civil courts by discharging him on a writ of habeas corpus on the application of his parents, even though the military prosecution is not instituted until after the writ was issued.

This was followed by the unanimous opinion in the Circuit Court of Appeals in the Love case (United States v. Williford, 220 Fed. Rep., 291), in which the court expressly approved the views stated in the Lewkowitz case, quoting section 761, R. S., relating to procedure under writs of habeas corpus, which reads as follows:

The court, or justice, or judge shall proceed in a summary way to determine the facts of the case by hearing the testimony and arguments and thereupon to dispose of the party as law and justice require.

The court added:

Law and justice do not, in our opinion, require Love to be withdrawn from the military authorities and relieved of liability for his offense in favor of his mother's right to his custody.

By act of July 27, 1892 (27 Stat., 278), "fraudulent enlistment and the receipt of pay or allowance thereunder" was made a military offense, punishable under the sixty-second article of war. The offense is now defined in article 54, revised Articles of War, approved August 29, 1916 (39 Stat., 659), which provides that the offense "shall be punished as a court-martial may direct." A minor who procures his enlistment by willful misrepresentation or concealment as to his qualifications for enlistment commits this offense, and the statute authorizes his punishment therefor. In general, it may be stated that where a minor has committed a military offense the interests of the public in the administration of justice are paramount to the right of the parent and require that the soldier shall abide the consequences of his offense before the right to his discharge be passed upon. The soldier should not be allowed to escape punishment for his offense, even though his parents assert their right to his services. A minor in civil life is liable to punishment for a crime or misdemeanor, even though his confinement may interfere with the rights of his parents; and the above authorities clearly apply the same rule to a minor held for trial or punishment for a military offense.

APPENDIX 16.

[Sheet 1.]

WAR DEPARTMENT
Form No. 338.
Approved by the Comptroller of the
Treasury April 29, 1914

WAR DEPARTMENT
QUARTERMASTER CORPS
PUBLIC VOUCHER

Voucher No.

General Account.

Detail Account.

COMPENSATION, CIVILIAN WITNESS

APPROPRIATION: PAY, ETC., OF THE ARMY, 191 Symbol.

THE UNITED STATES TO....., DR.

ADDRESS:

| Object symbol. | | Amount. | U. S. notations. |
|-------------------|--|---------|---------------------|
| | For mileage as a witness from.....to.....and return, being.....miles, at.....cents per mile..... For allowance as a witness while in attendance— On a court-martial at..... Giving deposition.... for use before a court-martial from....., 191 , to....., 191 , as per certificate hereon, ....days, at \$....per day.... Total..... | | |

I certify that, as stated above, I attended as a witness for the period named,
and as such the travel between the places named was required.
(Payee).....
(Do not sign in duplicate)

Examined
by

(Account to be completely filled in before certification, and no alteration or erasure to be made thereafter)

I certify that....., a civilian not in Government employ,
has been in attendance from....., 191 , to....., 191 ,
inclusive,

as a material witness before a...court-martial duly convened at this place,
giving deposition for use of a court-martial convened under attached orders,
and that he was duly summoned thereto from....., and was not furnished
transportation by the Government for any portion of the journey.

Place,

Date,, 191

(Title)

Paid by check No., dated, 191 , of on, in
favor of payee named above for \$.....

or

Received....., 191 , of....., in cash, the sum of..... dollars
and..... cents, in full payment of the above account.

\$.....

(This form to be used only for payment of civilian witnesses not in Government employ)

| | | | | | | | |
|---|--|---|------------------------------------|---|------------------------|-----------------------|--|
| FORM No. 338. <i>Public Voucher No.</i> | WAR DEPARTMENT QUARTERMASTER CORPS Appropriation: Pay, etc., of the Army, 191 | Amount, \$..... IN FAVOR OF (Name of payee) | For Compensation, Civilian Witness | ACCOUNTS OF (Name of disbursing officer) | (Official designation) | (Place where located) | (Period for which voucher is rendered) |
|---|--|---|------------------------------------|---|------------------------|-----------------------|--|

[Sheet 2.]

WAR DEPARTMENT
Form No. 338.
Approved by the Comptroller of the
Treasury April 29, 1914

WAR DEPARTMENT
QUARTERMASTER CORPS
PUBLIC VOUCHER

Voucher No.
General Account
Detail Account

COMPENSATION, CIVILIAN WITNESS

APPROPRIATION: PAY, ETC., OF THE ARMY, 191

Symbol

THE UNITED STATES TO....., DR.

ADDRESS:

| Object symbol. | | Amount. | U. S. notations. |
|-------------------|--|---------|---------------------|
| | For mileage as a witness from..... to..... and return, being... miles, at... cents per mile..... | | |
| | For allowance as a witness while in attendance— On a court-martial at..... | | |
| | Giving deposition at..... for use before a court- martial from....., 191 , to....., 191 , as per certificate hereon,..... days, at \$..... per day..... | | |
| | Total..... | | |

Examined
by

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer)

Voucher certified by

Voucher approved by

Paid by check No., dated....., 191 , of.....on.....,
in favor of payee named above for \$.....

or

Paid in cash by
(date)

..... dollars andcents.

Funds derived from check No. on

\$.....
.....
.....

(This form to be used only for payment of civilian witnesses not in Government employ)

Form No. 338.**MEMORANDUM***Public Voucher No.***WAR DEPARTMENT****QUARTERMASTER CORPS**

Appropriation: Pay, etc., of the Army,
191

*Amount, \$.....***IN FAVOR OF**.....
(Name of payee)**For Compensation, Civilian Witness****ACCOUNTS OF**.....
(Name of disbursing officer).....
(Official designation).....
(Place where located).....
(Period for which voucher is rendered)

APPENDIX 17.

WAR DEPARTMENT
Form No. 350a.
Approved by the Comptroller of the
Treasury April 29, 1914.

[Sheet 1.]
WAR DEPARTMENT
.....
(Bureau or Office.)

Voucher No.
General Account.
Detail Account.

PUBLIC VOUCHER

REIMBURSEMENT OF TRAVELING EXPENSES

Appropriation..... *Symbol*..... \$.....
Appropriation..... *Symbol*..... \$.....
Appropriation..... *Symbol*..... \$.....

THE UNITED STATES, TO....., DR.

Address:

For reimbursement of traveling expenses incurred in the discharge
of official duty from....., 191 , to....., 191 ,
under written authorization from the
dated....., 191 , a copy of which is..... as per itemized
schedule below.....

U. S.
nota-
tions.

Amount claimed, \$

| Object symbol. | Date 191 | Schedule of expenditures | Sub- voucher No. | Amount. | U. S. notations. |
|-------------------|-------------|--------------------------|------------------------|---------|---------------------|
| | | | | | |

Memorandum of travel performed upon transportation requests

Examined
by

| Date of travel. | No. of transpor- tation request. | From— | To— | Via R. R. | Amount. | U. S. notations. |
|--------------------|---|-------|-----|-----------|---------|---------------------|
| | | | | | | |

I do solemnly*.....that the above account and schedule are correct in all
respects; that the distances as charged have been actually and necessarily
traveled by me on the dates therein specified; that the amounts as charged
have been actually paid by me for traveling expenses; that no part of the account
has been paid by the United States, but the full amount is due; that all
expenditures included in said account other than my own personal traveling

expenses were made under urgent and unforeseen public necessity; and that it was not, for the reasons stated herein, feasible to have such expenditures paid directly by a disbursing officer.

Payee:

(Do not sign in duplicate)

Subscribed and \daggerto before me at....., this.....day
of....., A. D. 191

* Swear or affirm. \dagger Sworn to or affirmed.

I certify that the above account is correct, that the travel was performed, and that it was necessary for the public service.

Approved for \$.....

Title:

Date:

Title:

Paid by check No., dated....., 191 , of.....on....., in favor of payee named above, for \$.....

or

Received.....of.....in cash, the sum of.....dollars and.....
(date)
cents in full payment of the above account.



FORM No. 350 a

PUBLIC VOUCHER No.

WAR DEPARTMENT

(Bureau or Office)

APPROPRIATION:

(State full title of appropriation)

AMOUNT, \$.....

IN FAVOR OF

(Name of payee)

FOR REIMBURSEMENT OF TRAVELING
EXPENSES

ACCOUNTS OF

(Name of disbursing officer)

(Official designation)

(Place where located)

(Period for which voucher is rendered)

[Sheet 2.]

WAR DEPARTMENT
Form No. 350a.
Approved by the Comptroller of the
Treasury April 29, 1914.

WAR DEPARTMENT
.....
(Bureau or Office)

Voucher No.
General Account.
Detail Account.

PUBLIC VOUCHER

REIMBURSEMENT OF TRAVELING EXPENSES.

Appropriation *Symbol* \$
Appropriation *Symbol* \$
Appropriation *Symbol* \$

THE UNITED STATES, To....., DR.
Address:.....

For reimbursement of traveling expenses incurred in the discharge
of official duty from....., 191 , to....., 191 , under writ-
ten authorization from the....., dated....., 191 ,
a copy of which is..... as per itemized schedule below.....

Amount claimed, \$

U. S.
notations

| Object symbol. | Date 191 | Schedule of expenditures. | Sub- voucher No. | Amount. | U. S. notations. |
|-------------------|-------------|---------------------------|------------------------|---------|---------------------|
| | | | | | |

Memorandum of travel performed upon transportation requests.

Examined
by

| Date of travel. | No. of transporta- tion request. | From— | To— | Via R. R. | Amount. | U. S. notations. |
|--------------------|---|-------|-----|-----------|---------|---------------------|
| | | | | | | |

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer)

Voucher certified by.....

Voucher approved by.....

Paid by check No., dated....., 191 , of..... on, in
favor of payee named above, for \$.....

or

Paid in cash..... by, dollars and cents.
(Date)

Funds derived from check No.on.....

\$

Form No. 350 a.
 MEMORANDUM
 PUBLIC VOUCHER No.

WAR DEPARTMENT

.....
 (Bureau or Office)

APPROPRIATION:

.....
 (State full title of appropriation)

.....
 AMOUNT, \$

IN FAVOR OF

.....
 (Name of payee)

**FOR REIMBURSEMENT OF TRAVELING
 EXPENSES**

ACCOUNTS OF

.....
 (Name of disbursing officer)

.....
 (Official designation)

.....
 (Place where located)

.....
 (Period for which voucher is rendered)

APPENDIX 18.

[Sheet 1.]

WAR DEPARTMENT
Form No. 339.
Approved by the Comptroller of the
Treasury April 29, 1914

WAR DEPARTMENT
QUARTERMASTER CORPS

Voucher No.....

General Account.....

Detail Account.....

PUBLIC VOUCHER

PERSONAL SERVICES—REPORTER

APPROPRIATION: PAY, ETC., OF THE ARMY, 191 Symbol.....

THE UNITED STATES TO....., DR.

ADDRESS:.....

| Object symbol. | Date 191 | | Amount. | U. S. notations. |
|-------------------|-------------|---|---------|---------------------|
| | | For services as a reporter before a convened at, pursuant to Special Orders No., Department, 191 : | | |
| | | Cases of | | |
| | | hours before the, at \$1 per hour | | |
| | | (Court, board, or commission.) | | |
| | | words, at 15 cents per 100 words | | |
| | | words, at 10 cents per 100 words | | |
| | | words, carbon copies, at 2 cents per 100 words | | |
| | | days in going to, in attendance on, and returning from said at \$3 per day | | |
| | | (Court, board, or commission.) | | |
| | | To mileage for travel between and in going to and re- turning from the court, being miles, at cents a mile | | |
| | | Total | | |

I certify that as above stated I rendered the services named, and the
travel between the places named was required.

(Payee).....
(Do not sign in duplicate)

Examined
by

(Account to be completely filled in before certificates and no alteration or erasure to be made
thereafter.)

I certify that was employed by me as a reporter for a
..... under the annexed authority, and that the account for his
services as stated above is correct.

(Title).....

Paid by check No., dated, 191 , of..... on, in
favor of payee named above, for \$.....

or

Received, 191 , of, in cash, the sum of dollars
and cents, in full payment of the above account.

\$.....

Form No. 339.
Public Voucher No.

WAR DEPARTMENT
QUARTERMASTER CORPS

Appropriation: Pay, etc., of the Army,
191

Amount, \$

IN FAVOR OF

(Name of payee)

For Personal Services—Reporter

ACCOUNTS OF

(Name of disbursing officer)

(Official designation)

(Place where located)

(Period for which voucher is rendered)

WAR DEPARTMENT

Form No. 339.

[Sheet 2.]

Voucher No.

Approved by the Comptroller of the Treasury April 29, 1914

WAR DEPARTMENT

General Account.

QUARTERMASTER CORPS

Detail Account.

PUBLIC VOUCHER

PERSONAL SERVICES—REPORTER

Symbol.

APPROPRIATION: PAY, ETC., OF THE ARMY, 191

THE UNITED STATES TO, DR.

ADDRESS:

| Object symbol. | Date 191 | | Amount. | U. S. notations. |
|-------------------|-------------|--|---------|---------------------|
| | | For services as a reporter before a convened at, pursuant to Special Orders No., Department, 191 : Cases of hours before the, at \$1 per hour (Court, board, or commission.) words, at 15 cents per 100 words words, at 10 cents per 100 words words, carbon copies, at 2 cents per 100 words days in going to, in attend- ance on, and returning from said, at \$3 per day (Court, board, or commission.) To mileage for travel between and in going to and returning from the court, being miles, at cents a mile | | |
| | | Total | | |

MEMORANDUM VOUCHER

(To be filled in and retained by paying officer.)

Examined
by

Voucher certified by

Voucher approved by

Paid by check No., dated....., 191 , of..... on, in favor of payee named above, for \$.....

or

Paid in cash by, dollars and cents.
(date)

Funds derived from check No. on

\$.....

| | | | | | | | |
|--|--|---|--------------------------------|---|------------------------|-----------------------|--|
| FORM No. 339. MEMORANDUM Public Voucher No. | WAR DEPARTMENT QUARTERMASTER CORPS Appropriation: Pay, etc., of the Army, 191 | Amount, \$..... IN FAVOR OF (Name of payee) | For Personal Services—Reporter | ACCOUNTS OF (Name of disbursing officer) | (Official designation) | (Place where located) | (Period for which voucher is rendered) |
|--|--|---|--------------------------------|---|------------------------|-----------------------|--|

APPENDIX 19.

REPORT OF INQUEST.

From: _____ summary court-martial.

To: Commanding officer.

Subject: Report of inquest over body of _____, deceased.

1. Pursuant to your letter (or, your oral instructions) of _____, I viewed on the _____ day of _____, the body of _____, found dead at this post, and have examined the following witnesses, whose testimony is appended to this report:

2. From a view of the body and from the evidence before me I find that at or about _____ m., on the _____ of _____ (or, on or about the _____ day of _____), _____, a _____ day of _____, _____ Regiment of _____ (or, a civilian), died a natural death (or, committed suicide; or, was accidentally killed in manner and circumstances as follows; or, was killed by _____ or by some person or persons unknown, in manner and circumstances as follows: (or otherwise, as the case may be).

WAR DEPARTMENT, OFFICE OF CHIEF OF STAFF.

FIELD SERVICE REGULATIONS

UNITED STATES ARMY

1914

**CORRECTED TO JULY 1, 1914
TO INCLUDE CHANGES 5, DEC. 20, 1916.**

War Department,
Office of the Chief of Staff,
Washington, March 19, 1914.

The following Field Service Regulations, revised by the General Staff of the Army, are approved and published for the information and government of the Regular Army and the Organized Militia, and in time of war, the Volunteer forces.

Success in war can be achieved only by all branches and arms of the service mutually helping and supporting one another in the common effort to attain the desired end.

The basic principles of the combat tactics of the different arms are set forth in the drill regulations of those arms for units as high as brigades. It is the function of higher troop leading to so combine and coördinate the combat tactics of all the arms as to develop in the combined forces the teamwork essential to success.

While the fundamental principles of war are neither very numerous nor complex, their application may be difficult and must not be limited by set rules. Departure from prescribed methods is at times necessary. A thorough knowledge of the principles of war and their application enables the leader to decide when such departure should be made and to determine what methods should bring success.

Officers and men of all ranks and grades are given a certain independence in the execution of the tasks to which they are assigned and are expected to show initiative in meeting the different situations as they arise. Every individual, from the highest commander to the lowest private, must always remember that inaction and neglect of opportunities will warrant more severe censure than an error in the choice of the means.

By order of the Secretary of War:

LEONARD WOOD,
Major General, Chief of Staff.

FIELD SERVICE REGULATIONS

UNITED STATES ARMY

PART I.

ORGANIZATION.

ARTICLE I.

LAND FORCES OF THE UNITED STATES.

1. The land forces of the United States consist of the regular army, the organized land militia when called into the service of the United States, and such volunteer forces as Congress may authorize.

In peace the Army of the United States consists, ordinarily, of the regular army; but whenever the United States is invaded or in danger of invasion from any foreign nation, or of rebellion against the authority of the Government of the United States, or the President is unable with the regular forces at his command to execute the laws of the Union, he may call into the military service of the United States all or any part of the militia organized as a land force.

In war, or when war is imminent, the Army of the United States, after the whole or part of the organized land militia has been called into service, may be further augmented by the employment of volunteers. When the raising of a volunteer force has been authorized by Congress, and after the organized land militia of any arm or class has been called into the military service of the United States, volunteers of that particular arm or class may be raised and accepted into said service regardless of the extent to which other arms or classes of militia may have been called into service.

2. The land forces are grouped under two general heads, i.e.:

1. The Mobile Army.

2. The Coast Artillery.

3. **The Mobile Army.** The mobile army is primarily organized for offensive operations against an enemy, and on this account requires the maximum degree of mobility.

The basis of organization for the mobile army is the division. A division is a self-contained unit made up of all necessary arms and services, and complete in itself with every requirement for independent action incident to its ordinary operations.

When several divisions are acting together they may be grouped into field armies. To the field army there are attached certain organizations of an auxiliary character, called field army troops.

When the number of field army troops attached to a field army make it necessary, they are organized into a separate brigade for purposes of supply and administration, and a commander is designated and the necessary staff is assigned to him. Infantry, cavalry, or military police may be attached to this separate brigade for defensive purposes on the march. The number of

troops so assigned depends on the condition of the service and the number of field army troops in the brigade. Troops for the protection of field army troops are preferably furnished from troops assigned to the line of communications.

If the conditions of the particular service require it, divisions operating independently may be furnished with the necessary field army troops. A brigade operating independently, when so designated by competent authority, is known as a separate brigade, and when so operating may be supplied with the necessary special and field army troops.

When several field armies are operating in the same theater of war and if conditions so require it, they may be organized into armies.

4. A line of communications is established for each important force about to engage in field operations of an extensive character and supplied from a separate base.

5. **The Coast Artillery.** The coast artillery is charged with the care and use of the fixed and movable elements of land and coast fortifications, including submarine mine and torpedo defense.

COAST DEFENSE.¹

6. The military preparations for the defense of a coast line include:

(1) The construction of permanent fortifications and the provision of submarine defenses for defense against naval attack. Such defenses are manned and operated by coast artillery troops.

(2) The construction of semipermanent fortifications and field works for the protection of the permanent fortifications against capture by small raiding parties landing from ships, or, in the case of an island, in boats from the adjacent shore. Troops assigned to this duty are known as coast artillery supports. They may be troops of the coast artillery or troops of the mobile army. (C. F. S. R., No. 3, June 22, 1915.)

(3) Divisions and field armies concentrated and held at strategic centers of value with reference to the coast line. (C. F. S. R., No. 1, Mar. 20, 1915.)

OVERSEA DEPARTMENTS.

7. The commander of an oversea department is charged with its defense, and directs the operations of both the troops of the mobile army and those of the Coast Artillery serving therein. (See also paragraph 258.) (C. F. S. R., No. 2, Apr. 24, 1915.)

TABLES OF ORGANIZATION.

8. The details of organization, the amounts and kinds of transportation, and the factors on which the allowance of transportation is based, are fixed in the Tables of Organization, United States Army.

¹ See paragraph 252, subparagraph 5.

PART II.

OPERATIONS.

ARTICLE I.

INFORMATION.

GENERAL PRINCIPLES.

9. Military Information. Military information may be considered under two general heads, namely, (1) that collected by the General Staff in time of peace; (2) that obtained by troops in the field after the outbreak of hostilities. The former relates to the geography, resources, and military strength of the various nations, and enables the War Department to decide upon the size of an army or expedition, the proportion of the different arms, character of clothing, equipment, etc., that may be necessary in the event of war. The latter relates to the theater of operations and to the position, strength, intentions, etc., of the enemy in the field, and is absolutely essential to enable a commander properly to estimate the situation.

Information in the field is obtained from various sources—higher commanders, adjoining troops, inhabitants, newspapers, letters, telegraph files, prisoners, deserters, spies, maps, and reconnaissances. Knowledge of the terrain, always essential to a correct understanding of the situation, is obtained from a careful study of available maps, supplemented by thorough reconnaissance.

All information of the enemy and of the theater of operations is sent to the intelligence section of the general staff group of headquarters of units larger than a brigade (par. 261). This section weighs and classifies the information brought in and supervises the preparation of the necessary field maps.

An efficient secret service is organized as soon as practicable.

10. In hostile territory influential persons, especially those supposed to be active in the enemy's cause, may be seized and their persons and houses searched. Letters and newspapers in post offices and files in telegraph offices are carefully examined and anything of importance sent to higher authority. Matter not of importance is replaced, if time permits; if not, the whole is sent to headquarters. Local maps of recent date may be of great value.

When reliable information of the enemy can not be obtained, it is assumed that he will act with good judgment.

Information received by any person in the military service, and the action taken thereon, must be promptly reported to the proper military superior.

Unless instructions have been given to spread false information, all persons connected with the military service are forbidden to discuss the military situation, plans, movements, etc., with, or in the presence of, civilians of any age, sex, or nationality.

RECONNAISSANCE.

11. Reconnaissance is the military term used to designate the work of troops or individuals when gathering information in the field. Reconnaissance begins as soon as the theater of possible operations is entered and continues through-

out the campaign. No matter what other sources of information of the enemy may be available, reconnaissance must be depended upon to obtain the information upon which all tactical movements of troops should be based.

12. By Aero Squadron. In forces of the strength of a division, or larger, the aero squadron will operate in advance of the independent cavalry in order to locate the enemy and to keep track of his movements. Contact with the enemy once gained will be maintained thereafter continuously.

13. By the Cavalry. Reconnaissance in the theater of operations is best made by the cavalry, which from the beginning of the campaign seeks to determine the enemy's strength and dispositions. It protects its own army against surprise, screens its movements, and insures the safety and success of the troops of other arms. The defeat of the hostile cavalry and its expulsion from the field are usually the best means to this end. As the opposing armies draw near each other, the cavalry endeavors to secure control of the ground between and bends every effort to that close and continuous reconnaissance of the enemy's forces that is vital to the success of the entire campaign.

As a rule, only general instructions are given to a leader of independent cavalry. It is usually sufficient to indicate the country to be reconnoitered, invite attention to specially important localities, and point out the extent of the daily advance of the field force. He is generally in telegraphic communication with the supreme commander, and keeps him constantly informed of the situation at the front. In the absence of telegraphic facilities, he reports according to the circumstances, sending his messages by the divisional cavalry when practicable.

14. By Independent Cavalry. Reconnaissance by the independent cavalry will give, in a general way, the enemy's location for several hours, or even days, preceding contact of the main bodies. If this cavalry is strong enough to defeat the enemy's cavalry, it will be enabled to locate the hostile infantry and artillery and to determine their approximate strength. If weaker than the enemy's cavalry, it must rely upon the work of strategical and tactical patrols to obtain detailed information of the enemy, or it must be assisted by the other arms. In the latter case the advance guard of the main body will afford this assistance by stopping the advance of the enemy's cavalry and compelling him to deploy his infantry and artillery, in part at least.

On very wide fronts an army is generally covered by two or more bodies of independent cavalry; each is informed of the extent of ground it is to cover and keeps in touch with the neighboring cavalry.

15. By Divisional Cavalry. The cavalry attached to an infantry division is called divisional cavalry. When the division is operating independently, the divisional cavalry acts also as independent cavalry; when the division forms part of a field army, the divisional cavalry is known as advance cavalry. It usually enters into the composition of advance, flank, rear, and outpost guards, and when so employed is known as advance guard, flank guard, rear guard, and outpost cavalry, as the case may be, and performs such reconnaissance as the situation demands.

Reconnaissance by the advance cavalry is such as will afford security to the main body. It prevents surprise to any part of the force. If stronger than the cavalry opposing it, the advance cavalry will obtain valuable information of the enemy before the infantry and artillery of the advance guard become engaged. But where the cavalry, for any reason, fails in this purpose, the work must be done by the other arms, without, however, so dispersing battle units that they will be outside of supporting distance of each other.

Though its reconnaissance is more restricted than that of the independent cavalry, advance cavalry goes more into detail and gathers information as to

the resources of the country, roads, camping places, etc. As combat becomes imminent and the independent cavalry is drawn off to a flank, the advance cavalry must be especially active to guard against surprise, gain information of the enemy's movements, and prevent incursions of his patrols.

When there is independent cavalry in front, the divisional cavalry maintains connection therewith; when not, it reconnoiters far to the front and gains touch with the enemy if possible, operating in a manner similar to that of independent cavalry of larger units.

16. By Infantry. The extent of the infantry reconnaissance will not be so great where the aero squadron and the cavalry are able to perform this service efficiently, as it must be in the absence of efficient reconnaissance by the other arms. In no case, however, can infantry reconnaissance, preceding or during combat, be dispensed with. Infantry and artillery can not rely wholly upon cavalry or aero reconnaissance, but must conduct such close-in reconnaissance as is necessary for security and to determine their immediate dispositions.

In the absence of cavalry, reconnaissance at a distance is made by infantry or scouts specially detailed for that purpose.

If a command is weak in cavalry, or the country is rough and broken, it may be advisable to use reconnoitering detachments composed of both infantry and cavalry.

17. Reconnaissance Immediately Preceding Combat. Reconnaissance preceding deployment for action is of vital importance. On the information of the enemy and of the terrain obtained through proper reconnaissance combat orders are based. How complete such reconnaissance may be will depend upon the time that can be spared for the purpose without losing the initiative in action, upon the character of information desired, and upon the efficiency of the measures taken by the enemy to conceal his dispositions.

18. The strength of the force employed in this reconnaissance is determined by the character of the information desired and by the nature of the hostile screen. In every instance it must be strong enough to penetrate the enemy's screen, and where detailed information of the enemy's position is desired, to cause the deployment of the enemy's infantry and the opening of fire by part, at least, of his artillery. In the latter case the combat reconnaissance may develop into the opening phase of the attack, and care must be taken that enough troops are kept in hand to change completely the course of the attack, if the information obtained calls for such action.

19. In any advance toward the enemy the advance guard must be relied upon for such reconnaissance as is necessary, either to supplement the reconnaissance of other troops or to replace it when other reconnaissance is wholly wanting. It is important that the advance guard force the enemy to disclose his position and strength as early as possible. A strong force of artillery is most useful for this purpose, as it clears up the situation in a way that can not be done by other troops, except by incurring heavy losses.

In encountering the enemy in a position that is to be developed the advance guard must continue, by means of the advance cavalry, the reconnaissance begun by the independent cavalry or by other troops. The enemy will not disclose his position, particularly that of his artillery, until forced to do so by a determined reconnaissance which may call for the use of infantry and artillery in force before it can accomplish its purpose. The advance of the infantry will finally force back all advanced detachments of the enemy and bare his main position. The artillery will assist in this advance by opening fire on any targets of importance that the infantry advance uncovers. Finally, the enemy's artillery will be obliged to disclose its position by opening fire, either to stop the advance of the opposing infantry or to keep down the

opposing artillery fire. The information thus gained of the enemy's position and strength will enable the leader to form his plan of attack.

In the *rencontre* efficient measures for security on the march must be relied upon to take the place of the more complete reconnaissance which the necessity of obtaining the initiative in deployment forbids. In an attack on a position that the enemy has had time to take up deliberately and to strengthen, time is not so important an element, and the reconnaissance preceding deployment must be as complete as may be necessary to determine the enemy's strength and dispositions.

20. Reconnaissance During Combat. The infantry will keep up during combat such reconnaissance as will enable it to keep contact with the enemy, acquaint itself with the terrain in its front, and especially to protect its flanks and rear. The field artillery continues the reconnaissance called for by its tactical employment.

21. During combat the aero squadron will operate around the flanks and over and to the rear of the enemy's position, for the purpose of reporting his dispositions, the approach of reinforcements, or the beginning of his withdrawal from action.

22. During combat the cavalry will conduct an extended reconnaissance around the flanks and to the rear of the enemy's position, but such reconnaissance must be conducted by small detachments in order that the main body of the cavalry may be kept close at hand to aid in obtaining success in the main battle.

23. Reconnoitering Patrols.¹ The chief duty of reconnoitering patrols is to gather information. They habitually seek safety in concealment or flight, fighting only when their mission demands it. The most skillful patrolling is where patrols accomplish their mission and return without being discovered by the enemy.

24. The commander determines the number and strength of patrols and when they are to be sent out. It is a cardinal principle to send out only such patrols as insure effective reconnaissance. Patrols vary in strength from two or three men to a company. Small patrols have great mobility, are easily concealed, and do not draw heavily on the fighting strength. In hostile territory, or when resistance is expected, stronger detachments are required. These cover themselves with small patrols of two to four men, the remainder acting as support.

The officer sending out a patrol verifies the detail, designates a second in command and gives the necessary instructions. Horses of conspicuous color and those that neigh when alone should not be sent. Precautions are taken to avoid the glitter and rattle of weapons and equipments.

The orders or instructions for a patrol, or for any detachment going on reconnaissance, must state clearly where the enemy is or is supposed to be, what information is desired, what features are of special importance, the general direction to be followed, whether friendly patrols are likely to be encountered, and where messages are to be sent or the patrol is to report. Important and comprehensive instructions should be in writing, but precautions against capture of papers must be taken. An officer sending out a patrol must be certain that his orders are understood. Detailed instructions are, as a rule, avoided. When necessary the time of return is stated.

¹The term patrols is used to designate small detachments employed for a variety of purposes, the name of the detachment indicating its duty, as visiting, connecting, combat, exploring, reconnoitering, flanking, harassing, pursuing patrols, etc.

25. Patrol Leaders. Skillful patrolling is the basis of efficient reconnaissance. Patrol leaders are selected with care, officers being detailed for important missions. Patrol leaders should combine the qualities of good health, vigorous physique, keen eyesight, presence of mind and courage, with good judgment, military training, and experience. They should be able to read maps, make sketches, and send clear and concise messages. Officers on such duty often find themselves in positions where the situation must be viewed from the standpoint of a higher commander, and should be able to reason accordingly.

26. Conduct. Patrols exercise the greatest vigilance to prevent discovery.

No normal formation for patrol is or should be prescribed. Under the leader's guidance it moves so as to guard against surprise, usually with point and flankers. To extend the sphere of its observation, still smaller patrols (one or two men) may be sent out for short distances, communication with the leader being maintained by signals. Whatever the formation adopted, it should favor the escape of at least one man in case of surprise.

In questioning civilians caution is observed not to disclose information that may be of value to the enemy. Strangers are not allowed to precede the patrol. Patrol leaders are authorized to seize telegrams and mail matter, and to arrest individuals, reporting the facts as soon as possible.

27. Indications of the Enemy. Nothing should escape the observation of the patrol. The slightest indication of the enemy should be reported to the leader at once. On roads and in abandoned camps, signs are often found which indicate the number, character, and condition of the enemy, and the direction in which he is marching. Abandoned clothing or equipage may bear marks indicating organizations.

A thick and low cloud of dust indicates infantry; a high and thin cloud, cavalry; a broken cloud, artillery or wagon trains. The size of the command and direction of march may be roughly estimated by the dust, but the effect of wind must be considered.

The strength of a body of troops may be estimated from the length of time it takes to pass a given point. Assuming that infantry in column of squads occupies half a yard per man, cavalry in column of fours 1 yard per trooper, and artillery in single column 20 yards per gun or caisson, a given point would be passed in one minute by about—

175 infantry.

110 cavalry, at walk.

200 cavalry, at trot.

5 guns or caissons.

For troops in column of twos, take one-half of the above estimates.

28. When it is certain that the enemy has been discovered, that fact is promptly reported.

The exact location of the enemy—whether deployed, marching, or in camp—his strength, and the arms of service are next ascertained and reported. It is often difficult to decide whether the troops discovered are the main body or merely the advance guard or outposts. The rule is to observe the main body; therefore it may be necessary to obtain a view from a position in rear of the covering troops. This is done by going around or by breaking through, returning over different ground to avoid ambuscade.

29. Signals. In addition to the usual signals prescribed in drill regulations, the following should be clearly understood by members of a patrol:

Enemy in sight in small numbers, hold the rifle above the head horizontally; enemy in force, same as preceding, raising and lowering the rifle several times; take cover, a downward motion of the hand.

Other signals may be agreed upon before starting, but they must be familiar to the men; complicated signals are avoided.

30. Employment of Air Craft. Military air craft of all kinds will be employed under the direction of the commander of the forces to which they are assigned and the immediate control of the officer commanding the aero organization.

Balloons are classed as free, captive, and dirigible. Free balloons may be used to convey information from besieged places, the return message being sent by radiotelegraphy, carrier pigeons, or otherwise. Free balloons are of little use for any other service, and are not very dependable on account of their uncertainty of movement. Captive balloons may be used for tactical reconnaissance, for observation of artillery fire, and for signaling. Communication from a captive balloon to the ground should be by telephone.

Large dirigible balloons are of practical value for strategical reconnaissance and to travel great distances; they are also suitable for carrying a number of observers, radio equipment, machine guns, and considerable weight of explosives. Aeroplanes are more dependable for field service with a mobile army than dirigible balloons, as the latter require substantial shelter from winds while on the ground.

31. Reconnaissance by aeroplane includes strategical and tactical reconnaissance and the observation of artillery fire. Aeroplanes are also used to prevent hostile aerial reconnaissance.

Strategical reconnaissance by aeroplane is effective within a radius of 150 miles from the starting point, and is for the purpose of determining the position, strength, and direction of advance of the large elements of an enemy's forces, and also the character of the roads, railroads, streams, and the general military topography of the theater of operations.

Tactical reconnaissance by aeroplane is used both in attack and defense. It is extended in its nature and does not involve minute examinations of very small localities or detachments. It is designed to discover turning and enveloping movements, the position and strength of the enemy's general reserve, artillery positions and movements of cavalry; also, from the movement of combat or field trains behind an enemy's position information may be gained as to whether certain parts of the line are being weakened or strengthened, or whether a retreat is contemplated.

For observation of fire of field artillery, aeroplanes are usually assigned to the artillery commander. They are especially useful against targets which are invisible from the position of the artillery officer conducting the fire.

Aeroplanes are safe from hostile fire at altitudes of 4,000 feet or more.

The results of reconnaissance are reported by radiotelegraphy, signals, and the dropping of messages.

MESSAGES, REPORTS, MAPS, AND WAR DIARIES.

32. In the field the term "message" is generally applied to written information sent by messenger or wire. Such messages should be brief and clear, resembling telegrams. The source of the information contained in messages is always given, the writer carefully separating what he has actually seen himself from that received secondhand. Most of the rules adopted to secure clearness in orders apply equally to messages.

33. A report is a more or less formal account of some enterprise, undertaking, or event, such as a march, reconnaissance, battle, etc. A report is usually drawn up at comparative leisure, is often the supplement and expansion of short messages, and thus possesses the value of greater detail.

34. In the field the maps available for general use are on a small scale.

Those of our own country are prepared by the Geological Survey on a scale of 1:62500 (approximately 1 inch to the mile), with 20-foot contours. These maps are supplemented by field maps or sketches prepared from day to day. For facility in reading, military maps are made according to a uniform system of scales and contour intervals, as follows: One inch to 1 mile, V. I. 60 feet; 3 inches to 1 mile, V. I. 20 feet; 6 inches to 1 mile, V. I. 10 feet; 12 inches to 1 mile, V. I. 5 feet.

As a rule, road sketches are made on a scale of 3 inches to 1 mile, V. I. 20 feet; position and outpost sketches, 6 inches to 1 mile, V. I. 10 feet. The 1-inch map is used for extended operations; the 12-inch map for the war game or for the discussion of operations at maneuvers, and in siege operations.

As sketches must be made rapidly, often on horseback, unnecessary conventional signs are omitted. Sketches are useful to supplement messages and to elucidate reports of campaigns and battles.

35. A war diary is a record of events kept in campaign by each battalion and higher organization, each ammunition, supply, engineer, and sanitary train. Entries are made daily and should form a concise history of the military operations. A day comprises 24 hours covered by the date.

Each day's record will commence with a march table, or statement of the operations or location of the organization, including an account of weather, roads, camp, health of troops, etc., and a statement of the supply of ammunition, rations, and forage. This will be followed by a chronological record of events, including time and place of issue and receipt of orders and messages, with a copy or a synopsis of contents.

It is of special importance that the exact hour and place at which movements are begun and ended, and orders or important messages sent or received, be noted. After an engagement, the war diary will contain a report of losses and captures and will be accompanied by a sketch showing the positions of the command at the most important phases.

Each day's record will be attested by the commander or by the adjutant; and, with attached copies of orders and messages sent and received, will be forwarded daily to the next higher commander, who, as soon as practicable after the receipt thereof, will forward the war diary direct to the War Department.

Commanders of armies, or of units not components of a higher command, will forward their war diaries direct to the War Department.

TRANSMISSION OF INFORMATION.

36. Information is transmitted as follows:

1. By wire (telegraph, buzzer, telephone).
2. By visual signaling (flag, helio, night lamp).
3. By radiotelegraph.
4. By messenger (foot, mounted, cycle, motor car, flying machine).

Information over considerable distances is usually transmitted by wire or radiotelegraph. For short distances,² and when other means are not available, information is carried by messenger. When messages are sent by wire or radiotelegraph they are always handed the operator in writing. The telephone is not as accurate as the telegraph, and when used the parties concerned do the talking, if practicable. All available means are utilized to facili-

² For instance, at urgent speed and for distances up to about half a mile, a mounted messenger can deliver a message of 10 words in less time than the same can be delivered by wire.

tate the transmission of information, and it is the duty of all officers to assist in the transmission of orders and messages.

It is frequently advisable to send information not only to the proper superior, but to neighboring troops as well. When copies of messages are so sent the fact is noted upon each. In large commands information as to the situation of neighboring troops is often of great importance. In such cases "information officers" with messengers are sent to accompany such troops. These officers send to their own commanders all information of military importance to them.

Messages carried by messenger are usually inclosed in envelopes properly addressed. The envelope when not marked "confidential" is left unsealed, so that commanders along the line of march may read the contents. Upon the envelope is written the name of the messenger, his time of departure, and rate of speed. The latter is indicated as follows: Ordinary, rapid, or urgent. Ordinary means about 5 miles an hour for a mounted man; rapid, about 7 or 8 miles an hour; and urgent, the highest speed consistent with certainty of arrival at destination. The recipient notes the time of receipt upon the envelope and returns the latter to bearer.

When there is danger of falling into the hands of the enemy, messages are sent in cipher.

Important information is sent by two or more messengers, depending upon the dangers of the road. It may be advisable to send duplicate messages by different routes. Messengers are informed before starting of the purport of the message, and where they are to report after it is delivered.

When the usual means of communication can not be established, or fail to work, relay lines of mounted men may become necessary. When such lines are established, connecting posts are generally placed on the roads at well-marked points, such as crossroads, bridges, etc. The distance between posts depends upon the rapidity of transmission desired, the number of men available, and the location of suitable stations. The usual distance is from 5 to 10 miles. The strength of such posts varies from six men and a noncommissioned officer to half a troop. A record is kept at each post of all communications received and transmitted.

ARTICLE II.

SECURITY.

GENERAL PRINCIPLES.

37. Security embraces all those measures taken by a command to protect itself from observation, annoyance, or surprise by the enemy.

Ordinarily this security is provided in part by the independent cavalry, which, operating far to the front, checks the opposing cavalry and sends in timely information of the movements of the enemy. But as a command is not always preceded by independent cavalry, and as this cavalry can not always prevent sudden incursions of the enemy or discover his patrols, additional security becomes necessary. This is obtained by covering the immediate front of the command with detachments.

On the march these detachments are called advance, flank, or rear guards; in camp or bivouac they are called outposts.

The object of the former is to facilitate the movement of the main body and to protect it from surprise and observation; the object of the latter is to secure the camp or bivouac against surprise and to prevent an attack upon it before the troops can prepare to resist.

On the march these detachments facilitate the advance of the main body by promptly driving off small bodies of the enemy who seek to harass or delay it; by removing obstacles from the line of advance; by repairing roads, bridges, etc., thus enabling the main body to advance uninterruptedly in convenient marching formations.

They protect the main body by preventing the enemy from firing into it when in close formation; by holding the enemy and enabling the main body to deploy before coming under effective fire; by preventing its size and condition from being observed by the enemy; and, in retreat, by gaining time for it to make its escape or to reorganize its forces.

As the principal duty of these bodies is the same, viz., that of protecting the main body, there is a general similarity in the formations assumed by them. There is (1) the cavalry covering the front; next (2) a group, or line of groups, in observation; then (3) the support, or line of supports, whose duty is to furnish the observation groups, and check the enemy pending the arrival of reinforcements; still farther in rear is (4) the reserve.

38. The march order of the whole command should explain the situation, and among other things, detail the commander and troops for each covering detachment. It should specify the route to be taken and the distance to be maintained between the main body and its covering detachments. It should order such reconnaissance as the commander specially desires to have made.

The order of the commander of a covering detachment should clearly explain the situation to subordinates, assign the troops to the subdivisions, prescribe their distances, and order such special reconnaissance as may be deemed necessary in the beginning.

39. An advance or flank guard commander marches well to the front and, from time to time, orders such additional reconnaissance or makes such changes in his dispositions as the circumstances of the case demand.

In large commands troops from all arms are generally detailed, the proportion from each being determined by the tactical situation; but commanders detail no more troops than the situation actually requires, as an excessive amount of such duty rapidly impairs the efficiency of a command. As a general rule troops detailed on the service of security vary in strength from one-twentieth to one-third of the entire command, but seldom exceed the latter. When practicable, the integrity of tactical units is preserved.

In mixed commands infantry usually forms the greater part of the troops detailed to the service of security. Cavalry is assigned to that duty whenever advantage can be taken of its superior mobility. The kind and amount of artillery are determined by circumstances.

Engineer, signal, and sanitary troops are detailed when required.

The field trains of troops on this duty generally remain with the field train of the command, but if conditions permit they may join their organizations.

Troops on the service of security pay no compliments; individuals salute when they address, or are addressed by, a superior officer.

ADVANCE GUARDS.

40. An advance guard is a detachment of the main body which precedes and covers it on the march.

Its duties are:

1. To guard against surprise and furnish information by reconnoitering to the front and flanks.

2. To push back small parties of the enemy and prevent their observing, firing upon, or delaying the main body.

3. To check the enemy's advance in force long enough to permit the main body to prepare for action.

4. When the enemy is encountered on the defensive, to seize a good position and locate his lines, care being taken not to bring on a general engagement unless the advance-guard commander is empowered to do so.

5. To remove obstacles, repair the road, and favor in every way possible the steady march of the column.

41. Strength and Composition. Subject to variation according to the situation, one-twentieth to one-third of a command may be assumed as a suitable strength for the advance guard. The larger the force, the larger in proportion is the advance guard, for a large command takes relatively longer to prepare for action than a small one. In large commands it is usually composed of all arms, the proportions depending on the nature of the work, character of the country, etc. In open country it should be strong in cavalry and field artillery, but artillery is seldom assigned to the advance guard of a command not larger than a brigade. In such cases, however, when there is artillery with a command, an officer of that arm usually accompanies the advance guard for purposes of artillery reconnaissance. In swampy country or jungle it may be formed of infantry alone. When not preceded by independent cavalry, the advance guard must, as a rule, be strong in cavalry; in such cases the commander determines whether to attach all of the divisional cavalry to the advance guard, or to retain a part for some special service.

Machine guns materially increase the effectiveness of an advance guard. They are useful in holding bridges, defiles, etc., until reinforcements can be brought up.

Engineers are usually attached to an advance guard to remove obstacles, repair roads, etc. Circumstances may require a bridge train to be attached.

The supreme commander generally retains control of the signal troops, and establishes such lines of information as he deems necessary. However, when the nature of the country favors communication by signaling, signal troops may be attached to the advance guard.

An ambulance company usually accompanies large advance guards.

42. Distance from Main Body. The distance at which the advance guard precedes the main body, or the main body follows the advance guard, is stated in the march order. In small commands, where there is no difficulty in keeping touch with the main body, the march order generally requires the advance guard to regulate its march on the main body; but where the advance guard is large, or moves at a considerable distance in advance of the main body, the latter regulates its march on the advance guard.

While the distance between these two bodies should be great enough to prevent needless interruptions in the march of the main body, and to give the latter time to deploy should the enemy be encountered, it should never be so great that timely support of the advance guard becomes impracticable.

43. Advance Guard Commander. On receipt of the march order the advance guard commander estimates the situation and, at the proper time, issues the advance-guard order. This order divides the advance guard into its tactical components (advance cavalry, support, etc.), and gives the necessary instructions for each.

The advance-guard commander is mounted and goes wherever he deems his presence necessary, though his habitual station is at the head of the reserve, or with the support when there is no reserve. He conducts the advance so as not to interrupt the steady march of the main body, and, when ordered to move at a certain distance in front of the latter, maintains the necessary connection therewith. He bears constantly in mind the duties of an advance

guard, and studies the ground with a view to tactical dispositions should the enemy be encountered.

44. Distribution of Troops. An advance-guard order generally prescribes the following distribution of troops:

Advance cavalry.

Support.

Reserve.

The manner in which the advance-guard cavalry is employed depends upon the situation. Its proper place is in the direction of the enemy, and generally all or the greater part is used as advance cavalry. If weak in numbers, it may be assigned to the support.

45. Advance Cavalry. The advance cavalry is that part of the advance-guard cavalry preceding the support. It reconnoiters far enough to the front and flanks to guard the column against surprise by artillery fire, and to enable timely information to be sent to the advance-guard commander. If preceded by independent cavalry, the advance cavalry maintains connection therewith, except when prevented by uncontrollable reasons; if not preceded by independent cavalry, it pushes well out and endeavors to find the enemy, performing to a limited extent the functions of independent cavalry. Its commander should be bold, energetic, and capable; he sees that his command is supplied with articles required by patrols.

46. Support. Following the advance cavalry is the support, varying in strength from one-fourth to one-half of the advance guard. In mixed commands it consists of infantry, to which engineers may be attached. If there is no advance cavalry, some cavalry should be attached to the support for reconnoitering duty.

As the support moves out it sends forward an advance party several hundred yards, the distance varying with the terrain and the size of the command.

The advance party supplements the work of the advance cavalry, reconnoitering to the front and flanks to guard the support against surprise by effective rifle fire. The patrol preceding the advance party on the line of march is called the point, and is commanded by an officer or an experienced noncommissioned officer.

With the advance cavalry in front but little reconnoitering by infantry is necessary, and the advance party is relatively small—one-eighth to one-third of the support. If there is no advance cavalry, the advance party is made stronger (about one-half of the support) and the flanks are guarded, if necessary, by additional patrols sent out from the support and even from the reserve.

The support commander ordinarily marches with the advance party, but goes wherever needed. He sees that the proper road is followed; that guides are left in towns and at crossroads; that necessary repairs are made to roads, bridges, etc., and that information of the enemy or affecting the march is promptly transmitted to the advance-guard commander. He endeavors promptly to verify information of the enemy.

47. Reserve. The reserve follows the support at several hundred yards distance. It consists of the remainder of the infantry and engineers, the artillery, and the ambulance company. The artillery usually marches near the head of the reserve, the engineers (with bridge train, if any) and special troops at the rear.

48. Reconnaissance. In conducting the reconnaissance the patrols are, as a rule, small—from two to six men. If additional protection is necessary, a flank guard covers the threatened flank. The flanking patrols, whether of the advance cavalry or advance party, are sent out to examine the country wherever the enemy might be concealed. If the nature of the terrain permits, these

patrols march across country or along roads and trails paralleling the march of the column. For cavalry patrols this is often possible; but with infantry patrols and even with those that are mounted, reconnaissance is generally best done by sending the patrols to high places along the line of march to overlook the country and examine the danger points. These patrols report or signal the results of their observations and, unless they have other instructions, join their units by the most practicable routes, other patrols being sent out as the march proceeds and as the nature of the country requires.

Deserters, suspicious characters, and bearers of flags of truce,¹ the latter blindfolded, are taken to the advance guard commander.

Civilians are not permitted to precede the advance guard.

Communication between the fractions of an advance guard and between the advance guard and main body is maintained by wire, messenger service, or signals.

ADVANCE GUARD OF A SMALL COMMAND.

49. In forming the advance guard of a command smaller than a brigade, the foregoing distribution is modified, depending upon the situation. A company or troop usually sends forward only a point, a battalion or squadron, an advance party; but a battalion or squadron at war strength should put a company or troop in the advance guard and a regiment should put a battalion or squadron, if an enemy is liable to be met. Whenever the advance guard is less than a battalion, there is no reserve.

50. **Advance Guard of a Cavalry Command.** Cavalry marching independently adopts formations for its advance guard similar to those described above, though the distances are generally greater.

ADVANCE GUARD OF A DIVISION (INDEPENDENT).

51. Assuming that the advance guard consists of one brigade of infantry, one squadron, one battalion of artillery, one company of engineers, and an ambulance company, the distribution (with independent cavalry) might be made as follows:

Independent cavalry.

(One or two marches.)

Advance guard.

Advance Cavalry. One squadron with point and flanking patrols; communication maintained with independent cavalry. (Point of advance cavalry to point of advance party at least 4 or 5 miles.)

Support. One regiment of infantry and mounted detachment of engineers. The support sends forward its advance party, one company, about 500 yards; the advance party is preceded from 300 to 500 yards by its point.

(About 1,000 yards.)

Reserve—in Order of March. One battalion infantry; one battalion artillery; two battalions of infantry; one regiment infantry; company engineers (less detachment); ambulance company. (There may be a detachment of signal troops, though the division commander generally retains control of those troops.)

(One to two miles.)

Main body.

¹ See Rules of Land Warfare, U. S. Army relative to reception of bearers of flags of truce, etc.

SECURITY FOR THE HEAD OF A RETREATING FORCE.

52. In retreat a column is preceded by a body of troops designated "leading troops," whose principal duty is to clear the road of obstacles and facilitate the withdrawal of the command. The strength and composition of such troops are determined by the situation. Engineers are generally necessary; cavalry is assigned to this duty to afford protection against guerillas or small hostile parties that may have succeeded in reaching the rear of the command. If the rear is seriously threatened, the leading troops march practically as an advance guard.

FLANK GUARDS.

53. The flanks of a column are protected in part by the advance guard, which carefully examines the ground on both sides of the line of march. It may be necessary, however, to provide additional security for a flank threatened by the enemy. This is done by sending a detachment, called a flank guard, to cover the exposed flank.

Flank guards vary in size from patrols to detachments of all arms. Their composition and formation depend upon the situation, though they are generally strong in cavalry on account of the necessity for rapid reconnaissance and communication. They may be composed exclusively of that arm, but when strong positions are to be held, or prolonged resistance to the enemy is expected, troops of all arms are necessary. Their duties are similar to those of an advance guard. They keep in constant touch with the column either by wire, signal, or messenger service.

Flank guards may be sent out by an advance guard (made strong for that purpose) or by the main body; they march in a direction generally parallel to the column, keeping abreast of the unit from which detailed, or are sent to occupy favorable positions on a threatened flank, remaining there until the whole column has passed. In the latter case they join the rear guard and return to their commands at the end of the day's march. As a flank guard usually marches a greater distance than the body from which detailed, it is generally sent out in advance.

54. **Flank Marches.** When the main body executes a flank march near the enemy, the flank guard becomes a body of great importance. If the flank march is due to a considerable change of direction in the march of the column, it is generally advisable to convert the advance guard into a flank guard, and detail a new advance guard to precede the column. If the troops making the flank march start from camp, a separate flank guard will have to be provided.

In long columns the large units, such as regiments, will provide their own flank observation.

REAR GUARDS.

55. The rear guard is charged with the important duty of covering the retreat.

When a commander decides to retreat, he issues the necessary order. During a retreat the outpost for the night usually forms the rear guard of the following day.

56. **Strength and Composition.** The strength of a rear guard depends upon the nature of the country and the strength and character of the pursuing force. It can not, like the advance guard, count on the support of the main body.

Machine guns are especially useful in the passage of defiles and in covering the crossings of rivers.

Engineers and ambulance companies are usually assigned to rear guards.

The troops of a rear guard are selected from those that have had previous local successes, or have suffered little loss and are comparatively fresh.

57. Distribution of Troops. The proximity and conduct of the enemy control, to a large extent, the formation of a rear guard. When it is not necessary to withdraw in deployed lines, the greater part of the rear guard marches on the road in column of route, taking up a formation resembling that of an advance guard faced to the rear. The distribution of troops is therefore similar to that of an advance guard, namely:

Reserve.

Support.

Rear cavalry.

The rear cavalry is that portion of the rear guard cavalry following the support. The support, as in an advance guard, is divided into two parts; that part nearest the enemy is called the rear party and marches with a rear point. Mounted engineers usually accompany the support and may be attached to the rear party. Where the cavalry is of sufficient strength and has horse artillery attached, the entire rear guard, excepting the reserve, may be composed of that arm. The reserve is composed mainly of infantry and artillery.

58. Distances. The distances of the rear guard from the main body and between the fractions of the rear guard are about the same as in the case of an advance guard. If marching at night, the rear guard draws nearer the main body.

REAR GUARD OF AN ADVANCING FORCE.

59. If there is a possibility that the rear of the column may be attacked, a rear guard of suitable strength and composition is provided. If the hostile attempts are confined to guerillas, marauders, etc., the guard should be strong in cavalry. Its conduct is practically the same as that of the rear guard of a retreating force. It generally marches in rear of the trains, those organizations following the combatant troops without distance.

OUTPOSTS.

60. The size and disposition of the outpost will depend upon many circumstances, such as the size of the whole command, the proximity of the enemy and the situation with respect to him, the nature of the terrain, etc.

A suitable strength may vary from a very small fraction to one-third of the whole force. For a single company in bivouac a few sentinels and patrols will suffice; for a large command a more elaborate outpost system must be provided. It should be no stronger than is consistent with reasonable security.

The most economical protection is furnished by keeping close contact with the enemy by means of outpost patrols, in conjunction with resisting detachments on the avenues of approach.

The outpost should be composed of complete organizations.

61. In a brigade or smaller force on the march toward the enemy, the outpost is generally formed from the advance guard, and is relieved the following day when the new advance guard crosses the line of outguards. In a retreat, the detail for outpost duty is generally made from the main body. The new outpost becomes the rear guard the following day.

When, as in large forces, an advance and rear guard performs such duty for several days, the outpost, during this period, is furnished by the advance or rear guards.

When the command is small and stationary for several days the outpost is relieved daily. In large commands, the outpost will, as a rule, be relieved at intervals of several days.

62. The positions held by the subdivisions of the outpost should generally be prepared for defense, but conditions may render this unnecessary.

Troops on outpost keep concealed as much as is consistent with the proper

performance of their duties; especially do they avoid appearing on the sky line.

63. Composition. A mixed outpost is composed principally of infantry. The infantry is charged with the duty of local observation, especially at night, and with resisting the enemy long enough for the main body to prepare for action. The cavalry is charged with the duty of reconnaissance, and is very useful in open country during the day.

If the infantry has been severely taxed by marching or fighting, a large part of the outpost may be temporarily formed of cavalry.

When an outpost is detailed from the advance guard, the advance cavalry of the advance guard becomes the advance cavalry of the outpost and continues the work of reconnaissance until recalled for the night.

Artillery is useful to outposts when its fire can sweep defiles or large open spaces and when it commands positions that might be occupied by hostile artillery. The guns are carefully concealed or protected and are usually withdrawn at night.

Machine guns are useful to command approaches and check sudden advances of the enemy.

Engineers are usually attached to an outpost to assist in constructing intrenchments, clearing the field of fire, and opening communications laterally and to the rear.

The supreme commander generally retains control of the signal troops and establishes a line of information to the reserve and from the reserve to each support and important detached post.

It is generally unnecessary to attach any portion of the sanitary train to an outpost, as the equipment of the regimental aid station carried in the sanitary combat train will as a rule be sufficient. If necessary, dressing stations may be established by ambulance companies of the sanitary train in convenient location to the rear of the outpost line.

The field trains of troops on outpost duty generally join their organizations; if an engagement is probable, they may be held in rear.

64. Distribution of Outpost Troops. The outpost will generally be divided into four parts. These, in order from the main body, are the reserve, the line of supports, the line of outguards, and the advance cavalry.

The distances separating these parts, and their distance from the main body, will depend upon the object sought, the nature of the terrain, and the size of the command. There can be no uniformity in the distance between supports and reserve, nor between outguards and supports, even in the same outpost. The avenues of approach and the important features of the terrain will largely control their exact positions.

The outpost of a small force should ordinarily hold the enemy beyond effective rifle range of the main body until the latter can deploy. For the same purpose the outpost of a large force should hold the enemy beyond artillery range.

65. The reserve constitutes the main body of the outpost and is held at some central point from which it can readily support the troops in front or hold a rallying position on which they may retire. The reserve may be omitted when the outpost consists of less than two companies.

The reserve may comprise one-fourth to two-thirds of the strength of the outpost.

66. The supports constitute a line of supporting and resisting detachments, varying in size from a half company to a battalion. They furnish the line of outguards.

The supports are numbered consecutively from right to left. They are placed at the more important points on the outpost line, usually in the line on which resistance is to be made in case of attack.

As a general rule, roads exercise the greatest influence on the location of supports, and a support will generally be placed on or near a road. The section which it is to cover should be clearly defined by means of tangible lines on the ground and should be such that the support is centrally located therein.

67. The outguards constitute the line of small detachments farthest to the front and nearest to the enemy. For convenience they are classified as pickets, sentry squads, and cossack posts. They are numbered consecutively from right to left in each support.

68. A picket is a group consisting of two or more squads, ordinarily not exceeding half a company, posted in the line of outguards to cover a given sector. It furnishes patrols and one or more sentinels, double sentinels, sentry squads, or cossack posts for observation.

Pickets are placed at the more important points in the line of outguards, such as road forks. The strength of each depends upon the number of small groups required to observe properly its sector.

69. A sentry squad is a squad posted in observation at an indicated point. It posts a double sentinel in observation, the remaining men resting near by and furnishing the reliefs of sentinels. In some cases it may be required to furnish a patrol.

70. A cossack post consists of four men. It is an observation group similar to a sentry squad, but employs a single sentinel.

At night it will sometimes be advisable to place some of the outguards or their sentinels in a position different from that which they occupy in the daytime. In such case the ground should be carefully studied before dark and the change made at dusk. However, a change in the position of the outguard will be exceptional.

71. Sentinels are generally used singly in daytime, but at night double sentinels will be required in most cases. Sentinels furnished by cossack posts or sentry squads are kept near their group. Those furnished by pickets may be as far as 100 yards away.

Every sentinel should be able to communicate readily with the body to which he belongs.

Sentinel posts are numbered consecutively from right to left in each outguard. Sentry squads and cossack posts furnished by pickets are counted as sentinel posts.

72. By day, cavalry reconnoiters in advance of the line of observation. If there is independent cavalry in front, the advance cavalry maintains connection therewith and reconnoiters only where necessary. At night, however, that the horses may have needed rest and because the work can be better done by infantry, the greater part of the cavalry is usually withdrawn in rear of the supports, generally joining the reserve, small detachments being assigned to the supports for patrolling at a distance.

With efficient cavalry in front, the work of the infantry on the line of observation is reduced to a minimum.

General instructions for the advance cavalry are given by the outpost commander, but details are left to the subordinate.

73. Instead of using outguards along the entire front of observation, part of this front may be covered by patrols only. These should be used to cover such sections of the front as can be crossed by the enemy only with difficulty and over which he is not likely to attempt a crossing after dark.

In daylight much of the local patrolling may be dispensed with if the country can be seen from the posts of the sentinels. However, patrols should frequently be pushed well to the front unless the ground in that direction is exceptionally open.

74. Patrols or sentinels must be the first troops which the enemy meets, and each body in rear must have time to prepare for the blow. These bodies cause as much delay as possible without sacrificing themselves, and gradually retire to the line where the outpost is to make its resistance.

Patrols must be used to keep up connection between the parts of the outpost except when, during daylight, certain fractions or groups are mutually visible. After dark this connection must be maintained, throughout the outpost except where the larger subdivisions are provided with wire communication.

75. In addition to ordinary outguards, the outpost commander may detail from the reserve one or more detached posts to cover roads or areas not in the general line assigned to the supports.

In like manner the commander of the whole force may order detached posts to be sent from the main body to cover important roads or localities not included in the outpost line.

The number and strength of detached posts are reduced to the absolute needs of the situation.

76. **Establishing the Outpost.** The outpost is posted as quickly as possible, so that the troops can the sooner obtain rest. Until the leading outpost troops are able to assume their duties, temporary protection, known as the march outpost, is furnished by the nearest available troops.

77. The halt order of the commander, besides giving the necessary information and assigning camp sites to the parts of the command, details the troops to constitute the outpost, assigns a commander therefor, designates the general line to be occupied, and, when practicable, points out the position to be held in case of attack.

The outpost commander, upon receipt of this order, should issue the outpost order with the least practicable delay. In large commands it may often be necessary to give the order from the map, but usually the outpost commander will have to make some preliminary reconnaissance, unless he has an accurate and detailed map.

The order gives such available information of the situation as is necessary to the complete and proper guidance of subordinates; designates the troops to constitute the support; assigns their location and the sector each is to cover; provides for the necessary detached posts; indicates any special reconnaissance that is to be made; orders the location and disposition of the reserve; disposes of the train if same is ordered to join the outpost; and informs subordinates where information will be sent.

Generally it is preferable for the outpost commander to give verbal orders to his support commanders from some locality which overlooks the terrain. The time and locality should be so selected that the support commanders may join their commands and conduct them to their positions without causing unnecessary delay to their troops. The reserve commander should, if possible, receive his orders at the same time as the support commanders. Subordinates to whom he gives orders separately should be informed of the location of other parts of the outpost.

In large outposts written orders are frequently most convenient.

After issuing the initial orders, the outpost commander inspects the outpost, orders the necessary changes or additions, and sends his superior a report of his dispositions.

78. The reserve is marched to its post by its commander, who then sends out such detachments as have been ordered and places the rest in camp or bivouac, over which at least one sentinel should be posted. Connection must be maintained with the main body, the supports, and nearby detached posts.

79. The supports march to their posts, using the necessary covering detach-

ments when in advance of the march outpost. A support commander's order should fully explain the situation to subordinates or to the entire command, if it be small. It should detail the troops for the different outguards and, when necessary, define the sector each is to cover. It should provide the necessary sentinels at the post of support, the patrols to be sent therefrom, and should arrange for the necessary intrenching. Connection should be maintained with the adjoining supports and with the outguards furnished by the support.

In posting his command the support commander must seek to cover his sector in such manner that the enemy can not reach, in dangerous numbers and unobserved, the position of the support or pass by it within the sector intrusted to the support. On the other hand, he must economize men on observation and patrol duty, for these duties are unusually fatiguing. He must practice the greatest economy of men consistent with the requirements of practical security.

As soon as the posting of the support is completed, its commander carefully inspects the dispositions and corrects defects, if any, and reports the disposition of his support, including the patrolling ordered, to the outpost commander. This report is preferably made by means of a sketch.

80. Each outguard is marched by its commander to its assigned station, and especially in the case of a picket, is covered by the necessary patrolling to prevent surprise.

Having reached the position, the commander explains the situation to his men and establishes reliefs for each sentinel, and, if possible, for each patrol to be furnished. Besides these sentinels and patrols, a picket must have a sentinel at its post.

The commander then posts the sentinels and points out to them the principal features, such as towns, roads, and streams, and gives their names. He gives the direction and location of the enemy, if known, and of adjoining parts of the outpost.

He gives to patrols the same information and the necessary orders as to their routes and the frequency with which the same shall be covered. Each patrol should go over its route once before dark.

81. Every picket should maintain connection by patrols with outguards on its right and left. Each commander will take precaution to conceal his outguard and will generally strengthen his position by intrenching.

82. **Relieving the Outpost.** Evening and shortly before dawn are hours of special danger. The enemy may attack late in the day in order to establish himself on captured ground by intrenching during the night; or he may send forward troops under cover of darkness in order to make a strong attack at early dawn. Special precaution is therefore taken at those hours by holding the outpost in readiness, and by sending patrols in advance of the line of observation. If a new outpost is to be established in the morning, it should arrive at the outpost position at daybreak, thus doubling the outpost strength at that hour.

83. **Examining Posts.**² An examining post is a small detachment, under the command of an officer or a noncommissioned officer, stationed at some convenient point, to examine strangers and to receive bearers of flags of truce brought in by the outguards or patrols.

Though the employment of examining posts is not general in field operations, there are many occasions when their use is important; for example: when the outguards do not speak the language of the country or of the enemy; when preparations are being made for a movement and strict scrutiny at the

² See Rules of Land Warfare, U. S. Army, relative to reception of bearers of flags of truce, etc.

outguards is ordered; at sieges, whether in attack or defense. When such posts are used, strangers approaching the line of observation are passed along the line to an examining post.

No one except the commander is allowed to speak to persons brought to an examining post. Prisoners and deserters are at once sent under guard to the rear.

ARTICLE III.

ORDERS.

GENERAL PRINCIPLES.

84. The art of giving proper instructions and orders to troops is one of the most important feature in the exercise of command.

The expression of the will of leaders is conveyed in letters of instruction or by written or verbal orders.

Letters of Instruction. At the beginning of operations and from time to time thereafter the plans of the superior leaders are communicated in the form of letters of instruction. These regulate movements over large areas and for considerable periods of time. (See *Combat Orders*, pp. 1616-1617.)

85. **Field Orders.** Field orders regulate the tactical and such strategical actions of troops as are not carried in letters of instruction. (See *Combat Orders*, pp. 1616-1617.)

The field orders of field army and division commanders are almost invariably written. When conditions demand the issuance of verbal orders, written orders follow. The field orders of brigade commanders are usually written. The field orders of regimental and smaller unit commanders are usually verbal.

The object of field orders is to bring about a course of action, in accordance with the intention of the leader, suited to the situation and with full coöperation between all arms and service. They are issued for marches, halts, formation of camps or bivouacs, advance, flank and rear guards, outposts, combat, etc.

In active operations, especially during engagements, numerous field orders are issued in fragmentary form—either verbally or in the form of notes, brief dispatches, messages, orders for assembly, etc.—which do not contain all the requirements of a formal written field order; but whenever detailed instructions for operations are given, whether verbally or in writing, the sequence prescribed for the body of a formal field order is preserved.

Administrative details are usually covered in "orders," but when circumstances make it more convenient they may be included in field orders.

86. To give subordinate leaders an opportunity to study the situation, field orders should reach them in ample time. As a rule, however, it is desirable to keep contemplated movements secret as long as possible, and to confine knowledge thereof to chiefs of staff departments and leaders of the larger units.

In large commands it requires some time for formal orders to reach all the lower units; this may be roughly estimated at one hour for a brigade and one hour and a half for a division.

The hour stated in the heading of an order is the hour of signature.

87. Orders not connected with the tactical or strategical action of troops, but necessary in the ordinary administration of military affairs, are called general orders, orders, and special orders, according to circumstances.

General Orders. General orders include, generally, (1) all detailed instructions necessary in carrying out certain general regulations or orders issued from a superior headquarters; (2) all standing instructions, to the end that frequent repetition may be avoided; and (3) proceedings of general and special courts-martial.

General orders are issued by commanders of armies, field armies, divisions, brigades, regiments, and separate battalions.

Orders. Orders, in contradistinction to field, general, and special orders, are used by commanders of divisions and separate brigades for regulating the movements and resupply of the field trains, fixing the position of distributing points (rations and forage), authorizing the use of reserve rations, providing for the refilling of combat trains after combat or march, providing for ambulance and hospital service in camps, and for furnishing such other similar information or instructions as it is desired to communicate to troops. They also include such instructions as may be sent to the commander of trains, relative to the movements and disposition of the trains and information with regard to the arrangements made with the line of communication relative to the positions of refilling, rendezvous, and evacuation points.

When necessary, orders are used by commanders of battalions forming parts of regiments, and smaller units and detachments, for the same class of instructions as are promulgated by higher commanders in general orders.

Special Orders. These cover only such matters relating to the movements or assignment of individuals as are not necessary to be communicated generally to the command.

88. Verbal Orders. When not communicated by the leader in person, verbal orders are carried by staff officers or messengers. Important verbal orders are recorded as soon as practicable after issue.

As there is always a possibility of controversy as to their wording, verbal orders are sent by messengers in case of necessity only, and when so sent rarely contain more than one definite mandate. For example: "The brigade will halt three hours at——." More latitude is allowed in sending verbal orders by officers.

The bearer of a verbal order or message is required to repeat it before starting.

COMPOSITION OF FORMAL FIELD ORDERS.

89. To frame a suitable field order, the leader must make an estimate of the situation, culminating in a decision upon a definite plan of action. He must then actually draft or word the orders which will carry his decision into effect.

An estimate of the situation involves a careful consideration, from the commander's viewpoint, of all the circumstances affecting the particular problem. In making this estimate he considers his mission as set forth in the orders or instructions under which he is acting, or as deduced by him from his knowledge of the situation, all available information of the enemy (strength, position, movements, probable intentions, etc.), conditions affecting his own command (strength, position, supporting troops, etc.), and the terrain in so far as it affects the particular military situation. He then compares the various plans of action open to him and decides upon the one that will best enable him to accomplish his mission.

Clear and decisive orders are the logical result of definite and sure decisions and are the means of transforming the decision into action.

In framing field orders the integrity of tactical units is preserved whenever practicable.

Field orders must be clear and definite. Expressions depending upon the viewpoint of the observer, such as right, left, in front of, behind, on this side, beyond, etc., are avoided, reference being made to points of the compass instead. The terms right and left, however, may be applied to individuals or bodies of men, or to the banks of a stream; in the latter case the observer is supposed to be facing downstream. The terms right flank and left flank are fixed designa-

tions. They apply primarily to the right and left of a command when facing the enemy and do not change when the command is retreating. The head of a column is its leading element, no matter in what direction the column is facing; the other extremity is the tail.

To minimize the possibility of error, geographical names are written or printed in ROMAN CAPITALS; when the spelling does not conform to the pronunciation, the latter is shown phonetically in parentheses, thus: Bicester (Bister), Gila (Hee'-la).

When two or more places or features on the map have the same name they are distinguished by reference to other points.

A road is designated by connecting two or more names of places on the road with dashes, thus: Leavenworth—Lowemont—Atchison road.

As a rule, an affirmative form of expression is used. Such an order as: "The supply train will not accompany the division," is defective, because the gist of the order depends upon the single word "not."

Written orders should be so distinct as to be legible even in bad light.

Field orders are brief; short sentences are easily understood; conjectures, expectations, reasons for measures adopted, and detailed instructions for a variety of possible events, do not inspire confidence, and should be avoided.

The commander should accept the entire responsibility. In framing field orders such expressions as "attempt to capture," "try to hold," "as far as possible," "as well as you can," etc., are forbidden. They tend to divide responsibility between the commander and his subordinates.

An order should not trespass upon the province of a subordinate. It should contain everything beyond the independent authority of the subordinate, but nothing more.

When the transmission of orders involves a considerable period of time, during which the situation may change, detailed instructions are avoided. The same rule holds when orders may have to be carried out under unforeseen circumstances. In such cases letters of guidance are preferable; they lay stress upon the object to be attained, and leave open the means to be employed. Orders attempting to arrange matters too far in advance may have to be recalled and others substituted; such changes impose needless hardships upon a command and injure its morale.

Details of time and place are carefully stated. Subordinate commanders and staff officers regulate their watches by the time kept at headquarters.

Orders issued by subordinates should not be mere repetitions of those from higher authority with additions of their own. New orders are generally clearer and more satisfactory.¹

FORM OF FIELD ORDERS. (See page 1681.)

90. To enable the will of the commander to be quickly understood, to secure prompt coöperation among his subordinates, and for ready reference, field orders are required to follow a general form. This form divides an order into sections or parts and assigns to each a particular class of information.

The parts of a field order are:

The heading.

The distribution of troops (in certain orders).

The body.

The ending.

¹ For details of field orders for combat see pars. 142-149, inclusive.

91. The Heading. The heading contains the title or name of the issuing officer's command, the place, date, and hour of issue, the number of the order and reference to map used.

Titles are expressed as follows:

Det. 1st Div.

Outpost, 6th Inf.

Advance Guard, 3d Div.

1st Brig. 1st Div.

3d Div.

In the above titles "Det. 1st Div." means that the command is composed of troops from the first division; "Advance Guard, 3d Div.," means that the command is the advance guard of the third division.

The title may appear in the order creating a command, thus: "The Second Brigade will constitute the advance guard."

The title with place, date, and number thus fully identifies an order.

Whether named in the title or elsewhere in the order, the abbreviated form for the designation of tactical organizations is preferable. (See Appendix 9, List of Abbreviations.)

When a fraction of an organization can not be designated by naming one or more of the subdivisions, it receives the generic title of "detachment."

A detachment is a body of troops separated from a higher command and entrusted with a special mission.

Nearly every command of any size is composed of troops from the different arms or special services, or both, and when not constituting a division, brigade, or other authorized unit, the question arises whether to call such a command a "detachment" or to give it the tactical designation of the predominating arm or special service. If there is a predominating element the title of the command is that of the predominating element, unless the proportion of auxiliary troops or special troops equals or exceeds that prescribed for a division, in which case the command is a detachment. For example: A command consisting of 1 regiment of infantry and 1 squadron is a detachment, while the title of a command consisting of 1 regiment of infantry and a troop is that of the regiment.

Dates in the heading are abbreviated thus: 4 Feb. 08, 2-45 p.m.

92. The Distribution of Troops. The distribution of troops shows the tactical components into which a command is divided (advance guard, main body, etc.) and the troops assigned to each. It is generally used in march orders and in the first field order applying to a command newly created or organized. In other cases it is usually more convenient to name the troops in the body of the order, where their duties are prescribed.

When a "distribution" is used it is headed "Troops," and in written or printed orders is placed on the left of the body, occupying about one-third of the page. The tactical components are marked with lettered subheads (a), (b), etc., the troops listed under each performing the task prescribed in the similarly marked paragraph of the body of the order.

When orders are dictated or sent by wire or signals, the distribution of troops (if used) is given immediately after paragraph 2, without number.

93. The Body. The body contains information and instructions for the command, and is arranged in numbered paragraphs as follows:

Paragraph 1 contains such information of the enemy and of our supporting troops as it is desirable that subordinates should know.

Paragraph 2 contains the general plan of the commander, or so much thereof as will insure coöperation of all parts of the command.

Paragraph 3 contains the detailed tactical dispositions adopted by the com-

mander to carry out the plan outlined in paragraph 2, including the tasks assigned to each of the several combatant fractions of the command. These tasks are given under lettered subheads (a), (b), etc., the leading fraction, or the one having the most important duty to perform, being generally considered first. For instance: In an attack order it is customary to consider the artillery first; in a march order, troops are considered according to their position in the column.

Instructions applicable to all of these fractions may be embodied in a subparagraph, lettered (x), at the end of paragraph 3.

Paragraph 4 contains instructions for the trains, and may designate the position of ammunition distributing stations, dressing stations, and stations for slightly wounded.

The last paragraph, usually paragraph 5, shows where the commander can be found or messages may be sent. In orders of subordinate commanders, this paragraph also gives the location of "lines of information," if any have been established.

If additional paragraphs are necessary, they are incorporated, properly numbered, after paragraph 4. Sometimes it is unnecessary to include instructions for the trains; but whatever the number of paragraphs the last always shows where the commander can be found, etc.

No abbreviations are used in the body of the order except a.m. and p.m. for morning and afternoon, the authorized abbreviations for tactical organizations, and those customary in designating rank. In naming a night both days should be mentioned, thus: Night 4/5 Feb. 08. To designate "noon" and "midnight," these words are written.

94. The Ending. The ending contains the authentication of the order and a statement of how it is communicated to the command. This statement is an important feature of a field order and is made by the officer signing the order, he being responsible that it is properly distributed.

95. Before orders are issued they are carefully tested to see that the entire command is accounted for.³

ARTICLE IV.

MARCHES AND CONVOYS.

GENERAL PRINCIPLES.

96. A successful march, whether in peace or war, is one that places the troops at their destination at the proper moment and in the best possible condition. In war, marches are of daily occurrence, and success depends in a great measure upon the skill with which they are conducted.

Good marching is secured by careful preparation, strict discipline, and the due observance of march sanitation.

While conforming to other requirements, marches are conducted so as to reduce to a minimum the hardships of the troops.

When possible, ample notice is given so that preparations can be made without haste.

The march is habitually at route order.

Troops are informed of the length of halts so that they can take full advantage of the same.

The men are not kept under arms longer than necessary, nor required to carry heavy burdens when transportation is available.

³For forms of orders see Appendix 3.

Special care is paid to the feet of the men and to the hoofs and backs of animals.

In prolonged marches at least one day in seven should be a day of rest.

A forced march is never undertaken unless the situation requires it.

As a rule troops on the march pay no compliments; individuals salute when they address, or are addressed by, a superior officer.

The conduct of a march (forming the column or columns, distribution of troops, the start, rate, length of march, etc.) is controlled by the situation and object to be accomplished.

CONDUCT OF MARCHES.

97. Preparation. It is the duty of the commander to see that the necessary preparations are made—that the men and animals are in fit condition and that they are properly equipped; that all trains accompanying the command are loaded as prescribed; that proper measures have been inaugurated for the replenishment of supplies, and that the necessary arrangements have been made for the care and evacuation of the sick and wounded.

98. Forming the Column. To form the column for a march, the commander issues the necessary orders (march order).

The march order states the object of the march, gives the distribution of the troops, order of march of the main body, manner of forming the column, etc. If the command consists of two or more columns, the order of the supreme commander generally indicates the march to be made by each column, and the column commanders issue corresponding march orders.

When troops are encamped or bivouacked at some distance from the road, columns are formed by the successive arrival of the fractions at an initial or starting point, which, as a rule, is located in the direction of the proposed march. The commander fixes the initial point after considering the position of the troops and the roads by which they can join the column. He also prescribes the hour at which the leading fraction or fractions clear the initial point, and, if necessary, the routes to be followed in reaching it. To prevent needless marching, he may designate special initial points for parts of the command.

As a general rule, the larger units of a command should be camped in the order in which they will march on the following day.

In drafting march orders, the road space and rate of march of the different fractions of the command and their distances from the initial point must be considered. With foot troops and cavalry marching four abreast, artillery and trains in single column of carriages, the following may be assumed for approximate calculations: Two men per yard for foot troops, one man per yard for each mounted man, 20 yards for each gun, caisson, or wagon, and 12 yards for each autotruck.

Commanders of subordinate units examine the route to be followed, calculate the time required, and start their commands accordingly. They may designate initial points for their own commands. In every case the initial point should be of easy access.

When troops are located on or near the roads to be followed, the commander prescribes the hour of starting for the larger units; the subordinate commanders issue corresponding orders for their commands.

99. Distribution of Troops. The order of march of a column is controlled mainly (1) by tactical considerations, which are paramount in the presence of the enemy, and (2) by the rule requiring the hardships of troops to be reduced to a minimum.

During an advance the order of march of a column is generally as follows, the necessary security being provided:

Combatant troops (with combat trains):

1. Cavalry and horse artillery.
2. Infantry and light or mountain artillery.
3. Engineers and signal troops.
4. Trains, etc.

During a retreat the order of march is practically the reverse of the above.

In mixed commands, large bodies of cavalry and horse artillery should not be intermingled with foot troops.

A detachment of engineers usually marches near the head of each column to repair roads, strengthen bridges, etc.

The order of brigades in divisions, regiments in brigades, battalions or squadrons in regiments, and company units in battalions or squadrons is generally changed from day to day—the leading unit one day taking its place at the tail the following, and so on.

On the march, troops, as far as practicable, keep to the right of the road, leaving the left free. When the roads are narrow, space should still be left for messengers to pass freely along the column. When roads are soft with mud or heavy with sand or very dusty, it may be advisable to divide the column longitudinally, thus permitting men and animals to pick their way, the middle of the road being left clear. Care should be taken not to permit straggling or undue lengthening of the column.

Infantry usually marches in column of squads, column of twos when necessary; cavalry, in column of fours on good roads or when compact formation is desirable, otherwise in column of twos; artillery in section column (single column of carriages), or in double section column if the width of the road permits. On trails, troops march in column of files or troopers. In marching across country, the commander adopts the most advantageous formation.

100. The Start. When practicable, marches begin in the morning, ample time being allowed for the men to breakfast, animals to feed, and the wagons or animals to be packed. The time for reveille and stables should be designated the evening before. Canteens are filled, fires put out, latrines covered, and the camp policed before departure.

The hour for the start depends upon circumstances. As a rule foot troops do not start before broad daylight; mounted troops, when practicable, about an hour after broad daylight. Both men and animals rest well in the early morning hours.

The signals for striking camp and putting the command in march, such as the general, boots and saddles, etc., are ordered by the commanders of the larger units at the proper time. After the general, one or more officers of each organization superintend the preparations of the march.

The different units of the column, including those of the train, are separated at the start by distances prescribed in regulations or by the commander. These distances are temporarily increased or diminished, according to circumstances, thus facilitating uniform progress without checks, and with a continual tendency to the gradual resumption of normal distances.

101. Rate and Length of Marches. The rate of march of a mixed command is regulated by that of the foot troops. It varies with the length of the march, size of the command, condition of the troops, and other circumstances; sandy, rough, muddy, or slippery roads, great heat and dust, strong headwinds, storms and broken country, reduce the rate. If the hills are to be climbed or swampy country is to be crossed, or defiles passed, liberal allowances are made in time calculations.

For infantry the rate prescribed for drill is 100 yards a minute or 3.4 miles an hour; on the road the maximum to be counted on is 88 yards a minute or 3 miles an hour, including halts $2\frac{1}{2}$ to $2\frac{3}{4}$ miles. The rate of infantry columns, under average conditions, may be assumed at $2\frac{1}{4}$ to $2\frac{1}{2}$ miles an hour.

The average march of infantry, and of mixed commands consisting partly of foot troops, is 15 miles a day; but in extensive operations, involving large bodies of troops, the average is about 12 miles a day. Small commands of seasoned infantry marching on good roads in cool weather can average 20 miles a day.

It is of great importance that a uniform rate of march be maintained throughout the column. When a change in the rate is to be made, warning is sent along the column.

For cavalry the rates prescribed for drill are:

The walk 4 miles, the trot 8 miles, and the gallop 12 miles an hour. The average walk of a horse is at the rate of a mile in 16 minutes or $3\frac{3}{4}$ miles an hour; the average trot, a mile in 8 minutes or $7\frac{1}{2}$ miles an hour.

In the field the usual gait is the walk of $3\frac{3}{4}$ miles an hour; including halts, $3\frac{1}{4}$ to $3\frac{1}{2}$ miles an hour.

The average march of cavalry, after men and animals are hardened, is 25 miles a day.

The daily march of field artillery is the same as that of the command of which it forms a part; if alone it covers from 15 to 20 miles. The rate of horse artillery is the same as that of the cavalry to which it is attached.

The rate of a wagon train varies with the class and condition of the draft animals, the load, length of the column, and the condition of the roads. While large mules drawing light loads on good roads can cover nearly 4 miles an hour, in long columns a rate of 2 miles, including halts, is all that can be expected even under favorable conditions; small trains may make $2\frac{1}{2}$ miles an hour. The daily march of a wagon train is about the same as that of infantry.

The average load of a pack mule is 250 pounds, and a train thus loaded can travel from 20 to 25 miles a day on ordinary roads or trails; over rough country, from 10 to 15 miles.

The rate of march, the load, and the distance that may be covered in a day with autotricks or with tractors drawing wagons are dependent on the character and condition of the roads and the carrying or pulling power of the trucks or tractors.

102. Halts. To rest the men and animals and for other purposes, a command on the march is occasionally halted. The first halt is made after marching about three-quarters of an hour, and is about 15 minutes long, to enable the men to attend to the calls of nature and to adjust their clothing, etc. Judgment should be exercised in selecting the place for the first halt; it should not be made in a village or place where one of the objects of the halt would be defeated.

After the first rest, there is for foot troops a halt of about 10 minutes every hour—that is, the troops march 50 minutes and then halt 10. In very hot weather the halts may be longer and more frequent. The men are allowed to fall out, but remain in the immediate vicinity of their places.

For cavalry the hourly halts are shorter—5 minutes; the men examine the horses' feet, adjust saddles, etc.

For artillery the hourly halts are from 5 to 10 minutes; harness is adjusted, girths are tightened, etc.

As a rule troops prefer to finish a day's march as soon as possible. In good weather, with favorable temperature, long halts are not desirable on marches

of less than 15 miles for infantry or 25 miles for cavalry. When the day's march will run well into the afternoon, a halt of about one hour near meal time is advantageous. Places for long halts should be selected with care; wood, water, grass, dry ground, and shade are desirable features. Arms are stacked and equipments removed; mounted troops dismount and loosen cinches.

In hot weather, especially in the tropics, it may be desirable to avoid the midday heat. If the march is long, the command may make an earlier start, or it may rest for three or four hours during the hottest part of the day and finish the march in the evening. As a general proposition, however, it is undesirable to arrive at a strange place after nightfall or even late in the afternoon.

Halts are not made in or near towns or villages unless to procure water or supplies, and when so made, the men remain in column, details being sent for whatever is necessary. In commands not exceeding a regiment, and in wagon trains of less than a mile in length; the units may halt simultaneously, the signal from the head being promptly repeated. This may also be accomplished in longer columns by the commanders of units setting their watches at the same hour before starting, and agreeing when the halts shall be made; the units all halt and resume the march at the moments agreed upon.

103. Crossing Bridges, Fords, and Ferries. When a cause of delay—for example, a damaged bridge—is encountered, the troops in rear are notified of the minimum length of the delay; they then conduct themselves as at regular halts.

In ascending or descending slopes, crossing streams or other obstacles, or passing through defiles requiring a reduction of front, every precaution is taken to prevent interruption of the march of the troops in rear. If the distances are not sufficient to prevent check, units are allowed to overlap; if necessary, streams are crossed at two or more places at the same time; in passing through short defiles the pace is accelerated and the exit cleared at once. If a company unit is delayed while crossing an obstacle, the head slackens the pace or halts until all of that unit has passed; it then resumes its place in the column, increasing the pace if necessary.

Before attempting to cross with bodies of troops, careful examination is made of fords, boggy places, bridges of doubtful character, ice, etc., as the case may be.

When necessary, an officer is designated to superintend the crossing; his instructions must be strictly observed, the troops crossing in formation prescribed by him. Foot troops crossing bridges march without cadence.

Whenever a military bridge is constructed with the bridge equipage, or if deemed necessary, in cases where improvised material is employed, a bridge guard under an engineer officer will be detailed for its care and maintenance during the period of its use. All orders, regulations, and instructions issued by this engineer officer relative to the care, protection, and use of the bridge will be considered as emanating from the commander of the force crossing the bridge.

When roads lead through swamps or quicksand, or across streams with treacherous bottoms, their limits are marked with stakes or bushes, or warnings are placed at dangerous points. At night lanterns are hung from the stakes, and a fire is built or a lantern hung to mark the landing.

When the current is strong and the water deep, foot troops cross on as broad a front as possible, the men marching abreast and holding hands. They should not look at the water, but at the opposite shore. If the ford is wide enough, mounted troops may cross at the same time on the upstream side, thus breaking the force of the current.

Fords that are at all difficult delay long columns unless the troops cross at several places at once. The crossing of many animals or wagons may deepen a ford and render it impassable; new places may thus become necessary.

Persons operating the ferry are interfered with as little as possible.

The men enter pontoons or barges singly at the bow or stern and gradually move toward the stern or bow; larger vessels may be entered in column of twos; the men retain the places assigned them so as not to interfere with the handling of the boat; in small boats when the water is rough they sit down; when there is danger they are directed to remove their equipments.

Horses are loaded one at a time. When there is room for a single row only they alternate heads and tails; if in two rows they face inward. If a horse falls into the water it is turned loose.

Guns, caissons, and wagons are generally loaded by hand; if practicable, the teams are sent on the same vessel.

Unloading is also from the bow, in good order, without crowding; men sitting down do not rise before their turn.

When rafts are used, special precautions are necessary. The center of the raft is first occupied and then the load uniformly distributed. Unloading is carried out in inverse order, the center of the load being last to leave.

The crossing of beef cattle on boats or rafts is dangerous. When practicable they are crossed by swimming.

104. Care of Troops. On the march, commanders of the larger units keep themselves informed of the condition of their commands and of the progress of subordinate units in rear.

Sources of water supply are examined by experts and marked good or bad. In countries infected with cholera or other harmful bacteria, this is imperative.

Precaution is taken to prevent excess in eating and drinking. The drinking of water is often a matter of habit; under ordinary conditions a canteen of water should last one man a day's march. Soldiers should be trained to be economical in the use of water, and to keep a small supply until their canteens can be replenished. If water is plentiful they may drink often, but only a small quantity at a time.

Commanders afford the men ample opportunity for replenishing their canteens, but it is done by order, not by straggling from the command. In certain cases, the advance guard may require the inhabitants to place water in vessels along the line of march for the convenient use of troops. On long marches through country deficient in water, or where the water is bad, it may be necessary to carry a supply in wagons.

The watering of cavalry horses upon the march depends largely on the facilities available. In hot weather, or if nothing is known about the water supply of the day's march, the horses are watered before leaving camp. Good opportunities for watering on the road should not be neglected. To avoid delay, as many troops as possible are watered at the same time; as the head of a command approaches a place suitable for watering, the several units are conducted, according to their position in column, to the different watering places.

Animals of the artillery and of wagon trains are watered while in camp—before departure and after arrival—or during a long halt. If time permits, they may be watered on the march from buckets, or by unhitching and riding or leading to water.

One of the greatest sources of hardship on a march, especially for infantry, is hot weather. Every precaution is taken to prevent suffering from this cause. Halting places are selected when practicable where there are shade and free circulation of air, and the men are cautioned against drinking too much water. Green leaves or a moist handkerchief in the hat affords relief

from the hot rays of the sun. If the men are overheated, care is taken to prevent them being chilled by exposure to cold winds or drafts.

105. Straggling. No man leaves the ranks without permission; it is the duty of all officers and noncommissioned officers to prevent straggling. Enlisted men found away from their organizations without authority are arrested by the military police. Military prisoners held by military police are returned to their units at the first opportunity, with a statement of the circumstances of their apprehension.

All persons found pillaging, marauding, or committing crimes are arrested and dealt with according to law.

106. Camp or Bivouac. As a command approaches the camping place the commander issues the halt order. This order provides for the outpost, if necessary, and gives instruction for the encampment of the command.

SPECIAL REGULATIONS.

107. Though of general application, the foregoing rules must be modified according to the situation.

For convenience of reference and discussion, marches are classified as follows:

1. Marches in peace:
 - (1) Marches in changing station.
 - (2) Practice marches.
2. Marches in campaign:
 - (1) Concentration marches.
 - (2) Marches in the presence of the enemy.
 - (3) Forced marches.
 - (4) Night marches.

MARCHES IN PEACE.

108. Changing Station. The march order is issued from day to day, or it may cover marches of several days. It prescribes the distribution of troops, time of starting, camping places, service calls, and such other details as the commander deems necessary.

To afford greater freedom of movement, the distances between the elements of a column may be materially increased.

In wet weather, to avoid cutting up the road in advance, mounted troops of small mixed commands may follow the infantry; in going through high vegetation or snow, they may lead to break the way.

Field trains may follow immediately in rear of their regiments, and the supply trains be placed to facilitate issues.

109. Practice Marches. The practical training of troops is divided into two phases, namely, garrison training and field training. Practice marches form a part of field training and are made with two objects in view: (1) That of hardening the men and animals and of keeping them in proper physical condition; (2) that of instructing officers and men in duties incident to a campaign—marching, camping, cooking, etc.—and the principles of tactics, including the services of information and security.

A practice march conforms to the conditions it is intended to simulate.

That the maximum benefit may be obtained, practice marches should always include instruction in field duties of some character. In maneuvers, and in exercises where the presence of the enemy is assumed, regular field orders are issued.

MARCHES IN CAMPAIGN.

110. Concentration. Marches of concentration are made for the purpose of assembling at a certain time and place bodies of troops from different localities. Such marches require an accurate computation of the time required for marching and of the road space occupied by the troops. The condition of the roads, weather, etc., must be considered.

A column of troops on the march should not be cut by another. If the heads of two columns meet at a distance from the enemy, the senior commander has the right of way; if near the enemy, the senior determines what measures are to be taken.

If a column in march overtakes another at a halt, it may pass on, provided its commander be the senior, or the other commander gives his consent.

111. Marches in the Presence of the Enemy. The order of march of these bodies is controlled by tactical considerations.

The order of march of the main body is determined by the contemplated employment of the troops. When contact with the enemy is probable, columns are closed up and march on broad fronts; communication is maintained between the columns on parallel roads, and all impedimenta not necessary in the conflict are kept in rear. If a part of a unit of infantry is assigned to the advance guard, the remainder of that unit usually marches at the head of the main body.

During the advance, the artillery, in order to expedite its entry into action, is generally near the head of the main body, sufficient infantry leading to insure proper security. Its commander usually accompanies the commander of the column. If there is danger to the flanks from small bodies of the enemy, the artillery may be broken into columns not longer than a regiment; it then marches like a convoy with infantry in front, in or opposite the center, and at the rear. This formation of necessity delays the entry into action of a part of the infantry; to reduce this delay, the artillery marches, if possible, in double column, and its combat train follows immediately in rear of the last infantry unit. When moving into action the artillery has the right of way.

Thus, in the march of a division, assuming the advance guard to consist of one brigade of infantry, all of the divisional cavalry, one battalion of artillery, one company of engineers, a detachment of signal troops, and a detachment of the sanitary train, the distribution of the main body and trains might be made as follows:

- 1 regiment infantry.
- 1 battalion artillery.
- Regiment artillery.
- 2 brigades infantry (less 1 regiment).
- Engineers.
- Signal troops.
- Artillery combat trains.
- Trains.

On marches through long defiles, or dense forests, or on night marches, it may be advisable to place the artillery near the rear of the column.

112. Trains. Military trains are at all times provided with the necessary guards. Field trains are guarded as far as practicable by men on duty with the train, by convalescents and other noneffectives, by dismounted men of the cavalry and by men from the battery reserves in the artillery. Supply, ammunition, and engineer trains are guarded by the military police. In marches into action the trains are held far enough in rear not to interfere with the movements of troops or to check withdrawal in case of defeat.

If a pontoon battalion is attached to a division and is to be used during the day's march, it is assigned a place in column as far forward as practicable.

If a wagon breaks down or is stalled, its load is transferred to other wagons and the road cleared as soon as practicable.

113. Forced Marches. The conduct of forced marches is controlled by the distance to be covered and the time in which the march is to be accomplished. As they seriously impair the fighting power of even the best troops, forced marches are undertaken only in cases of necessity. Long forced marches can not be made without injury unless the command is in good condition and the march is made with good judgment. The difficulties of the problem rapidly increase with the size of the command and length of the march, but in any case the completion of the march should find the troops in condition to accomplish the object of the march.

With foot troops forced marches are generally made by increasing the number of marching hours, the halts and periods for cooking and sleep being arranged so as to afford the maximum benefit. The rules prescribed for the average march are followed as closely as possible. For large columns of infantry, marching long distances, increase of pace is seldom of value.

A maximum day's march for infantry and trains is about 28 to 30 miles. A march of this character can not, as a rule, be prolonged more than 36 hours. If a forced march is to continue for several days, it becomes practically a succession of daily marches of more than average length.

Foot troops are favored in every way possible. They are assigned the best roads, and not intermingled with vehicles or mounted men. If transportation is available, their packs are lightened.

With mounted troops the gait, as well as the number of marching hours, may be increased.

Under favorable conditions of road and weather a rate of 50 miles in 24 hours can be maintained for three or four days. On such marches the usual hourly halts are made; in addition, a halt of 2 hours is made at the end of the first half of each day's march, during which the horses are unsaddled and permitted to roll, feed, and lie down. The rate is about 5 miles an hour, excluding halts.

Under very favorable conditions a single march of 100 miles can be made in from 24 to 30 hours. On such a march the usual hourly halts are made; in addition halts of 2 hours are made at the end of the first and second thirds of the march, during which the horses are unsaddled and permitted to roll, feed, and lie down. The rate is about $5\frac{1}{2}$ miles an hour, excluding halts.

For distances from 30 to 40 miles a rate of 6 miles an hour, excluding halts, can be maintained under favorable conditions of road and weather. If the command be small, well seasoned, and lightly equipped, the rate may be even greater. The usual halts are made.

If the distance to be covered by forced marches is about 150 miles, the march begins at a rate of not more than 50 miles a day. For distances greater than 200 miles the daily march is from 30 to 40 miles.

On forced marches where the road is level or nearly so and the footing good, the men are occasionally required to dismount and march for short distances at a fast walk or slow double time, leading their horses. They are also permitted to loosen or remove their sweaters and overcoats, if their comfort will be materially increased thereby.

114. Night Marches. Night marches are sometimes made in hot weather; generally, however, they are made as the result of a forced march to surprise the enemy or to secure a favorable position from which he may be attacked at night or at dawn.

Moonlight and good roads are favorable for night marches. A waning moon is of advantage in marches beginning early in the morning. As all-night marches rapidly impair the efficiency of a command, a few hours' rest should be taken if practicable. Special effort is necessary to maintain good march discipline.

Precaution is taken that the proper road is followed and that contact between units is maintained, men being stationed to mark changes of direction. If necessary guides are secured and charged with the duty of following the right road. When, due to unfavorable conditions, units can not be kept well closed, men will be placed at forks and crossing of roads, especially on dark nights and at times of dense fogs or storms, and always when passing through cities or towns from which roads diverge in many directions.

When the march is secret, additional precautions are necessary. Silence is maintained; mouthpieces of bugles are removed, and articles of equipment secured to prevent rattling; smoking is not permitted; villages and farm-houses are avoided on account of warning given by dogs. If the troops are compelled to leave the roads, their progress will be slow, and additional time allowance must be made.

If cavalry forms a part of the column at night, it ordinarily marches in rear of the infantry; if there is artillery, it generally follows the cavalry and has a special infantry escort.

CONVOYS.

115. On land the term "convoy" is usually applied to those trains by which supplies are forwarded to an army from depots or magazines in rear, and to trains bringing in supplies collected by requisition. The trains directly attached to a military force are generally sufficiently protected by the presence of troops and by train guards.

116. **Wagon Convoys.** As the difficulty of controlling and protecting a convoy increases rapidly with its length, it should not, as a rule, contain more than 100 wagons. Such a train occupies about 1 mile of road space.

An officer, with such assistants as may be available, is placed in charge of the transportation. He divides the train into sections of 20 to 30 wagons and places a noncommissioned officer or wagon master in charge of each section.

Military police are assigned to preserve order, protect property, render assistance in case of accidents, and take part in the defense. With hired or impressed transportation a strong guard is required.

117. A convoy marches with a distance of about 25 yards between sections, about 2 yards between wagons, and at a rate of 2 to 2½ miles and hour, including halts. The march is similar to that of a body of troops, except for breathing spells in ascending long slopes and delays to lock wheels on steep descents. Long halts are avoided. The slowest teams are placed in the lead.

Broken wagons are removed from the road, their loads being transferred to spare wagons or distributed among other wagons of the train.

118. **Security.** Security for a convoy is furnished by the escort, which, as a rule, is composed of infantry, with enough cavalry for scouting and communication, and some engineers. The proportion of cavalry varies, being greater in open than in close country.

The strength of the escort depends upon the importance and size of the train, the risk, nature of the country, length of the journey, etc. A train containing explosives requires a strong escort in order to keep the enemy from firing into it.

The senior line officer on duty with the troops commands the convoy. He consults with the officer in charge of the transportation, and, if practicable,

defers to the latter's wishes as to the hours of starting, length of marches, parking of the train, military police, etc. Officers casually with a convoy exercise no authority therein.

Distribution of Troops. When a convoy is to march, the commander assigns military police to the different sections, and distributes the remainder of the escort as follows:

Advance guard.

Main body.

Flank guard (if necessary).

Rear guard.

Advance Guard. The advance cavalry, if any, precedes the train 3 to 5 miles, scouting to the front and flanks. It is accompanied by the necessary guides and interpreters. Careful examination is made of bridges and defiles and of the country in the vicinity; temporary guards are left at such points until the support comes up.

The remainder of the advance guard marches about a mile in front of the train.

The advance guard commander examines the country with a view to selecting suitable places for halting or parking the convoy, should the enemy be encountered.

The head of the train is never permitted to enter a defile until the advance guard is in possession of the farther end.

Main Body. The main body marches at the most important point, which may be near the head, in rear, or opposite the center of the train, the latter being the usual position. If the main body marches opposite the center it is generally advisable to place a section of infantry at the head and another at the tail of the train for its immediate protection.

Rear Guard. The rear guard marches a short distance in rear of the train, with the usual rear guard formation. Its strength is ordinarily about one-sixth of the escort.

119. Camping. The place for camping is usually selected by the advance guard commander, due regard being paid to the water supply, fuel, grass, and facilities for defense. A field inclosed by wire fence is advantageous.

Herding should not be undertaken unless there is little danger from attack, or lack of forage demands it.

On going into camp or during long halts, the train is parked, the formation depending upon the proximity and character of the enemy and the amount of ground available.

When the enemy is known to be distant the train is usually parked in column of sections or half sections, with distances of about 20 yards between subdivisions, and intervals of 6 to 8 yards between wagons. A compact formation is secured by placing the wagons axle to axle and tying the animals to picket lines in front of the wagons.

For purposes of defense wagons may be placed in two lines facing each other, or in the form of a square, rectangle, oval or circle, the poles inside; the inclosure thus formed furnishes shelter for the men and animals. When there is time, wire entanglements are constructed and shelter trenches dug outside the corral.

A diamond-shaped corral is recommended for emergencies, as it can be rapidly formed and the march quickly resumed. The animals of the first two sections are unhitched and placed inside; openings are left where necessary. If the nature of the ground permits, the teams of the first two sections may countermarch before forming the corral, thus obviating the necessity of unhitching.

The camp is protected by the necessary outposts.

Defense of a Convoy. The chief duty of the escort is to keep the enemy from gaining a position permitting effective fire on the train. With efficient security a convoy can not be surprised.

The flanks of a convoy are its most vulnerable parts. If the enemy is reported near, the wagons are closed up and the march is continued in the most orderly manner possible; if practicable, the wagons are formed in double column.

The escort fights only when necessary, and does not pursue when the enemy is repulsed. If the enemy holds a commanding position or a defile on the line of march, he is either dislodged by the escort or the convoy takes another road.

The advance cavalry reports the presence of the enemy with the utmost dispatch so that the commander may change the direction of march, park the train, or, if necessary, begin a retreat.

If menaced by small parties of the enemy, a convoy continues its march under protection of the escort; if attacked by a superior force, the train is parked or a corral formed, skirmishers being thrown out to delay the enemy and gain time for the formation. The commander selects good defensive positions at some distance from the train, intrenches if possible, and prepares for a stubborn resistance. Couriers are dispatched to apprise the nearest troops of the situation. Should the enemy be repulsed, his retreat is carefully verified before the march is resumed.

If it is evident that the train can not be saved, the commander endeavors to escape with the most valuable part, the remainder being set on fire or otherwise destroyed.

Attack of a Convoy. The most favorable time for attacking a convoy is when it is passing through woods, a defile, or over a bridge; when it is going around a sharp bend in the road; when ascending or descending difficult slopes or passing over bad sections of the road; when the convoy is beginning to form a corral; when the teams are being watered; or, generally, whenever the conditions are such that the escort can not quickly prepare for defense.

The attacking force endeavors to bring the convoy to a halt, and to throw it into confusion by making an attack from an unexpected quarter. The fire of artillery and of machine guns is very effective. If a convoy is captured, the parts that can not be carried off are destroyed.

CONDUCTING PRISONERS.

120. In addition to an escort to repel attempts at rescue, a guard of about 10 foot soldiers and several mounted men is required for every 100 prisoners. The captives are formed into companies and marched in column, their officers marching separately. Prisoners are treated kindly, but must be given to understand that any attempt to escape will draw fire. If the convoy is attacked, they are ordered to lie down. At night they are placed in suitable well-lighted buildings or inclosures.

CONVOYS BY WATER.

121. On interior waterways, water transportation derives its security principally from the presence of troops in the field. For protection against guerillas and raiding parties, a shallow-draft steamboat, provided with machine guns and shelter against rifle fire, carries part of the escort and precedes the transports. Means for disembarking the escort are provided in order that hostile parties be quickly dislodged. In the case of narrow streams or canals, if the boats are crowded with troops, it may be necessary to have the escort disembark and clear the country as it advances.

At sea, on the Great Lakes, and on large rivers, inlets, and estuaries, convoy escort duty is performed by the navy in accordance with the following rules prepared by the joint board:

"1. All matters relating to the purchase, charter, fitting out, equipping, and maintenance of transports, engaging their officers and crews, and providing rules for their government, their interior discipline and administration, shall be controlled by the army.

"2. If practicable, all transports carrying troops or animals shall be supplied with distilling apparatus adequate for the supply of water required. As a reserve in case of emergency, a distilling ship, furnished by the navy, shall, if practicable, accompany each convoy.

"3. a. All matters relating to the loading of the transports with troops, animals, or stores, and the quota or cargo to be assigned each vessel, will be under the charge of the army.

"b. The discharge of troops, animals, and stores from the transports into the boats and their transfer in boats to the shore will be in charge of the navy, and will be carried out as such time and in such order as the army commander may decide.

"4. a. An expedition oversea which requires naval convoy being decided upon, as soon as the transports begin to assemble at the rendezvous a naval officer of suitable rank shall be appointed as convoy commander and be supplied with information concerning the strength of the expedition and its proposed objective.

"b. The army authorities shall furnish him with facilities for inspecting the transports as they assemble, for the purpose of ascertaining whether they are properly fitted with ground tackle, boats, lines, and all equipment necessary for the proper management and control of the convoy while in transit and while disembarking men and animals under the conditions which will probably be met. Defects in this direction shall be by him called to the attention of the proper army authority, who shall use every effort to remedy such defects, in accordance with the judgment of the naval convoy commander. The naval convoy commander shall render all possible assistance with the resources at his disposal. In the event that it is found impracticable to remedy defects which, in the opinion of the naval convoy commander, will threaten the safety of the convoy or jeopardize the success of the expedition, such defects shall be reported immediately to their respective departments by the army and navy convoy commanders.

"5. A naval lieutenant and a junior or warrant officer and four quartermasters or signalmen for each transport and supply vessel under convoy shall be supplied by the Navy Department and shall be detailed by the naval convoy commander to the vessels when they are ready to proceed to the anchorage determined upon as the final rendezvous for departure. Means of making flag, hand semaphore, and wigwag signals by day and night shall also be provided by the Navy Department.

"6. a. The orders as to the destination of convoy and time of sailing shall be issued by the army commanding officer under the authority of the War Department and communicated to the naval convoy commander. Should circumstances arise after sailing which render a change in plan or destination necessary or desirable, which change it is not practicable to refer to higher authority, the army commander shall, after consultation with the naval convoy commander, decide as to such change.

"b. The naval convoy commander shall have control of all movements of the convoy and shall establish all orders of sailing and formation. He shall make provision for emergencies, such as an attack by an enemy or dispersion of the convoy by weather or other circumstances.

"c. He will make his subordinates, placed on the transports and supply vessels, familiar with his dispositions and plans.

"d. Should the transports be separated from the convoying vessels by accident or design, the senior naval officer present and on duty will take charge of the convoy and control its movements in accordance with the plans of the convoy commander.

"7. a. The senior naval officer attached to a transport or supply vessel shall, under the authority of the naval convoy commander and in obedience to his orders and signals, control entirely movements of the vessel in which he is embarked, including her anchorage.

"b. He shall have no other authority on board. The master and officers of the vessel shall perform their navigation duties affecting her speed and movement under his direction, and should there be any opposition to or interference with his authority in any way he shall call upon the commanding officer of troops on board, who shall take such steps with the force under his command as may be necessary to enforce the authority of the naval officer attached to the vessel.

"8. The time, place, and order of landing will be decided upon by the army officer commanding, who will consult with the naval convoy commander as to naval assistance, such as the covering and protection of the landing by the artillery of the men-of-war and use of naval boats. This assistance the naval convoy commander will render to the utmost extent practicable and with the sole object in view of assisting to the utmost the plan of campaign of the army commanding officer. After the order of landing is made known to him, the naval convoy commander, in accordance therewith, will control the placing of the transports and supply vessels for disembarking the troops, animals, munitions, and stores, and will control the loading and unloading of boats and have control over such area of the beach as may be necessary for the proper execution of the above. The naval convoy commander will also control the withdrawal of transports, when discharged, to the harbor and anchorage selected. In case of reëmbarkation under naval convoy the same general procedure will govern.

"9. It is deemed desirable that the army commanding officer, if convenient, shall be embarked in the flagship of the naval convoy commander. If not convenient, the army commanding officer's transport should be out of the formation and near the flagship of the naval convoy commander, in order that communication between them may be readily had at any time, and in this case the senior naval officer assigned to transports should be embarked in the same transport as the army commanding officer.

"10. Any existing regulations or orders in conflict or at variance with any of the foregoing rules are rescinded or modified to the extent of such conflict or variance."

ARTICLE V.

COMBAT.

122. Combat is divided into two general classes, the offensive and the defensive. The defensive is divided into the purely passive defense and the temporary defense, which has for its object the assumption of the offensive at the first favorable opportunity.

Decisive results are obtained only by the offensive. Aggressiveness wins battles. The purely passive defense is adopted only when the mission can be fully accomplished by this method of warfare. In all other cases, if a force be

obliged by uncontrollable circumstances to adopt the defensive, it must be considered as a temporary expedient, and a change to the offensive with all or part of the forces will be made as soon as conditions warrant such change.

COMBAT PRINCIPLES.

The following principles apply to both offensive and defensive combat:

Fire superiority insures success.

Unity of command is essential to success. The regiment united in combat has greater force and fighting power than have three separate battalions. A battalion acting as a unit is stronger than are four companies acting independently. All the troops assigned to the execution of a distinct tactical task must be placed under one command.

The task assigned any unit must not involve a complicated maneuver. Simple and direct plans and methods are productive of the best results in warfare.

All the troops that are necessary to execute a definite task must be assigned to it from the beginning. Avoid putting troops into action in dribblets.

Detachments during combat are justifiable only when the execution of the tasks assigned them contributes directly to success in the main battle or when they keep a force of the enemy larger than themselves out of the main battle. When combat is imminent all troops must be called to the probable field of battle. A force is never so strong that it can needlessly dispense with the support of any of its parts during combat.

Too many troops must not, however, be committed to the action in the early stages, no matter what be the nature of the deployment or the extent of line held. Some reserves must be kept in hand.

Use the reserve only when needed or when a favorable opportunity for its use presents itself. Keep some reserve as long as practicable, but every man that can be used to advantage must participate in the decisive stage of the combat.

Flanks must be protected either by reserve, fortifications, or the terrain.

Flank protection is the duty of the commanders of all flank units down to the lowest, whether specifically enjoined in orders or not. This applies to units on both sides of gaps that may exist in the combat lines.

Reconnaissance continues throughout the action.

USE OF THE COMBINED ARMS.

123. Infantry. The infantry is the principal and most important arm, which is charged with the main work on the field of battle and decides the final issue of combat. The rôle of the infantry, whether offensive or defensive, is the rôle of the entire force, and the utilization of that arm gives the entire battle its character. The success of the infantry is essential to the success of the combined arms.

124. Artillery. The artillery is the close supporting arm of the infantry and its duties are inseparably connected with those of the infantry. Its targets are those units of the enemy which, from the infantry point of view, are most dangerous to its infantry or that hinder infantry success. The greater the difficulties of the infantry the more powerful must be the artillery support.

In order to insure close coöperation of the artillery with the infantry in combat, the leader of each infantry unit to which artillery support has been assigned will, in both the attack and defense, make known to the artillery commander his plans and their expected development and will, throughout

the action, keep the artillery representative accompanying him fully informed of the needs of the infantry in the matter of artillery support.

The security of the artillery in combat must be provided for either by the distribution of the other arms or specifically in orders. But when such is not the case the necessary protection must be afforded by the nearest unit of infantry or cavalry whose mission will permit it to give such protection.

125. Cavalry. The cavalry, preceding contact of the opposing troops of the other arms, is engaged in reconnaissance of the enemy and of the terrain and in accomplishing such mission may be assigned it. During combat it directs its activities to the support of the other arms and particularly toward insuring the success of the infantry as soon as that arm is fully committed to action. It must not be given a task, nor voluntarily assume one, that will prevent its fullest coöperation with the other arms in the decisive action. The cavalry leader will be given wide initiative in the tactical employment of his command during the decisive combat.

The cavalry of a field army is divided into two classes, that attached to the infantry divisions and called divisional cavalry, and that forming a separate strategical unit called the cavalry division.

The divisional cavalry is an auxiliary arm of the infantry division and is used as the division commander directs, either as independent cavalry or as advance cavalry.

The cavalry division is pushed, as independent cavalry, far to the front, often several days' march in advance of the remainder of the field army, to drive back the covering forces of the enemy and to gain accurate information of his dispositions, strength, and movements. This is the most valuable use of the cavalry division in the opening stages of a campaign. The use of the cavalry division as a screen is justified only in exceptional cases, as it is seldom effective in absolutely preventing hostile reconnaissance. Better results can be obtained by using the cavalry as a mass to engage and defeat the enemy's cavalry. The troop leading of the cavalry division is prescribed in the drill regulations for that arm.

A field army commander may find it necessary to strengthen the independent cavalry of the field army by the temporary assignment to it of all or part of the divisional cavalry.

An army commander may combine two or more cavalry divisions under one leader.

126. Special Troops. The engineer troops, when not engaged in the special duties of their arm, may be used as infantry, but only in exceptional cases, as part of the attacking line. On the offensive, when used as infantry they form part of the reserve, part of a holding force, or are used for flank protection. On the defensive, they may be used as infantry wherever the development of the action warrants such use.

The duties of all other special troops or units that form part of the division are laid down in the different tactical manuals.

127. Heavy Field Artillery. The limited mobility of heavy field artillery renders its use inadvisable in any position from which the conditions of combat may require its hasty withdrawal. For that reason it has no place in an advance guard; in an outpost, unless occupying a position in which the action is to be fought to a decision; in advanced positions or posts; in the *rencontre*; or in delaying actions, unless its loss is justifiable.

128. On the offensive, heavy field artillery finds its function in firing upon supporting points in the hostile line; upon covered positions occupied by large bodies of the enemy, particularly his reserves; in the destruction of

material objects, as buildings, bridges, etc.; and, in general, against a position that has been deliberately taken up and strengthened by the enemy.

129. On the defensive, heavy field artillery finds its use in compelling the deployment of the enemy's columns at long distances from the defensive line, against any large formed bodies of the enemy, and against those parts of his matériel or material objects within lines that offer an important target.

Due to its long range, it is profitably used in both offensive and defensive combat in restricting the field of activity of the enemy's shorter range artillery. It can also be used to advantage in the destruction of the enemy's field artillery matériel.

130. The use of the heavier types of field artillery presupposes an offensive, where reconnaissance of the enemy's position has been thorough and where the attack has been carefully planned; or a defensive, where there has been time to deliberately select and strengthen a position. Until the use of the heavier field artillery under the conditions given can be clearly foreseen, its position is well to the rear of all the combatant units.

FIRE SUPERIORITY.

131. Fire superiority must be obtained in the early stages of combat and maintained to the end. Without it, success can not be expected either on the offensive or the defensive. It affords the best protection that can be given troops advancing to the attack, as also the best means of diminishing losses. The artillery must coöperate with the infantry in obtaining and maintaining fire superiority. Deficiency in the volume of fire on the defensive should be offset by the selection of a position naturally strong, or that can be made strong, in the time available for that purpose.

FRONTAGE OF UNITS IN COMBAT.

132. Depth in formation for combat, rather than extension of front, is all important in the initial deployment, even where the position and the strength of the enemy have been fully developed. Sufficient depth makes available means to meet the contingencies of combat and the unforeseen developments in the situation as they arise. Troops once deployed and committed to action are no longer available to enable the leader to exercise a constant influence over the course of the entire combat. The progress of the combat will call for an extension of the front occupied in the initial deployment that can not be foreseen. Troops must be held available for the purpose of such extension. For that reason some reserves must be held to the last, but when the decisive moment arises every man that can be used to advantage must be put into the action.

Frontages for deployment are based upon the infantry strength of the division and higher units. Artillery has no place in the front line of the initial deployment and, at the time such deployment is made, the place of the cavalry is out in front of the line or in contact with the enemy on the flanks. The infantry strength alone, therefore, is considered in fixing the frontages for the initial deployment.

The frontages occupied by the different battle units are not in proportion to the number of their component units. The duration of the combat and the needs for the security of the flanks increase with the size of the force employed. Each higher leader must keep out a reserve. A division, therefore, makes its initial deployment on a front only twice that justified for the brigade, and a field army of three divisions, when one division is held as a reserve, is assigned for deployment a front twice that of the division.

A unit whose flanks are secured by other troops or by impassable obstacles, or one that occupies a position naturally strong, or made so by adequate preparation, may be given a frontage limited only by the requirements of fire efficiency throughout the combat. The same is true of reserves deployed to bring about a decision already prepared by other troops. A force whose flanks are exposed must protect them by a maximum distribution in depth.

Frontages of units in forces no larger than a brigade are prescribed in the drill regulations for the different arms, and the principles upon which the frontages given are based apply when such units are part of a larger force than a brigade.

Divisions and Field Armies. A division, when operating against an enemy of nearly equal training and morale, and on open and unprepared ground, can not make its initial deployment on a front greater than $1\frac{1}{2}$ to 2 miles and, at the same time, have the capacity to hold its position strongly throughout the action. In the same way a field army of three divisions would be limited in its initial deployment to the frontage of 4 to 5 miles. Where, for uncontrollable reasons, deployment over a more extended front is necessary, strong reserves are the only means available to meet the dangers to such over-extension.

INTRENCHMENTS.

133. On the defensive the artificial strengthening of the position taken up is limited only by the time and the facilities available. On the offensive intrenchments are used on all lines that are to be held for any length of time. Troops advancing to the attack must understand that the best protection against losses is afforded by an uninterrupted and vigorous advance toward the enemy's position, and by the use of such natural cover as the ground offers. In the attack intrenchments will be used only when further advance is for some time impossible, and to hold ground already gained.

USE OF MACHINE GUNS.

134. Machine guns are emergency weapons. They are best used when their fire is in the nature of a surprise to the enemy at the crises of combat. Their effective use will be for short periods of time—at most but a few minutes—until silenced by the enemy. When engaged they must be used to the limit of their effective capacity. On the offensive they find their use in assisting the attack to obtain fire superiority temporarily lost and against lines of trenches which are to be assaulted. In the defensive they are used against large targets visible for a short time only, and on advancing lines of the enemy's infantry within the close and effective ranges. The effect of the enemy's fire, particularly his artillery fire, on machine guns, is lessened by their employment in small groups.

POST OF THE LEADER.

135. On the march when there is a probability of contact with the enemy, the leader of each column is at the front, usually well forward with the advance guard. During action, in forces no larger than a brigade, the leader places himself far enough to the front to personally direct the movements of his command. In divisions, it will, at times, be possible to find a point of observation from which the division commander can personally supervise the course of the action or, at least, overlook the most important part of the field assigned to his division. In forces not larger than a division, the post of the leader dur-

ing combat is usually near the position of the reserve. In forces larger than the division, and in the division where the terrain does not permit of personal observation, it is best for the leader, during the action, to be well in rear, removed as far as possible from the sights and sounds of the battlefield, in order that his decisions may not be unduly influenced by local conditions. In this case communication with all parts of the battlefield must be direct, rapid, and continuous.

RESERVES.

136. The preponderating influence of rifle fire in deciding an action seems to call for the deployment in the early stages of all the troops that can be used on the firing line. But rifle fire, even with the maximum possible support of artillery fire, will not alone force a favorable decision. Infantry, properly trained and properly led, can not be driven from position by fire action alone. For that purpose an assault actually delivered, or one that shows a determination to close with the enemy, is necessary. The firing line prepares the way for this assault, but is not in itself sufficient for its completion. Fresh troops must be at hand to give the firing line the impetus necessary to drive it forward, and fresh troops must be at hand to actually penetrate the enemy's position, to fill in gaps that develop in the line, to cover the reorganization of troops disorganized in the assault, and to meet counter attacks. On the defensive, troops must be at hand to meet the play of the opponent who holds the initiative. In both offensive and defensive combat, flanks that are vulnerable must be secured. For all such purposes some troops must be kept out of the firing line until the very last stages of the action. Reserves are thus a necessity and they must be strong enough to answer the demands made upon them during the entire combat.

The reserve is the leader's weapon, which, on the offensive, enables him to shape the course of the action and to finally force a decision. On the defensive, it enables him to meet the developments of the action as they arise. Adequate reserves must be held for the crises of combat, but all troops will find a field for activity before or at the close of the battle.

137. The knowledge of the situation that the leader possesses must guide him in fixing the strength of the reserves. On the offensive one-fourth to one-third of the entire force is held out at first as a reserve in all units down to and including the regiment. In the passive defense, after the requirements of the firing line are fully provided for, the governing consideration in fixing the strength of the reserve is the vulnerability of the flanks. Where the flanks are secured by other means, a reserve as low as one-eighth of the entire force may suffice. In the defense seeking an opportunity to attack, the change from the defensive to the offensive, together with the requirements of flank protection, requires strong reserves. Here it may be necessary to hold out at first, for this purpose, as much as two-thirds of the entire force.

In an attack involving forces of the size of a division, or larger, the brigade reserves protect the flanks of the attacking lines, support such lines if they be repulsed, meet counter attacks, secure the captured position, thus giving the disordered attacking lines time to re-form, and initiate the pursuit of the retreating enemy. In the brigade on the outer flank of an enveloping movement the reserve may be used at the last to extend the line. In the defense, the brigade reserve is used to protect the flanks of its firing lines, to support such lines if driven back, to make local counterattacks, and to cover the retreat of its firing lines, if the latter be compelled to withdraw from action.

138. In Divisions. In divisions, the division reserve is used to meet enveloping or turning movements; to make an enveloping movement where the situa-

tion of the division permits; to fill in gaps that may develop between its own divisions and others on its flanks during the course of the action; and to make counterattacks. A decisive engagement will call for the use of all or nearly all of the reserves before a decision is reached, but if any part of the reserve remains in hand when a retreat becomes necessary, it will be used to cover the withdrawal from action and re-formation of the deployed lines.

139. In Field Armies. In field armies the general reserve may be smaller proportionally than in the division acting alone. Its function is not to reinforce divisions in action, or to be used piecemeal in any part of the field. It finds its best use as a mass of maneuver to envelop or turn the enemy's position, to meet similar moves on his part, or to change the character of the action, as from defensive to offensive.

140. Artillery. Artillery that can find active employment anywhere in an action is out of place as a reserve. When the unit of which it forms a part is held as a reserve, it remains a component part of such reserve unless detached for active use in some part of the field under the orders or directions of the superior leader.

Cavalry. The value of cavalry as a reserve lies mainly in its mobility. The cavalry division gives the leader of the field army a valuable and powerful weapon with which to meet any crises in combat which demand the employment of troops possessing the highest mobility. But to rely wholly upon cavalry for a reserve is to restrict the sphere of activity of that arm. Reserves other than those composed of cavalry must be provided for.

PLAN OF ACTION.

141. Upon the information of the enemy and of the terrain obtained by reconnaissance and, as far as time will permit, upon the study of the terrain in the field of probable operations made by the leader, the plan of action is based. After contact is gained the decision will be to attack, to take up a defensive position, to withdraw, or to change the direction of march. The offensive must be the rule, to be departed from only for uncontrollable reasons.

The following factors must be considered in arriving at the decision: The mission, relative numerical strength of the opposing force, relative efficiency of the troops on both sides, the terrain, and the probable results of victory or defeat. In doubtful cases aggressiveness and initiative will usually win. To take up a defensive position, to withdraw, or to change the direction of march so as to avoid contact with the enemy may be a conservative or prudent course to follow in doubtful cases, but such a course will not bring victory nor shorten the campaign. The mission of an army in war is to win battles. Every step taken must be with that end in view.

COMBAT ORDERS. (See Article III and Appendix 3.)

142. The initial combat orders of the division and of all units higher than the division are almost invariably written. Troops may be put in motion in the desired direction, especially in a *rencontre engagement*, by verbal orders, but such verbal orders must be followed as soon as possible by written orders. After the action has begun the greater number of the orders given by the higher commanders will be fragmentary and verbal. In units higher than the regiment all such orders will, as far as practicable, be written out by a staff officer at the time they are issued, and a copy thereof be given the officer charged with the execution of the order, if possible at the time the order is delivered, otherwise as soon thereafter as it is possible to furnish it.

Troops deployed and under fire can change front only at the risk of incurring heavy losses. When they are once committed to any line of action, change to another is costly both in men and morale. It is impossible for the higher troop leaders to directly influence the course of an action once begun in any way except through the use of such reserves as may be at hand. Modern fire effect will not permit the higher leaders to change abruptly the course of action of troops already engaged by the mere sending of orders, verbal or written, to the commanders of such troops. These principles must be borne in mind in issuing combat orders.

Combat orders are the expression of a fixed decision and must definitely state the end in view, such as "To attack," or "To take up and defend" a position. Vague or ambiguous orders indicate vacillation and the absence of any definite decision on the part of the officer responsible for them. Troops have a right to be told, in terms that are direct and unmistakable, exactly what it is their leader wants them to do.

143. Armies. In armies, combat orders will often be in the form of, or a part of, letters of instruction to the commanding generals of the field armies composing the army. But where the field armies are within supporting distance of each other and can mutually coöperate in the task assigned them, formal combat orders may be issued. Such orders are necessarily general in their character and consist of a statement of the objective sought by the army commander, and of the part he expects each field army to play in attaining this objective. The army commander, either by means of letters of instruction or by personal conferences with his field army commanders, fully acquaints them not only with the immediate end in view, but also with so much of his further plans as may be necessary to insure thorough coöperation on their parts.

144. Field Armies. In field armies, combat orders recite the decision of the commanding general and assign the tasks that each division is to perform in carrying out such decision. Details as to the movements of any part of a division, including the trains, have no proper place in combat orders of field armies.

145. Divisions. In divisions, or in forces smaller than a division but made up of two or more arms, the combat orders will recite the purpose of the commanding general, which is either the expression of his own decision, or is the task allotted him by the higher commander, and will then state definitely the task that each subordinate unit is to perform in the execution of this purpose. The order states definitely what each subordinate unit is to do. How the task allotted is to be performed is the function of the commanders of the subordinate units.

146. Personal conferences between the higher commanders and the subordinates who are to execute their orders may at times be advisable, in order that the latter may arrive at a correct understanding of the plans and intentions of their superiors and may correctly interpret the orders issued. But such conferences are not for the purpose of criticising the orders or plans of the higher commander, nor to influence the latter's action. The officer issuing the order can not share the responsibility therefor with any of his subordinates. The decision, no matter how arrived at, is his alone.

147. In assigning combat tasks, divisions in field armies and brigades in divisions are given certain well-defined parts of the enemy's line to attack, or certain sections of a line to defend, or are held as general reserves. In divisions, the special troops are assigned tasks in orders only where such tasks are not definitely prescribed in the manuals for the employment of such troops in combat. Combat orders of divisions fix the position of ammunition distributing stations, dressing stations, and stations for the slightly wounded.

If no previous arrangements have been made for the disposition of the trains, the combat order provides for grouping all trains not needed on the battle field far enough to the rear so as not to interfere with the movements of the combatant troops, should withdrawal become necessary.

148. Combat orders need not necessarily provide for the protection of flanks or maintenance of communication, nor for the keeping up of local reconnaissance, unless some special disposition is desired. Such matters are attended to by the commanders of all units involved, as a matter of course. If an omission in these respects is to be feared on the part of a subordinate, attention may be directed to them in orders, provided such subordinate can not be replaced by an officer more fitted to command.

149. Commanders of subordinate units cannot plead absence of orders or the nonreceipt of orders as an excuse for inactivity in a situation where action on their part is desirable, or where a change in the situation upon which the orders issued were based renders such orders impracticable or impossible of execution. If the subordinate commander knows what the general plan—the end in view—is, lack of initiative on his part is inexcusable.

DEVELOPMENT AND DEPLOYMENT FOR ACTION.

150. In armies, the objectives assigned to each field army are necessarily of a general character and are determined some time, often several days, preceding probable combat. The objective determines the route of march for the field army and the manner in which such march is conducted. The object is to place the field armies in preparatory positions from which development for action can be best accomplished and the divisions moved most expeditiously to their allotted tasks.

151. In the theater of possible operations, forces larger than a division will march in more than one column unless the only routes available are such as would place the different columns outside of supporting distance of each other. Divisions are within supporting distance of each other when not more than a day's practicable march apart, and when the intervals between the heads of the different columns are such as will not permit the enemy to interpose his force between them. In field armies the intervals between the divisions in march must be such as will permit simultaneous development and deployment for action, without crowding the troops or unduly extending the line.

152. When an encounter with the enemy is probable, every available means will be taken to gain information and to lessen beforehand the time that will be required in the deployment for action. Single route columns of such length that the rear elements are out of supporting distance of those in the lead, must be shortened by an extension of front, as far as security and the terrain will permit. This extension is secured by breaking the single column into two or more parallel columns, rather than by an extension of the front of such units, as for instance, marching in columns of platoons or sections—a difficult and fatiguing method of march. As the enemy draws nearer and combat becomes imminent, these columns are again broken up into smaller parallel columns, until the final development is such as to insure rapid deployment and still retain sufficient depth in formation to enable the leader to meet the after requirements of the situation.

153. Precautions must be taken, in this development for action, that each column is directed upon its probable objective, and that the different columns and parts of columns do not get out of supporting distance of each other. This development for action takes place in divisions and smaller units before the route column comes within the zone of hostile artillery fire.

154. Combats of armies or of field armies are made up of a number of local combats conducted by divisions or parts of divisions. In divisions, each brigade is given a definite objective or is held in reserve. After the combat is on, the division commander can retain but little direct control over the troops actually engaged. His control over the course of the entire action must rest in his use of the artillery and of the reserves he has at hand. The artillery is the only arm that can immediately respond to demands for support made by troops already engaged. The division commander uses this arm to meet local crises in the battle that must be met at once. The reserves are so placed and maneuvered as to meet the demands of the larger crises of the action.

155. In field armies, after the divisions are moving upon their objectives, the field army commander does not interfere in the leading of such divisions except as may be necessary to influence the entire action. His best weapon for this purpose is the general reserve.

156. After the initial deployment of the division for action the subsequent troop leading of the brigades, and of the units smaller than the brigade, follows the principles laid down in the drill regulations of the different arms.

157. With the entry into action of the infantry, the cavalry withdraws from the front. From that time on the position of the cavalry should be one of readiness for use in the crises of the combat. If inferior to the enemy's cavalry, it may be forced to conform to the movements of the latter. In such a case it will have little or no voice in the selection of the position toward which it falls back.

158. In armies the cavalry divisions will usually remain under the orders of their own field army commanders.

159. In field armies and in divisions, the selection of the flank toward which their cavalry will fall back when obliged to uncover the front is the function of the commanders of those units. The flank selected is the one most exposed, and where the active support of the cavalry may be most necessary to the infantry, or, if that factor can not be determined, the flank that affords the best field of activity for the cavalry in assisting in the main combat or in operating against the enemy's flanks or rear. Throughout the entire action contact must be maintained with the hostile cavalry, and the latter prevented from hindering the success of the infantry. To best effect this purpose the cavalry of field armies and divisions must be kept concentrated on one flank. Such a division of the cavalry in an endeavor to cover both flanks as would seriously impair its fighting capacity, is but rarely justifiable.

THE SURPRISE.

160. To be surprised is never justifiable in warfare. If, however, due to insufficient reconnaissance, troops are forced into action directly from a formation unsuitable for combat or come unexpectedly under effective fire of the enemy before development and deployment, boldness in decision and in action is usually the best line of conduct. If the enemy is still beyond close range, quick development of fire is important. Here the artillery must be put into action at once, to deliver a heavy fire upon the most threatening bodies of the enemy. If the enemy is so near that a charge is practicable, recourse to the bayonet must be unhesitating. This principle applies particularly well where troops suddenly encounter the enemy in the local phases of a battle. To attempt to retire at once when surprised is to risk annihilation.

When troops are on the march or at rest, reconnaissance by the cavalry, the omission of which is never justifiable, is the best means to guard against being surprised. In action cavalry reconnaissance is the best protection against surprise on the flanks or from the rear.

THE RENCONTRE.

161. In the rencontre, where there is no surprise, success depends mainly upon efficient troop leading. To well-trained and well-led troops the attack in the rencontre is natural, and presents fewer difficulties than under any other condition of warfare. Quick decision on the part of the leader is possible, if he has thought out beforehand and keeps constantly in mind what he will do when the enemy is encountered. On the march he must take care to change the details of his mental plan to fit the changing conditions of terrain. This principle applies to all leaders, from the superior commander down to the commander of the advance party on the march or of the outguards when in camp.

162. In rencontre combat there are but two courses open to the commander of the advance guard, viz., to attack, or to hold his position. The action of the advance guard will usually shape, and in every instance decidedly influence, that of the entire force. It must, therefore, be such as will accord with the preconceived plans and intentions of the supreme commander. The advance-guard commander must know in advance whether the general plan is aggressive or defensive, and what the ideas of his superior are as to the development of such plan. This is the only guide to action the advance-guard commander can have, but it will ordinarily suffice to determine him whether to act boldly or cautiously. The terrain of the rencontre may be the deciding factor in his decision, but, except for uncontrollable reasons, no action of the enemy should rob him of the initiative, or force him from the decision he believes to be in accord with the plans of the supreme commander.

Boldness on the part of the advance-guard commander or the prompt action of the enemy may cause an initial deployment that the development of the action shows to be faulty or on wrong lines. In such a case the action of the advance guard must, perforce, be of a holding or delaying character, in order to give time for the correct development of the main body. Until this deployment is accomplished the advance guard must hold its position. It may then be withdrawn and form the reserve.

The advanced detachments must endeavor to forestall the enemy in deployment and not only cover the advance into action of the artillery, but also disclose targets for its fire. Strong firing lines and the use of machine guns are the most important factors in successfully accomplishing this task. Important supporting points must be seized and held. This brings the enemy to a standstill, and gives the superior leader the opportunity to seize the initiative and to deploy the remainder of his troops for action, uninfluenced by the first dispositions of the enemy.

In the rencontre the early use of the artillery delays the deployment of the hostile lines or forces such deployment at long ranges and thus gains valuable time for the leader to shape his plans.

OFFENSIVE COMBAT.

THE ATTACK.

163. In combat, where the force involved is as large as or larger than a division, a simultaneous effective advance against the entire hostile front is out of the question. Modern battles are made up of a number of local combats, where success or failure in any one instance may decide the issue of the entire battle. Fronts occupied by field armies are but seldom continuous, even in comparatively flat and open country. Some parts of the line will be held much more strongly than others, and the natural defensive features of portions of the front may render part of the line naturally impregnable.

It is necessary, therefore, to select in the enemy's position limited sections, against which the decisive attacks will be made; but to insure success, the attention of the enemy must be held along his entire front. The attack thus develops into two parts; one whose task it is to actually assault the hostile position at selected points, if assault be necessary to drive the enemy out; the other whose task it is to threaten or to actually attack all other parts of the enemy's line, in order to hold the hostile troops to their position and to prevent the strengthening of the points to be assaulted.

164. As fire superiority is the first and most important requisite to success, it must be obtained at the start and maintained throughout the action. Fire superiority depends mainly upon the volume of the fire. A frontal attack alone against the hostile position may give no opportunity to obtain a greater volume of fire than that of the enemy, unless the latter's lines be unduly extended. Where that condition exists, a combination of a frontal with a flank attack promises the best results. The enemy is attacked in front by part of the force, while the remainder is directed against one of his flanks with a view to enveloping it. A successful envelopment of both flanks of the enemy, simultaneously with the frontal attack, is made possible only by a decided numerical superiority on the part of the attack. An attempt to envelop or to attack both hostile flanks, without an attack in front, entails a dispersion of force so rarely justifiable as to deserve no consideration.

165. In armies and in large field armies only the direct attack is practicable as a whole. But in the local combats of the smaller units into which the entire action is divided envelopment is usually practicable.

166. The terms "frontal" and "enveloping" attacks have no significance so far as the ultimate relative positions of the contending forces are concerned. Unless the enemy blunders or is decidedly numerically inferior, the enveloping attack finally becomes a frontal attack, so far as the brigade and smaller units involved are concerned. It must be expected, therefore, that all attacks, no matter how initiated, will ultimately be made in a direction normal to the position of the troops opposing them.

167. Preconcerted plans covering all phases of an attack are objectionable, since it is impossible to determine, until the development of the action makes it manifest, what part or parts of the enemy's line will prove the most attractive for the assault. Both frontal and enveloping attacks will be equally energetic at first, and when the time comes for the decisive attack, the part of the attacking line designated for that purpose is given, by means of the supports or reserves, the added momentum and strength that may be found necessary to a successful assault, while the remainder of the force holds the enemy in its front to his positions.

168. **Selection of Enemy's Flank to Envelop or Turn.** In the selection of the flank of the enemy against which to direct enveloping or the turning movement, the governing considerations are both tactical and strategical. Tactical considerations point to the selection of that flank of the enemy which is weakest in position or in troops, give ease in approach, affords cover to the enveloping or the turning movement, and where the defeat of the enemy will prove most disastrous to him. Strategical considerations direct the attack toward that flank of the enemy where, if successful, it will drive him away from his line of retreat and cut him off from his nearest supporting troops or the possibility of reinforcement. The possibility of defeat and the resultant position of the attacking troops must also be considered. Where tactical and strategical considerations conflict tactical considerations must govern. The gaining of the decision in combat is of primary importance.

THE ENVELOPING ATTACK.

169. The advantages of envelopment lie mainly in the longer concentric line employed, which gives a greater volume of fire, or a fire that is converging upon the enemy's position, and which may enfilade part of the enemy's line when he is compelled to form a new front or to refuse a flank of the old to meet the enveloping attack.

170. While surprise is, to a great extent, essential to the success of an enveloping attack, it can not be hoped that the enemy will so neglect the duty of reconnaissance as not to be aware of the movement in time to form a new line to meet it. The time that he has for this purpose must be reduced to a minimum by the use of cover for the enveloping force, as far as the terrain makes it possible, and by keeping at a distance the reconnoitering force of the enemy. What the enemy may be kept from knowing, if the holding and enveloping attacks be properly conducted, especially as regards coördination of time and effort, is against which part of his line the decisive attack will be finally made.

In the enveloping attack, since the enemy moves on shorter lines, he can readily extend his flank beyond that of the attack up to the limit of his strength. An attempt to meet such movement is apt to lead to overextension of troops, or to a dangerous separation of the enveloping from the holding attack. It is usually better to take advantage of the enemy's overextension and thinning of his lines by retaining a deep formation and protecting the outward flank by reserves, than to overextend in turn in an effort to outflank him.

TURNING MOVEMENT.

171. In forces larger than a division turning movements may be used in conjunction with a frontal or a frontal and enveloping attack. As a turning movement separates the entire force into two parts, each for a time outside of the immediate supporting distance of the other, both the holding and the turning force should be made up of all arms, and each force should be strong enough to maintain itself in position without calling upon the other for support. The turning movement is justifiable only when it can be made in such a manner as to permit of dividing the entire force, without giving the enemy a favorable opportunity to defeat the separated parts in detail.

THE HOLDING ATTACK.

172. This, as the name implies, is for the purpose of holding the enemy to his position by offensive action in one part of the field while a decisive blow in the nature of an assault or of an enveloping or a turning movement is struck in another quarter. The governing idea of the holding attack is to make it energetic enough to deceive the enemy, in order that he may use as many of his troops as possible in resisting it, even drawing upon his reserves for such purpose. Early development of the maximum volume of rifle and artillery fire is therefore essential, and for that reason the deployment is on extended lines. Supports and reserves are reduced to the minimum that will be needed to replace losses, secure the flanks, and strengthen those parts of the line against which the enemy might act most aggressively. Holding attacks differ from delaying actions in that the guiding principle in the former is offense and in the latter defense. The holding force may be called upon to push the attack to the point of an assault, and in the end will join in the advance on the enemy's position when the decisive attack has succeeded. Care must be taken that the holding attack does not, because of promising conditions in its front, make a premature assault on the enemy's line and be defeated before the decisive blow can be struck in another part of the field. There is danger, also,

in prematurely pushing this attack so far that its weakness or its intentions may be disclosed to the enemy and give him the opportunity to defeat the entire force in detail.

THE ASSAULT.

173. If the hostile lines are held by good infantry, properly led, and supported by good artillery, fire action alone will not bring about a decision. For this purpose the assault will be necessary.

174. In large forces assaults are local and not general. Combined assaults in forces larger than a division are not practicable, nor can the assaults of several divisions along an extended front be coördinated in time. Each battle unit to which has been assigned a distinctive mission must time its assault according to conditions in its own part of the field, but other units must keep the enemy in their front so occupied that he can not concentrate a heavy force to meet the assault or to make a counter attack.

175. While the plan of the superior leader under which the first deployment for action takes place may have in view, in a general way, an assault of certain portions of the hostile lines in the attack of an enemy position, or the forcing back of a portion of the enemy's line in the rencontre, the point of the assault can not be definitely fixed until the attack is well developed. For that reason the different parts into which the attack is divided must be so handled and the reserves must be so placed, that any portion of the line may be pushed to the assault when the proper time comes.

176. **Selection of Objective.** When the time for the assault arrives, all the firing lines will have advanced far enough toward the enemy to disclose the weak and the strong points of his lines. The selection of the objective of the assault and the time for launching it rest preferably with the superior leader in that part of the field, but conditions may arise which justify subordinate commanders in moving to the assault, or the impulse for the assault may emanate from the troops engaged and not be the result of orders. In the absence of orders, subordinate commanders are not justified in pushing to the assault, no matter how promising conditions in their front may be, if there are not reserves available in their part of the field to insure success, or if success would interfere with the general plan.

177. While the superior leader in the local combat may be so far to the rear of the firing line that it is difficult for him to perceive when the proper time to make the assault has come, he alone is in position to give it the proper direction and to clinch success by use of the reserves and by coördination of the action of the remaining troops to that of the assaulting lines. Where the assault is made by orders of subordinate commanders, or where the impulse for it emanates from a part of the firing line, there is danger that other parts of the line will have neither the power nor the inclination to move forward in support. Assaults by small bodies of troops can succeed only where conditions of terrain are such as to afford them cover and protect their flanks. Otherwise, if they are not supported by other parts of the line, the result may be the annihilation of the assaulting force. The higher commanders must keep closely in touch with the varying phases of the fire fight, and be ready to give the necessary impulse by means of the reserves or other parts of the line, when they see that the enemy's firing power is broken and there is an inclination on the part of the firing line to close with the enemy. But if they believe the time is not ripe for the assault, they must not be forced into it by the premature action of part of the line. Rather than support a premature minor assault, it is best to let such assault expend itself, even to annihilation.

178. **Support by Fire.** As soon as the decision to assault is made, all the fire that can be brought to bear by artillery, machine guns, fire of position,

and from other parts of the firing line will be directed upon that part of the enemy's lines selected for assault. The artillery must support this assault to the end, regardless of the losses it may sustain, and must continue its fire up to the moment of the charge, even at the risk of some of its projectiles striking among its own infantry.

THE PURSUIT.

179. Importance. Only by means of an energetic pursuit of the beaten enemy can the full fruits of victory and decisive results therefrom be obtained. It is not the mere defeat of the enemy's army, but its destruction, that ends the campaign. The task of the victorious army is less than half performed when it remains satisfied with the mere possession of the battle field. Pursuit must immediately follow victory, and every effort be made to continue contact with the enemy, day and night, up to the absolute limit of physical endurance of the troops.

180. Initiation. When the enemy continues the engagement until actually driven from his position by the attack, pursuit is locally initiated by regiments and battalions, whose firing lines occupy the enemy's trenches and fire on his retreating troops. Supports and reserves still in hand are held, as far as required, to meet any counterattack that the enemy may make. As the retreating enemy gets beyond the range of fire from the occupied position and the danger of a counter attack seems removed, any local reserves that remain in hand are designated by the commanders of the units to which they belong to follow the enemy in their own section of the battle field. But the need of re-forming the attacking units and of replenishing ammunition, together with the mental and physical condition of the troops that made the attack, as well as the insufficient strength of the forces immediately available, soon brings this local pursuit to an end. In order that the enemy may not be able to take advantage of this opportunity to shake himself free from his opponent, a systematic and orderly pursuit must take up the task where the local pursuit left off. The superior leader must promptly issue orders that will insure this pursuit. Where the defeat of the enemy has been decisive, pursuit by all the forces in battle formation will be the most effective in the beginning. Where, however, the attack has been of such a nature as to greatly weaken all or a part of the troops directly engaged, it is best to give such troops an opportunity to assemble and reorganize. In such a case pursuit is inaugurated by all the reserves that may remain in hand. The other troops, when reformed and reorganized, follow as a reserve.

181. When the enemy commences his withdrawal before his front lines have given way, troops committed to the attack continue in their allotted task until the enemy in their front is driven from his position, when they pass to immediate pursuit in battle formation. In the meantime, all the cavalry and horse artillery available are thrown against the flank or in front of the retreating troops, and whatever general reserves of infantry and artillery are still intact are moved against the flank or rear of the hostile holding force or at once take up the direct pursuit.

182. Conduct. No matter under what circumstances the pursuit is inaugurated, the principles under which it is conducted thereafter are the same. The task is to keep continuous contact with the enemy and to seek every opportunity to inflict losses upon him. Boldness to the point of rashness is not only justified but is demanded in the pursuit. The assumption of a dangerous offensive on the part of a retreating enemy unless he be reinforced is not to be feared so long as he is given no opportunity to free himself of his opponent.

183. Cavalry and Artillery. The cavalry takes up the pursuit of a beaten

or retreating enemy at once, without waiting for specific orders to do so. Only such mounted troops as may be necessary to keep contact with the enemy will pursue directly on the road or roads over which he is retreating. The bulk of the available mounted troops, cavalry and horse artillery, will endeavor to get on the flanks or in front of the retreating enemy, in order to bring him to a standstill, or at least delay his retreat. The task of this force is essentially independent of that of the other troops. It must endeavor to anticipate the enemy, in the possession of defiles, bridges, or other points of vantage that lie on the latter's line of retreat. Its mission is to further disorganize the enemy and, where unable in itself to break down the opposition of his larger formed bodies, to hold them to a position until the infantry and the field artillery can again come up with them. All remaining available artillery will be pushed as far in advance in the pursuit as the infantry support will permit.

Broad Front. Where the terrain permits, pursuit on a broad front is productive of the best results, as it facilitates the envelopment or turning of any position taken up by the retreating troops. If the enemy takes up a position to hold part of the pursuing line, the continued advance of the other parts will give opportunities to cut off the delaying forces of the enemy, or will compel his early withdrawal from the position taken. Where there are several pursuing columns one will thus open the way for the others. In pursuing on a broad front care must be taken that the different parts of the pursuit do not get out of supporting distance of one another.

DEFENSIVE COMBAT.

THE PASSIVE DEFENSE.

184. A force may at times fully accomplish its mission by retaining its position for a specified time with or without combat. Here the object is to avoid giving the enemy the decision, either by avoiding combat altogether or, if he attacks, by preventing him from carrying the position held by the defensive troops. The position taken up is selected, as far as the mission will permit, with reference to its natural defensive features. Since the idea of offensive combat is absent, every advantage is taken of obstacles, natural or artificial, that hinder or altogether prevent the advance of the enemy. Negative rather than positive measures are relied upon to prevent the enemy from seizing the position. In this form of defense the firing line is made as strong as possible from the first. If the flanks are not secured by other means, reserves strong enough for that purpose must be provided, but no reserves need be held for a decisive counter attack. Supports and local reserves need be only strong enough to replace losses, to strengthen or reënforce the firing line where the enemy's attack is most threatening, and to repair breaches in the line.

185. The purely passive defense is justified where the sole object is to gain time, or to hold certain positions pending the issue of events in other parts of the field. Its results, when it accomplishes its mission, can never be other than negative.

THE DEFENSE SEEKING A FAVORABLE DECISION.

186. This is the only form of the defense that can secure positive results. A force whose intentions are offensive may at times be forced to assume the defensive either voluntarily in order to gain time or to secure some advantage over the enemy; or involuntarily, as where, in the *rencontre*, the enemy gets a start in deployment for action, or where the enemy's attack is impetuous and without sufficient preparation. In either case the defensive force contents

itself with parrying the blows of the enemy, while gathering its strength and looking for the opening to strike a decisive blow.

187. The crisis of this form of the defensive comes with the counter attack, which marks the change from the defensive to the offensive. Upon the superior leader falls the responsibility of perceiving the right moment at which this change should be made and of having at hand the means necessary to effect it. The general reserve affords him the weapon necessary for his purpose. In this class of the defensive, therefore, strong supports and reserves are essential. The firing line is made as short as possible at first, in order to permit of the holding out of local supports and reserves strong enough to meet all movements of the enemy and to hold the line throughout up to the time of the decisive counter attack, and the retention until that time of a reserve strong enough to make the counter attack a success. An open field of fire for the effective and the close ranges is essential. Obstacles immediately in front of the position that might impede the counter attack are objectionable.

THE COUNTER ATTACK.

188. The part of the enemy's line at which the counter attack will be launched can not be determined definitely until the time comes to make it. The enemy's attack will usually disclose weakness in some parts of his lines, and supports and local reserves may be used to accentuate this weakness or even to develop it in that part of the enemy's line where the terrain or the position of the general reserve may give the best opportunities for the counter attack.

The counter attack may become necessary where the enemy shows the greatest strength, in order to keep him from penetrating the defensive position. The decision as to the time and the place for making the counter attack rests with the superior leader. All, or the greater part, of the general reserve is used to effect this change from the defensive to the offensive. Local counter attacks by small units are a means of defense and will often be necessary and advisable, but have no direct bearing on the main counter attack, which is controlled by the superior leader. Local counter attacks must not, therefore, be pushed to the extent of committing other than local supports or reserves to the offensive before, in the opinion of the superior leader, the time has come to strike the decisive blow.

189. The counter attack may be made by launching the reserve against the enemy's flank after he is fully committed to the attack, or straight to the front where weakness in his attacking lines is apparent. The impulse for the counter attack may at times be given by the advance of the fighting line after a repulse of the enemy and the consequent demoralization of his attacking lines.

190. When the time comes for the counter attack, all the artillery and machine-gun fire available is suddenly turned on that part of the enemy's line selected for the attack. This must not be done until the troops are ready for the attack. Otherwise, the enemy may discern the intention in time to make preparations to meet it either by reënforcing that part of his line or by pushing the assault in another part of the field.

CAVALRY IN DEFENSIVE COMBAT.

191. In all defensive combat cavalry has even a more important rôle than it holds in the offensive. It must always be ready to come immediately to the assistance of the infantry and to make any sacrifice necessary to ward off the defeat of that arm. It must be kept near at hand and ready for action, mounted or dismounted, in any part of the field. Its opportunities for mounted action to check the enemy's advancing lines, especially those that threaten the

flanks of the infantry, will probably be many. Its coöperation can not be limited to any part of the battle. It may be able to hasten by its action the time for the counter attack or to create the opportunity for such attack. The superior leader must be in immediate communication with the cavalry commander throughout the action, and the work of the cavalry must be so co-ordinated with that of the general reserves that each will be prepared to seize any opportunity created by the other. The general reserve and the cavalry, together with all the artillery not fully occupied elsewhere, are the means available to the superior leader to change from the defensive to the offensive and to make such change successfully.

DEFENSIVE POSITIONS.

192. A defensive position may be taken up and strengthened when the direction of the enemy's advance is definitely fixed, and when it will be necessary for him to carry such position in order to keep the force occupying it from accomplishing its mission. Until such condition is fulfilled the time has not come to take up a defensive position.

193. **Requisites.** The requisites to be sought in a defensive position are a clear field of fire up to the effective range of the artillery, flanks that are naturally secure or that can be made so by the use of the reserves, extent of ground suitable to the strength of the force to occupy it, effective cover and concealment for the troops, especially reserves, good communications throughout the position, and good lines of retreat. Unless the defense is to be a purely passive one, obstacles in front of the position must not be such as would impede the counter attack.

194. **Division and Occupation.** The front of the position is divided into sections and to each is assigned a unit which provides its own section reserve. The subunits provide their own supports. The entire position is prepared for defense, as far as time will permit. The governing consideration in the selection and the strengthening of the position is the needs of the infantry. Suitable artillery positions are selected and prepared, but are not occupied until the plans of the enemy are developed. In the meantime the artillery is held in readiness. Artillery firing positions must be such as will bring fire to bear at long range on attacking lines approaching from any possible direction. The artillery will serve the needs of the defense best when it can bring an effective fire to bear on the assaulting lines of the enemy and can sweep the front of the entire position.

195. **Position of General Reserve.** The position of the general reserve is such as will enable it to respond best to the most probable demands to be made upon it. If the line is such that the enemy may attempt a decisive attack along any part of it, the reserve will be held in a central position. Dividing the general reserve and holding it in two or more positions widely apart are inadvisable, except where necessary to insure the reënforcement of any part of the line in time to be effective.

196. **Advanced Positions and Posts.** The occupation by a strong force of any position in advance of the main position is objectionable, in that it involves a dispersion of strength on the part of the defense and may result in compelling the entire force to fight to a decision in the advanced position and not in the position prepared for that purpose. Where necessary to occupy advanced positions in order to secure more time before the enemy can attack the main position, or in order to keep the enemy out of them as long as possible, care must be taken that the force detailed for the purpose is not so weak that it will fall back to the main position before it accomplishes its mission, and not so strong that it will be tempted to hold out too long, with

the resultant danger of committing the remaining troops to action in advance of the main position. It is not a question of how strong a force can be spared for the purpose of occupying an advanced position, but rather how weak can this force be made and yet have strength sufficient to accomplish its mission.

The holding of strong posts in advance of the main position, either for the purpose of delaying the enemy or for observation, is not objectionable, due to the fact that the force necessary for the purpose is restricted in strength. Unlike advanced positions held in force, advanced posts may be occupied up to the last so long as any advantage is gained thereby, even to the extent of risking the total loss of the occupying detachment.

197. Supporting Points. Even on comparatively level and open ground it is rarely necessary or advisable to occupy or strengthen the defensive line to the same degree throughout its entire extent. The terrain will generally offer some points in the line that are unusually strong naturally, or that can be readily strengthened, and such points will be used as supports on which to rest the entire line. They should be selected with a view to afford each other mutual support, flanking the ground over which the enemy must attack, and compelling him to capture one or more of them before he can force a decision. Supporting points are especially desirable on the flanks of the position and where there are unavoidable salients in the line. They must form a part, and not be in advance, of the main position.

POSITIONS IN READINESS.

198. Where it is intended to resist the advance of the enemy in the immediate vicinity, and knowledge of his movements is not yet sufficiently definite to decide upon a plan of action, troops may be placed in a position in readiness for action. A position in readiness may be preliminary to taking the offensive against the enemy or, as is more often the case, to taking up and occupying a defensive position. In the former case no defensive position need be selected or prepared. The troops are developed for action in such a way as will hasten their deployment when the time comes. In the latter case defensive positions will be tentatively selected covering all the probable lines of approach of the enemy, but none of the positions so selected will be occupied or strengthened until a definite selection can be made. However, if there be a line or supporting point that is common to all the tentative positions and which must be held, no matter what may be the direction of the enemy's advance, it will be occupied at once and strengthened. The infantry necessary for its garrison will be assigned to it without delay.

199. The remainder of the infantry will be held near its most probable position in the ultimate defensive line. The artillery will be placed in readiness to command all, or at least the most probable, lines of approach of the enemy and where it can be readily moved into firing positions when required. Continued and thorough reconnaissance is most essential, and all the cavalry available will be used for that purpose, supported by other arms where such support is necessary to obtain the desired information.

200. Requisites. The requisites of a position in readiness are good means of communication to the probable positions to be occupied, or to the front where the intention is to assume the offensive, and such cover as will prevent the enemy from readily reconnoitering the position and dispositions of the troops.

WITHDRAWAL FROM ACTION.

201. No other situation in combat demands so high an order of skill in troop leading as does withdrawal from action under pressure of the enemy's attack. A leader is not justified in withdrawing from the field of battle as

long as he has reserves in hand whose active use might turn apparent defeat into victory. To hold out reserves for the sole purpose of covering a possible retreat is never justifiable as long as defeat is not a certainty. But when defeat is certain the last reserves in hand should be used to cover the withdrawal from action of the firing lines. Where all the troops have been committed to the action, and withdrawal under pressure of the enemy's attack is unavoidable, unless troops can be gotten together to cover the withdrawal of the lines that are the hardest pressed, the retreat quickly degenerates into disorderly flight. It will seldom be the case that there are not some local supports or reserves still intact somewhere along the line, or that some portions of the firing line can not be withdrawn without serious difficulty or risk. In the absence of reserves such troops are sent to occupy a position to cover the withdrawal. Cavalry and horse artillery may be used unsparingly to take the place of the infantry withdrawn, and to hold the advance of the enemy in that part of the field until the covering positions are occupied. All available artillery is used to stop the advance of the enemy.

202. Order of Withdrawal. In the withdrawal from action it is desirable to withdraw first the troops that can be most readily disengaged from the enemy. But the terrain may dictate the withdrawal first of the troops that are the hardest pressed, in order to prevent them from being cut off or forced away from the line of retreat.

COVERING POSITIONS.

203. Selection of good positions to cover the withdrawal is the most important requisite in retreat. The first covering position taken up should be far enough to the rear to prevent the troops occupying it from being directly influenced by the withdrawal from the main position, and yet near enough to such position to exert at once an influence on the action when the withdrawal begins, and to cover the retirement of the advanced lines. Defeated lines will usually be forced by the enemy's attack to retreat straight to the rear, and the covering positions selected should be located preferably to the flanks of the lines of retreat. They must afford also facilities for ready withdrawal of the occupying force. If any reserves remain at hand, they occupy the selected position and immediately make dispositions to cover the withdrawal of the advanced lines. The maximum fire effect at the long and effective ranges is desirable, and this is gained by making the firing line as strong as possible. Supports and reserves for this line are reduced to a minimum. Machine guns so placed that they can open suddenly upon the lines of the enemy are a very effective means of stopping the pursuit. A clear field of fire at the close ranges is not necessary in a covering position. The position of the artillery may be still further to the rear, but always within effective range of the main position, in order to bring fire to bear upon the enemy's pursuing lines as soon as the withdrawal from the main position is under way.

204. Successive Covering Positions. When retreat is decided upon it may be necessary to take up successively other covering positions farther to the rear before the advance of the enemy can be checked long enough to give the time necessary to properly organize the retreat, to bring the troops from the deployed battle formation into an orderly column of march, and to enable the rear guard to take up its duties in an effective manner. The principles governing the selection and the occupation of the first covering position apply to all the others. Their occupation is for the purpose of gaining time and putting as great a distance as possible between the main body of retreating troops and the pursuing enemy.

ASSEMBLY POSITIONS.

205. When compelled to withdraw, troops that have been actively engaged will usually be obliged to fall back for several miles in deployed formation before efficient reorganization and assembly is possible. It is a mistake to attempt re-formation of the disorganized units too close to the position from which withdrawal is necessary. The assembly position must be far enough to the rear to enable the deployed lines to thoroughly free themselves from all contact with the enemy and to insure sufficient time for undisturbed reorganization. Reserves must continue to cover the withdrawal of the disorganized troops until the latter have reached a safe assembly position, where complete reorganization is possible. Leaders of the smaller units, however, collect and re-form such units as fast as possible on the march.

206. As soon as the withdrawal is well under way, the superior leader goes to the rear to select the assembly position, if not already selected, and to make plans for the reorganization of his force and for its future dispositions.

THE RETREAT.

207. A step-by-step opposition to the enemy's pursuit, by taking up and holding successively covering positions to the rear of the main position, can not be continued long without involving an excessive number of troops and increasing the demoralization of the entire force. The number of covering positions taken up in the immediate vicinity of the battle field must be reduced to a minimum by organizing the retreat and forming a rear guard as soon as possible after the decision to retreat has been reached.

208. **Preparation of Plan.** The leader will bear in mind during the course of the battle the possibility of retreat, and will form at least a mental plan as to how such retreat will be inaugurated and conducted, should it become necessary. Such a plan may be considered even before combat, and the higher staff officers must be prepared to submit to the leader, when called upon, the parts of the order that concern their own departments. Lines of retreat will be selected that give the greatest strategical advantages and afford the shortest practicable routes to reinforcements or a safe position. The retreat must be on lines that lead to a concentration of the forces as soon as practicable. Measures must be thought out to keep the enemy from forcing the retreat over lines other than those selected. Covering positions are tentatively selected and the troops to occupy them are kept in mind during the shifting phases of the battle.

209. **Assignment of Roads.** In forces larger than a division, all the roads practicable for the retreat will be used and, if possible, each division assigned a separate road. In such a case, each division forms its own rear guard. When more than one division is forced to use the same road, the rear division covers the retreat.

210. **Preliminary Measures.** When the engagement has been decisive the orders for the retreat will necessarily be issued fragmentarily and in the form of successive instructions to the units involved. Under such conditions, only after the retreat is under way and the rear guard is effectively performing its duties can a combined order be issued. The trains are at once put in march in the direction of the retreat and every effort made to keep them out of the way of the combatant troops. Those troops that have been but slightly engaged with the enemy and can be readily withdrawn may be assembled, after withdrawal from action, immediately back to the firing lines, if cover be available, and at once put in order of march or used to cover the withdrawal of other troops. The troops last to withdraw, usually those that have been most heavily

engaged, may not be brought into order of march as a whole until they have fallen back to the position of assembly well to the rear.

211. Rear Guard. The formation of an effective rear guard must be the first care of the leader. The troops best adapted for a rear guard are those whose strength and morale have been least impaired in combat. All of the divisional cavalry, except reconnoitering detachments, and as much of the artillery as can be effectively used, are assigned to the rear guard. The strength of the infantry force assigned to the rear guard will usually be limited to that of the infantry immediately available, but will not exceed one-third of the entire force. The rear guard differs in composition from the advance guard in the greater proportion of artillery and cavalry. All troops doing rear-guard work should be placed under one command.

212. Conduct. The conduct of the rear guard must be governed by the consideration that the advance of the enemy must be delayed without becoming so involved in action that withdrawal is difficult or excessively costly. The rear guard that obliges all or any part of the main body to stop the retreat in order to come to its assistance, fails in its mission. The taking up of positions on a broad front on ground favorable to the use of long-range fire will oblige the enemy to make wide deployments that require much time to effect. This in itself accomplishes the mission of the rear guard. Negative measures, such as the destruction of bridges, the placing of obstructions in roads, defiles, etc., are used to the fullest extent. There need be no hesitation on the part of the commander of the rear guard in the destruction of any material objects in the path of the enemy, since such objects will undoubtedly be destroyed later by the enemy, should he, in turn, be obliged to retreat.

213. As the enemy will pursue on a broad front with a view to cutting off the delaying force on some one route or of attacking the main body in flank, the rear guard must fall back on a broad front. Flank detachments will be necessary where the terrain gives to the enemy more than one route of pursuit. The different columns into which the rear guard may be divided must be always in a position to afford mutual support, and must endeavor to keep abreast of each other. Not every good position need be taken advantage of to delay the enemy, where delay is not essential to the safety of some part of the command. The march of the main body must be expedited as far as the maintenance of order and the retention of morale will permit. Only in that way can be avoided the necessity of calling upon the rear guard for undue exertion and heavy sacrifices. Points on the line of retreat, whose possession is essential to the safety of the command, such as bridges, defiles, etc., must be secured in advance of the enemy. Strong flank positions that command the lines of retreat will be occupied by detachments from the main body and held until the rear guard comes up. Detachments of the hostile cavalry that gain a position from which they may harass the flanks of the retreating columns must be kept at a distance by the use of infantry, as all the available cavalry will find its employment in contact with the leading troops of the pursuit.

214. In the retreat the cavalry and the artillery must be called upon to make the greatest exertions and to suffer the heaviest losses, where necessary, to check the pursuit. The loss of men, horses, and matériel must be unhesitatingly faced, if there be any decided gain thereby.

215. Divisions retreating over parallel roads will endeavor to mutually support each other, and to keep their columns abreast, as far as may be possible. The cavalry division will usually find its best employment against the enemy's cavalry, or, in the absence of the latter, against a flank of the enemy's pursuit.

DELAYING ACTIONS.

216. Delaying actions are of two classes: One in which the advance of the enemy is delayed as long as is possible without imperiling the safe withdrawal of the delaying force; the other, in which this force must hold its position, regardless of the risks and losses involved, for a time that is dependent upon conditions in other parts of the field or in the theater of war.

217. In delaying actions of the first class mentioned, the firing line is made as strong as possible from the beginning. Supports and reserves are reduced to a minimum. A clear field of fire at the long and the effective ranges is most important, as the enemy must be brought under as heavy a fire as possible as soon as he comes within range. The terrain must be such as to give ease of withdrawal from the position. A clear field of fire at the close ranges is not necessary. As soon as the enemy comes within assaulting distance the position is vacated, machine guns and mounted troops delaying the advance of the enemy's lines up to the last minute that permits of safe withdrawal.

218. In delaying actions of the second class mentioned, where time must be gained even at the risk of sacrifice of the delaying force, development of effective fire at the long and effective ranges is an important element. But here the close ranges must also afford a good field of fire. Artillery and machine guns remain in action, even at the risk of total loss, as long as there is a target at which to fire.

219. Since in all delaying actions the governing idea is to gain as much time as possible before the enemy can come within assaulting distance, the position taken up must be such as will not afford cover to the attack up to the close or nearer effective ranges. Open ground to the front is desirable, in order that the enemy may be obliged to make an early and a wide deployment before advancing to the attack. A maximum extent of firing line is useful for this purpose. Supports and reserves are held well to the rear. Obstacles, natural or constructed, that impede the advance of the enemy are desirable. Defiles that can not not be readily turned offer good opportunities for delaying action.

NIGHT COMBAT.

220. With the increase in range and accuracy of fire, particularly that of the artillery, and the facilities for observation that are afforded by the use of aircraft, night operations increase in importance. Troops must often make use of darkness to minimize losses from fire and to escape observation, to prepare for an assault to be made at daybreak, or to approach a point from which a daylight assault is to be made. Night operations may be necessary also for the purpose of gaining time.

THE OFFENSIVE.

221. Even with well-trained and easily led troops, a night attack involves risks that should be assumed only for the most weighty reasons, and when the results of success are such as will justify the action. With poor troops and inefficient leaders night attacks are out of the question. As control is difficult, artillery support of the assault impossible, and confusion almost inevitable, chance is a factor that must be given maximum weight in estimating the probabilities of success.

222. A night attack may appear advisable where it is found impossible to secure the fire superiority necessary to permit of an assault by day, or where, for other reasons, it is found impracticable to push the attack to within assaulting distance of the enemy's position; to avoid the heavy losses that would be incurred in an attack over open ground against a well-prepared position:

to capture an advanced post or position, or an outpost as a preliminary to further operations; or to surprise poorly trained and poorly led troops.

223. A night attack made simultaneously, along the entire front of a division or field army, is impracticable. A force as large as a brigade may be designated for the purpose of making a night attack against one definite objective in the enemy's line, but each regiment and each battalion therein must in turn be given an objective. If a night attack is to take place along a more extended front than that assigned to a brigade, it will be made up of a number of separate attacks, and the objective assigned to each brigade must be so separated from those assigned to others that the possibility of collision between the brigades during the attack is eliminated.

224. Night attacks will be made only by order or consent of the superior leader in that part of the field. The decision to attack must be made while there is yet sufficient daylight to make all the preliminary reconnaissances and necessary preparations. A thorough knowledge of the ground and of the enemy's position is necessary for the subordinate commanders. Any coöperation on the part of the troops other than those directly assigned to the task, that may appear advisable, is provided for by the superior leader.

THE DEFENSIVE.

225. On the defensive, obstacles in front of the position occupied and strong patrols pushed well forward afford the best protection against night attacks. When the approach of the enemy is evident, the trenches are heavily manned and the supports moved close up to the firing line. Fire is not opened until the enemy is close enough to offer a profitable target, otherwise the fire will be wild and ineffective. The principal reliance in repelling attack must be placed in the bayonet. Reserves, using the bayonet only, make counter-attacks when the opportunity to do so comes, especially against the flanks of the hostile attacking lines.

NIGHT ADVANCE.

226. An advance may be made at night in order to gain ground toward the enemy's position, but without any intention of bringing on a decisive engagement with the enemy during darkness. Preliminary to such a movement patrols should be pushed toward the enemy beyond the position to be gained. If the position taken is within range of the hostile position, it must be occupied long enough before daylight to give time to strengthen it, unless it is occupied with the intention of pushing the attack at dawn.

BIVOUC ON THE BATTLEFIELD.

227. In combats between armies and even between field armies or equivalent units, several days may elapse before a decision is reached. This condition entails a severe mental and physical strain upon the troops engaged, a strain which every effort must be made to lessen as far as the requirements of the task imposed will permit. The physical wants of the troops must be provided for and every opportunity for rest given them. But shelter and comfort of the troops must be subordinated to the requirements of instant readiness for action at all times.

228. When opposing forces are in contact, night will afford the advanced troops but little opportunity for sleep. The offensive will now, more than ever before, take advantage of night to push forward and entrench new lines or strengthen ground already gained. The defensive must avail itself of darkness to strengthen its position and repair faults in its lines. Night attacks by either side are always a possibility. Regular rest for the troops occupying

the advanced lines is, therefore, out of the question, and to prevent exhaustion they must be permitted to rest at any time, day or night, when the exigencies of combat will permit.

229. It is usually impracticable, and generally inadvisable, to wholly relieve the firing lines at night by fresh troops unless a new position be taken up. While all troops bivouac at night in position, the firing lines must maintain their tactical formations and a greater readiness for action than is necessary for the other troops. To give the troops on the firing lines as much rest as possible, patrols and sentry posts, composed of the freshest troops from the supports or local reserves, are pushed to the front to keep a constant watch on the enemy and upon the foreground. Sentry posts may be entrenched and given cover from fire from both front and rear, but in such a manner as not to interfere with observation to the front. Combat patrols must look to the safety of the flanks and of the rear, where protection to the rear is not otherwise provided for. Artillery positions must be fully covered. Fires must not be lighted in any part of the position that is within range and observation of the enemy.

230. The approach of dawn is often taken advantage of by the offensive to launch an energetic attack from a position gained during the night, and by the defensive to make a counter attack and to drive back the opposing advanced lines. All troops that are necessary to meet such moves on the part of the enemy must, therefore, be held fully in readiness at that time.

MEASURES TO BE TAKEN AFTER THE BATTLE.

231. When a favorable decision on the field of battle has been gained and the enemy is in retreat, the superior leader must first give his attention to the inauguration of a systematic and orderly pursuit. The replenishment of the ammunition supply must be his next care. Other supplies necessary for the subsistence or the comfort of the troops are brought up. Orders are issued providing for the police of the battlefield, in order to prevent pillage and maltreatment of the dead and wounded, and for a thorough search for the wounded of both sides. (See also par. 349.) Field hospitals immobilized for the care of the wounded will be evacuated as rapidly as the condition of the wounded and facilities for evacuation to the rear will permit. When the decision has been adverse and a retreat is necessary, all the severely wounded and the wounded whose transport might delay or impede the retreat will be left behind with the sanitary personnel and supplies necessary to their immediate needs.

ARTICLE VI.

SHELTER.

GENERAL PRINCIPLES.

232. To maintain the efficiency of a command, the troops must have adequate shelter.

In time of peace troops in the field are generally sheltered under canvas. In local insurrections, riot or disorder, public buildings in the disturbed district may be used for sheltering the troops engaged in quelling the disturbance, when other shelter is not provided. Private buildings are not entered without the owner's consent, except in the performance of duty.

In time of war temporary use may be made of public buildings in our own country when absolutely necessary—for example, in the care of the sick and wounded; but as long as communities or individuals offer the use of buildings.

or they can be rented at reasonable rates, seizure is not resorted to unless the emergency is imperative. In enemy territory public and private buildings may be used to shelter troops and for other military purposes; but for sanitary reasons troops are seldom quartered in private buildings. When public or private buildings are to be taken for shelter, the civil authorities should be consulted and satisfactory arrangements made. Families are not removed from their dwellings if it can be avoided.

233. When troops are sheltered under canvas, they are in camp. When resting on the ground without shelter, they are in bivouac, when occupying buildings in towns or villages, or huts specially erected, they are in cantonment.

Cantonments often develop through improvement of camps—huts or temporary buildings taking the place of tents. During a prolonged suspension of hostilities, the occupation of enemy territory, and at sieges, cantonments are advantageous, especially in cold or wet weather.

234. Billeting¹ is the assignment of troops to public or private buildings for quarters.

235. The allowance of tentage to be carried on the march is fixed in Tables of Organization. The allowances at other times is fixed by the various equipment manuals.

SHELTER IN THE SERVICE OF THE INTERIOR.

236. In mobilization and concentration camps, troops are sheltered under canvas or in temporary barracks, and proper provision is made for their health, comfort, and instruction. As a rule, such camps or cantonments should fulfill the following conditions:

1. The grounds should be easily drained, naturally healthful, large enough for depots, corrals, hospitals, etc., and the encampment of the troops without crowding, and with ample space for exercise and instruction.

2. The water supply should be excellent and abundant and not liable to contamination from any source.

3. There should be ample railroad and switching facilities and suitable arrangements for loading and unloading, as the fundamental reasons for the mobilization or concentration will be defeated if ample rail or water facilities are not available to promptly receive and dispatch troops and supplies.

4. All parts of the camp should be readily accessible by good wagon roads. All arrangements for the accommodation and supply of the troops should be completed before their arrival by the permanent camp personnel sent ahead for the purpose. Camps are laid out so as to preserve the integrity of units, the headquarters of each being centrally or conveniently located with respect to its troops; tents are pitched and aligned, kitchens equipped, water and fuel supply arranged, latrines prepared, hospitals erected, and arrangements made for ample mail, telegraph, and telephone service. The general headquarters should be centrally located and connected by wire with the principal subordinate headquarters. Depots and storehouses are placed at railroad sidings and the hospitals near the railroad station. Trains are placed so as to interfere as little as possible with the comfort and cleanliness of the troops.²

No individuals, troops, or trains of organizations temporarily present should be attached to the permanent camp personnel, if it can be avoided. It is the

¹ No soldier shall, in time of peace, be quartered in any house without the consent of the owner; nor in time of war, but in a manner to be prescribed by law. (Constitution, 3d amendment.)

² See semipermanent camps, p. 1677.

function of the permanent camp personnel to operate depots, hospitals, to maintain camp telephone and telegraph lines, etc. The troops temporarily present must be in constant readiness to move.

SHELTER IN THE THEATER OF OPERATIONS.

237. Tactical considerations demand greater concentration and generally control the location of the camp.

If troops are actually engaged in field operations, their equipment, including tentage, is necessarily limited to that carried on the men, on animals, and in trains. In certain instances, after proper sanitary inspection, local buildings in the theater of operations may be used to advantage in affording additional shelter to officers, enlisted men, and animals.

If the length of a halt, during the period of operations, is of some considerable duration, when practicable additional camp equipment (baggage, tents, surplus kits, etc.) is sent up from the line of communication and temporarily placed at the disposition of organizations. In this instance every possible use is made of local buildings and temporary structures, to the end that the troops be made as comfortable as possible during the period of the halt.

238. Selection of Site. There is often little choice in the selection of camp sites in war. Troops may have to camp many nights on objectionable ground. Nevertheless, sanitary considerations are given all the weight possible consistent with the tactical requirements.

When tactical questions are not involved, and especially when the camp is to be occupied for some time, great care is exercised in selecting the site. Through no fault of their own, troops occupying an unsanitary site may suffer greater losses than in the battles of a long campaign. A medical officer assists in the selection of camp sites.

The selection of camp sites while on the march or during active operations is governed by the following conditions:

1. The ground should accommodate the command with as little crowding as possible, be easily drained, and have no stagnant water within 300 yards.
2. The water supply should be sufficient, pure, and accessible.
3. There should be good roads to the camp and good interior communication.
4. Wood, grass, forage, and supplies must be at hand or obtainable.

Closely cropped turf with sandy or gravelly subsoil is best; high banks of rivers are suitable, provided no marshes are near.

In hot summer months, the ground selected should be high, free from underbrush, and shaded with trees if possible.

In cold weather ground sloping to the south, with woods to break the north winds, is desirable.

Old camp grounds and the vicinity of cemeteries are undesirable. Marshy ground and stagnant water are objectionable on account of the damp atmosphere and the annoyance and infection from mosquitoes. Ground near the foot of a hill range generally has a damp subsoil and remains muddy for a long time. Thick forests, dense vegetation, made ground, alluvial soil, punch-bowl depressions, inclosed ravines, and dry beds of streams are unfavorable.

Camp sites should be selected so that troops of one unit need not pass through the camp grounds of another.

As a protection against epidemics, temporary camp sites in the theater of operations should be changed every two or three weeks.

239. Form and Dimensions of Camps. The forms of the camp should be such as to facilitate the prompt encampment of troops after a march and their prompt departure when camp is broken. The form of camps will depend

upon the tactical situation and the amount and nature of ground available. In certain cases, particularly in one-night halts in the presence of the enemy, camps must of necessity be contracted, while, in other cases, where a more extended halt is contemplated and where tactical reasons will permit, better camp sanitation may be secured, and a more comfortable arrangement made by the expansion of camp areas.

Appendix 1 (p. 1676) gives the general forms, dimensions, and interior arrangements of camps of troops and trains. It also shows and explains the contracted camping areas.

240. Establishing the Camp. Camp is established pursuant to the halt order. This order provides for the outpost, if necessary, and gives instructions for the encampment of the main body. When practicable, large commands are encamped by brigades.

The camping ground may be selected by the supreme commander, but in large commands is generally chosen by a staff officer sent forward for that purpose. This officer, with a representative from each brigade and regiment and a medical officer, precedes the command, selects the camping ground, assigns sections thereof to the larger fractions of the command, and causes them to be conducted to their respective sections on arrival. He also designates the place for obtaining drinking and cooking water, for watering animals, for bathing, and for washing clothing, in the order named, from upstream down.

On the arrival of the troops, guards are posted to enforce proper use of the water supply; the interior-camp guards proceed to their places, and after posting sentinels, pitch their tents. The remaining troops pitch tents and secure animals and equipment; kitchens are established and details made to procure fuel, water, forage, etc., and to prepare latrines and kitchen pits; if necessary, tents, company streets, and picket lines are ditched.

In the presence of the enemy, places of assembly for the troops are designated and directions given for their conduct in case of attack. Lines of information are established with the outpost.

241. Billeting. When troops are to be billeted a staff officer and a representative from each brigade and regiment precede the column. The staff officer confers with the civil authorities, if present, makes an equitable division of the available quarters into distinct sections, and assigns a section to each regimental representative; the latter distributes the quarters to the troops of his regiment and conducts them to their places on arrival.

Unless the force is small, shelter of this character is usually inadequate, and some of the troops must use shelter tents or bivouac. Villages and large farms often afford facilities, such as wells and cisterns, bakeries, blacksmith shops, material for repairs, fuel, and forage, which contribute to the comfort of the troops; it is therefore advantageous to camp or bivouac near them.

242. Bivouac. On marches or in the presence of the enemy troops are frequently forced to bivouac on account of lack of suitable ground or for tactical reasons. (See par. 227.) On the other hand, in fine weather, in midsummer, or in the dry season in the tropics, the troops may bivouac from choice.

From the tactical point of view, bivouacs are very convenient, but for sanitary reasons they are resorted to, as a rule, only when necessary. The general principles governing the selection of camp sites apply to bivouacs. The ground should be dry and protected against sun and wind. Light woods are nearly always good sites for infantry bivouacs, on account of the shelter and material available.

In the artillery on marches from day to day the men may be permitted to sleep under carriages or paulins covering the harness, thus obviating the necessity of pitching tents.

SHELTER DURING BATTLE.

243. During a lull in an engagement, or when hostilities are suspended for the night, the troops bivouac in line of battle on or near the position they occupy, the officers in rear of the center of their units. Reserves required to remain in instant readiness generally bivouac in column with a flank to the front. After the outposts are established, the commander of the main body decides whether the troops shall use their shelter tents or not. (See "Bivouac on the Battlefield," p. 1633.)

SHELTER DURING SIEGES.

244. On account of the long range of modern fortress artillery, the camps or cantonments of the main body of the besiegers, unless good cover is available, are generally not less than 5 miles from the enemy's works. To guard against sorties a large part of the command is continually on outpost duty, but when that duty is completed the troops return to their own camp with the main body in order to recuperate from this arduous work.

To guard against danger from epidemics in the necessarily crowded camps or cantonments of the besiegers the most careful attention is paid to the water supply and sanitation.

CARE OF TROOPS.

245. Lack of sufficient rest renders troops unfit for hard work and diminishes their power of resisting disease. Therefore commanders should secure for the troops, whenever possible, their accustomed rest.

The rules of sanitation are enforced.

Men should not lie on damp ground. In temporary camps and in bivouac they raise their beds if suitable material, such as straw, leaves, or boughs can be obtained, or use their ponchos or slickers. In cold weather and when fuel is plentiful the ground may be warmed by fires, the men making their beds after raking away the ashes.

When troops are to remain in camp for some time all underbrush is cleared away and the camp made as comfortable as possible. Watering troughs, shelter in cold weather, and shade in hot, are provided for the animals, if practicable.

In camps of some duration guard and other routine duties follow closely the custom in garrison. The watering, feeding, and grooming of animals take place at regular hours and under the supervision of officers.

The camp is policed daily after breakfast and all refuse matter burned.

Tent walls are raised and the bedding and clothing aired daily, weather permitting.

Arms and personal equipments are kept in the tents of the men. In the cavalry, horse equipments are also usually kept in the tents, but in camps of some duration they may be placed on racks outside and covered with slickers. In the artillery, horse equipments and harness are placed on the poles of the carriages and covered with paulins.

The water supply is carefully guarded. When several commands are encamped along the same stream this matter is regulated by the senior officer.

If the stream is small, the water supply may be increased by building dams. Small springs may be dug out and lined with stone, brick, or empty barrels. Surface drainage is kept off by a curb of clay.

When sterilized water is not provided, or when there is doubt as to the purity of the water, it is boiled 20 minutes, then cooled and aerated.

246. Latrines for the men are always located on the opposite side of the camp from the kitchens, generally one for each company unit and one for the officers of a battalion or squadron. They are so placed that the drainage or overflow can not pollute the water supply or camp grounds.

When the camp is for one night only, straddle trenches suffice. In camp of longer duration, and when it is not possible to provide latrine boxes, as for permanent camps, deeper trenches should be dug. These may be used as straddle trenches or a seat improvised. When open trenches are used the excrement must be kept covered at all times with a layer of earth. In more permanent camps the trenches are not over 2 feet wide, 6 feet deep, and 12 feet long, and suitably screened. Seats with lids are provided and covered to the ground to keep flies from reaching the deposits; urinal troughs discharging into the trenches are provided. Each day the latrine boxes are thoroughly cleaned, outside by scrubbing and inside by applying when necessary a coat of oil or whitewash. The pit is burned out daily with approximately 1 gallon oil and 15 pounds straw. When filled to within 2 feet of the surface, such latrines are discarded, filled with earth, and their position marked. All latrines and kitchen pits are filled in before the march is resumed. In permanent camps and cantonments, urine tubs may be placed in the company streets at night and emptied after reveille.

PART III.

ADMINISTRATION.

ARTICLE I.

GENERAL.

247. In time of war the activities of the military establishment embrace:
- (a) The service of the interior.
 - (b) The service of the theater of operations.
248. The service of the interior is carried on by:
- (a) Department commanders.
 - (b) Bureau chiefs, having for this purpose general depots of supply, general hospitals, arsenals, etc.
249. The service of the theater of operations is carried on by the commander of the field forces. The theater of operations is divided into two zones:
- (a) The zone of the line of communications.
 - (b) The zone of the advance.
- The service of the interior functions both in peace and in war; that of the theater of operations, in war only.

ARTICLE II.

THE SERVICE OF THE INTERIOR.

GENERAL.

250. The function of the service of the interior, in time of war, is to supply the commander of the field forces with the means necessary for the accomplishment of his mission.

This service is carried on by the bureau chiefs, department commanders, and in certain instances by commanders of concentration camps and of ports of embarkation. Their respective operations are directed and coördinated by the Secretary of War through the medium of the Chief of Staff.

In general the functions of the bureau chiefs and the department commander are as follows:

251. Bureau Chiefs. They are the advisers of the Secretary of War and the Chief of Staff on all matters connected with the operations of their respective departments or corps throughout the entire military establishment.

They are kept informed of the plans of the field forces and recommend the steps to be taken to insure the successful execution of these plans, as far as their respective corps or departments are concerned.

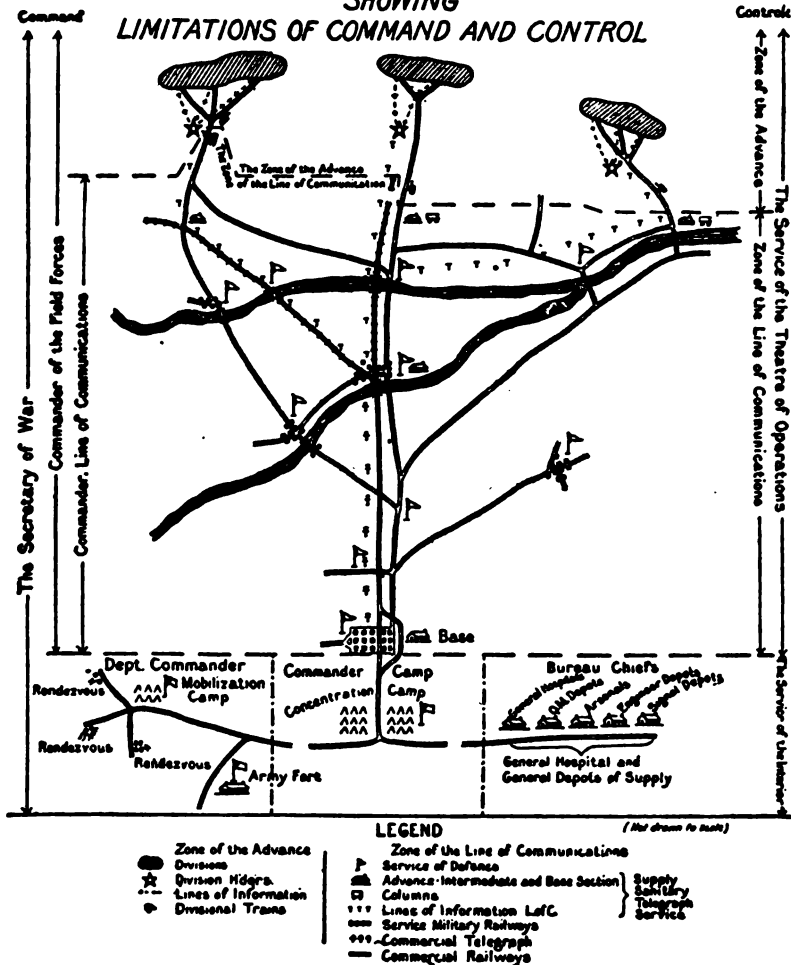
They control directly and are responsible for the efficient operation of the general depots of supply, general hospitals, arsenals, and other military establishments placed under their orders.

They are charged with the accumulation of the necessary supplies and matériel and with forwarding the same, in accordance with regulations, to the point where they come under the control of the department commander, the commander of the field forces, the commander of the port of embarkation, and in certain instances the commander of a concentration camp.

They formulate estimates for the necessary appropriations to carry on the operations of their respective departments or corps.

252. Department Commander. He is responsible for the recruitment, training, and equipment of all military forces not specially excepted within the limits of his department, and for their mobilization and dispatch to concentration camps.

OUTLINE OF THE SYSTEM OF ADMINISTRATION SHOWING LIMITATIONS OF COMMAND AND CONTROL



He is advised by the War Department where troops of his command are to be sent, the time at which they should arrive, and the commander to whom they should report. He is responsible for their movement, transportation, and supply while en route.

He is responsible that adequate records of physical examinations are prepared and that all men going forward to the theater of operations are protected by the prescribed prophylactic treatments.

He keeps the War Department informed of the state of preparedness of the troops under his command.

He is responsible for the defense of all portions of his department except where an independent commander has been assigned by War Department orders. In this latter case the responsibility of the department commander does not extend to the area of operations of the independent commander.

MOBILIZATION AND CONCENTRATION.

253. Mobilization Camps. A mobilization camp is a place, in the territory from which the troops are drawn, where they are assembled to be raised to war strength, equipped, and prepared for service.

The mobilization of the Regular Army will be effected at their permanent stations. Recruits, after being armed, equipped, and trained at the recruit depots, will be forwarded to their respective organizations.

The mobilization of the organized militia and volunteers will be effected at mobilization camps.

The general instructions relative to mobilization are published in regulations or in War Department orders.

Department commanders are responsible that all military organizations leave mobilization points: (1) with the full equipment required by existing orders; (2) with sufficient rations and grain to fully supply them while en route; and (3) with two days' rations and grain for use after their arrival at the concentration camps.

254. Concentration Camps. A concentration camp is a place near the scene of intended operations or near an embarkation point, where troops are assembled for immediate use against the enemy or for transport to an overseas theater of operations.

The command of troops at a concentration camp lies with the department commander in whose territory the camp is situated, unless these troops pertain or are assigned to a commander not under the department commander's orders prior to the concentration. The commander of the concentration camp deals directly with the War Department. In cases where it is desired to make an exception to the foregoing rule, or where doubt may exist, the authority ordering the concentration should define in orders upon whom the command falls and to whom the commander reports.

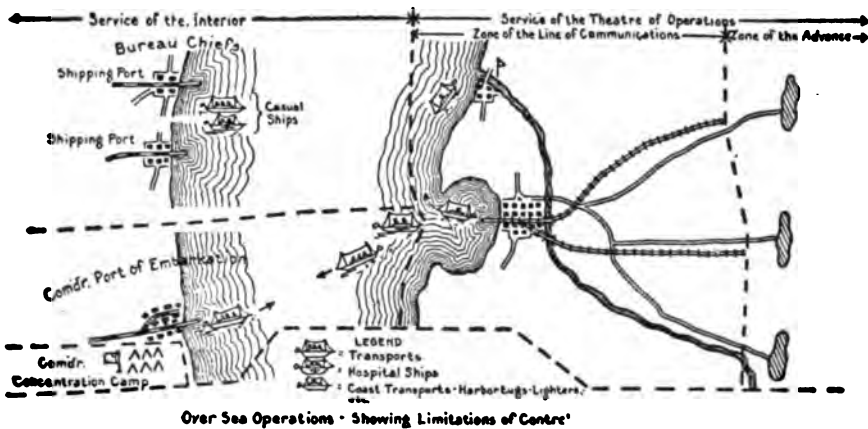
255. Concentration Camp at a Port of Embarkation. In case the concentration is ordered at a port of embarkation already provided by higher authority with a staff for receiving and forwarding troops, the responsibility for camp sites and facilities and the necessary supplies devolves upon the commanding officer of the port of embarkation. Under these circumstances the necessary staff officers will be sent in advance by the commander of the troops ordered to the camp to coöperate in making the detailed arrangements. But in case no such permanent staff is provided at the port of embarkation, the staff of the command concerned must make all provisions for receiving, camping, and supplying the troops. The necessary supplies are obtained by ordinary methods of requisition or purchase.

256. Concentration at a Point Near the Scene of Intended Operations. In case the concentration is ordered at a point near the scene of intended operations when troops are assembled for immediate use against the enemy, the necessary line of communications personnel will, if practicable, be ordered by the War Department to report to the commander of these troops and will be sent in advance by him to the camp to make all preliminary arrangements for receiving, camping, and supplying the troops. If, however, no additional personnel for the line of communications is provided by the War Department, the commander of the troops concerned designates the necessary personnel

from his own command and sends them ahead to make the preliminary arrangements.

257. Duties of the Commander of the Port of Embarkation. The duties of the commander of the port of embarkation are as follows:

- (a) To arrange camps for the troops at or near the port of embarkation.
- (b) To accumulate supplies for the maintenance of the expeditionary force while at the port of embarkation and until its arrival at the port of debarkation.
- (c) To accumulate and ship the necessary supplies for the maintenance of the troops at the overseas base pending the organization of the supply services in the theater of operations.
- (d) To make all detailed arrangements for the prompt detraining of troops and material and for their subsequent embarkation.
- (e) To see that the ships furnished him by the Quartermaster Corps are properly fitted out for use as transports.
- (f) To operate and maintain the military shipping and traffic between his port and the overseas base through a superintendent of transport service, who is a member of his staff.



(g) To command all administrative groups assigned to the port of embarkation and to be directly responsible to the War Department for the efficient and economical direction of their operations.

The commander of the port of embarkation, his staff and personnel are not subject to the orders of the commander of the troops at the concentration camp nor the latter commander to the orders of the former.

The commander of the port of embarkation prepares the schedules for the embarkation of troops, matériel and supplies on transports, and has charge of such embarkation. The commander of the camp issues the orders necessary to carry out these schedules and details a staff officer to assist the commander of the port of embarkation during the loading. Under all conditions these schedules will be made only after consultation with the superior commander of the troops to be embarked.

When a landing or disembarkation in the face of opposition is anticipated, the distribution and plan of embarkation will be made to suit the tactical requirements of the situation, and in case of a difference of opinion the final decision will rest with the commander of the troops. When no opposition to landing is expected, the final decision will rest with the commander of the port of embarkation.

Cordial coöperation between these commanders is essential to the efficient performance of their respective duties.

258. Oversea Departments. The department commander, in addition to his functions as described in "The Service of the Interior," is also charged with the defense of the oversea department, and directs all military operations within its limits. Such regulations as are applicable relating to the control and command of the commander of the field forces in the theater of operations are, in time of war, vested in the commander of an oversea department.

ARTICLE III.

THE SERVICE OF THE THEATER OF OPERATIONS.

GENERAL.

259. In the theater of operations the functions of the War Department and of the various commanders are, in general, as follows:

The War Department designates the commander of the field forces, assigns him a definite mission, prescribes the zone under his command, and supplies him with the means necessary to the accomplishment of his mission.

The commander of the field forces exercises supreme authority over all military and administrative matters within the zone assigned him, organizing the means placed at his disposal so as to insure efficiency, and directing and controlling all operations necessary to the accomplishment of his mission.

The commander of the line of communications is responsible to the commander of the field forces for the efficient operation and defense of the line of communications and directs and controls all administrative and staff services attached thereto.

HEADQUARTERS AND STAFFS.

260. All military units larger than a company have headquarters and staffs. The headquarters of squadrons, battalions, and brigades have no administrative functions. The headquarters of an independent detachment has for the time being administrative functions and during such periods is temporarily assigned an administrative staff.

The commander of an army concerns himself with only the broad questions of strategy and military policy. He assigns general missions to his subordinate commanders and leaves them to work out the necessary details. On this account he is assigned only such administrative and technical staff as he may require for these broad functions.

The staff functions of the headquarters of units larger than a brigade may be separated into two groups, i.e. (1) general staff group; and (2) a technical and administrative group—record, inspection, law, supply, sanitary, engineer, ordnance, and signal.

261. The General Staff. The Chief of Staff is the mouthpiece of his commander and should enjoy his complete confidence and a considerable degree of independence in the performance of his duties. He controls and coördinates the operations of the troops and all administrative and technical services under the orders of his commander. He is provided with such assistants as are necessary. To each such assistant is particularly assigned the work of one or more of the three general divisions of general staff work, viz.:

The first or combat section concerns itself with orders, movements, and dispositions of the forces; combats, detachments; war diaries.

The second or administrative section concerns itself with organization,

losses, reinforcements, police and discipline; questions of supplies of all kinds; signal and telegraph service; evacuation and care of sick and wounded; relations with the line of communications and all general correspondence.

The third or intelligence section concerns itself with the movements and dispositions of the enemy, including exploration, reconnaissance, and the gathering and distribution of information; interpreters, newspaper correspondents, and various agents; relations with the enemy, flags of truce, deserters, and prisoners of war; relations with the civil authorities of the occupied territory, requisitions, etc.

262. Technical and Administrative Staff. This includes the representative of the various staff corps and departments who may be assigned to the headquarters. These officers perform the duties appropriate to their office under the instructions of their commander. During the period of grand tactical operations with commands larger than a division and when a line of communication is in operation, their functions are advisory. Upon completion of the grand tactical operations and upon the discontinuance of an organized line of communications, or if no line of communications has been organized, these staff officers assume a more immediate control of their respective staff personnel, depots, hospitals, etc.

The functions of the technical and administrative staff of a division are so intimately connected with the maintenance of the division as to preclude the separation of any of its personnel for any extended period of time from its headquarters. These staff officers are the technical advisers of the division commander, and control directly the operation of such portions of their respective corps personnel as may be placed under their immediate orders.

263. The Commander of the Line of Communications. This commander reports directly to the commander of the field forces.

The mission of the tactical units and administrative groups assigned to a line of communications is to relieve the combatant field force, as far as possible, from every consideration except that of defeating the enemy.

It is necessary that the commander of the field forces be relieved from the consideration of details and thus be free to consider the broad lines of action to be followed by his command.

A line of communications is not organized when a force can safely occupy a territory without military operations of an extensive character. In this case administration and supply naturally and properly follow the same general principles as with troops in the service of the interior.

ARTICLE IV.

THE ZONE OF THE ADVANCE.

GENERAL.

264. The division is the great administrative unit and forms the model for the organization of the administrative service of smaller units operating independently. To the division alone are regularly attached ammunition, supply, sanitary, and engineer trains. Field army troops may be assigned to divisions for the purpose of supply and for the care and evacuation of their sick and wounded. In this instance the divisional trains of the division to which they are assigned must be increased. When field army troops are organized into a separate brigade their administration and supply follows the principles laid down for a division. In this instance the necessary ammunition, supply, and sanitary trains are organized and assigned to the brigade.

265. Military administration follows the fundamental principle that troops in action should not have their attention diverted from their task of defeating the enemy by anxiety concerning questions of supply or evacuation of sick or wounded. The impetus in all these matters should be given from rear to front, by the troops or services in the rear.

Normal routine requirements which can be foreseen are replaced automatically and without the preliminary of formal requisitions. This has particular application to furnishing rations, grain, ammunition, and sanitary supplies.

266. It is the function of the line of communications to extend its lines so as to make contact with the divisions in advance, and not the latter's function to extend back.

During certain periods of time the line of communications will be within a short distance of the division, whereas, during other periods, for tactical and strategical reasons, this distance may be greatly increased, and often for short periods of time all connection between the line of communications and certain units of the division may be severed.

267. In principle, the administrative services of a division must have the same degree of mobility as the division itself. They should not be charged with taking care of supplies which can not be transported in the ammunition, supply, and engineer trains. The equipment of the sanitary train provides only necessities for the sick and wounded pending their immediate evacuation to the rear.

268. It is the function of the administrative services of the line of communications or of the administrative services attached to camps, as the case may be, to relieve the division from the care of its sick and wounded, and to take care of all material which the division is not normally equipped to carry.

269. In the preparation of these regulations, divisions, field armies, and armies are considered as operating in the zone of the advance. The same general principles of administration hold with reference to these units when concentrated and operating in the service of the interior and in the zone of the line of communications.

TRANSPORTATION.

270. The function of combat, field, ammunition, supply, sanitary, and engineer trains is to keep the commands to which they are attached at all times ready for action without hampering their freedom of movement.

To meet these requirements demands not only well-thought-out orders by the superior authority, but also the highest sense of responsibility on the part of those in command of these trains.

These officers must be prepared to make any sacrifice in order that their trains shall arrive at the destinations appointed at the hours fixed.

271. Baggage and other impedimenta must be reduced to a minimum, and as far as possible, all transport and material not actually required with the combatant field forces must be left in the zone of the line of communications, whence it may be sent forward as required.

272. Commanders of organizations are responsible that no unauthorized vehicles accompany troops or trains, and that no unauthorized supplies or material are transported. Train commanders and guards permit only those who are so authorized to ride on vehicles.

273. Trains will always be halted on the right-hand side of the road, leaving the left-hand side clear for the passage of troops, ambulances, etc.

274. Trains. Transportation attached to organizations is grouped under the following heads, i. e.:

(a) The trains assigned to organizations smaller than a brigade designated combat and field trains, respectively.

(b) The trains assigned to divisions, designated ammunition, supply, sanitary, and engineer trains, respectively.

In addition to the foregoing, there are ammunition, supply, sanitary, and engineer columns which are attached to and belong to the advance section of the line of communications. (See par. 279.)

275. Combat Trains. Combat trains include all personnel, vehicles and animals attached to organizations for transporting ammunition reserve and special equipment required during combat, including the mule or cart carrying sanitary first aid equipment. To them also are attached those vehicles required for the technical service of engineers and signal troops.

Combat trains remain at all times with the unit to which attached and follow it into action. In the cavalry and field artillery it may be advisable to temporarily separate combat trains from the troops.

276. Field Trains. Field trains include all personnel, vehicles, and animals attached to organizations or headquarters for the transportation of the authorized allowance of baggage, rations, and grain, and include rolling kitchens, if supplied. Wagons of sutlers, correspondents, etc., accompanying a field force by proper authority are assigned to the field train of the organization to which their owners are attached. On the march the headquarters wagons of brigades and divisions are generally attached to some regimental field train.

Field trains are assigned to regiments and independent battalions and are habitually divided into two sections: (1) A baggage section carrying baggage; and (2) a ration section carrying rations and grain exclusively, and including rolling kitchens, if supplied.

For transportation of baggage each organization is assigned its proportionate space on the vehicles of the baggage section.

277. When an organization is operating independently, the field trains are under the direct control of the organization commander. When organizations are not operating independently, field trains are ordinarily ordered to be grouped by the division commander and the senior line officer present with the train assumes command and moves it as directed by the superior authority. When the field trains are ordered grouped with the divisional train they are, for the time being, under the orders of the commander of trains.

The field trains are not again placed at the disposition of the organization until so ordered by the division commander. During combat the division commander holds the grouped trains well to the rear, thus relieving the roads of unnecessary vehicles.

In the late afternoon, or at the end of a march or close of a combat, the division commander directs the field trains to move up immediately in rear of the troops, and informs the commanding officers of organizations that their baggage sections and one day's rations from their ration sections have been ordered to be at a designated place. The organization commander at once sends an orderly to the designated place to conduct the vehicles to the organization. As soon as practicable after the arrival in camp of the ration vehicles they are unloaded and, without delay, rejoin the grouped portions of the ration vehicles. The division commander usually returns the baggage sections to the same place early the following morning.

278. Ammunition, Supply, Sanitary, and Engineer Trains. The ammunition train includes all vehicles, animals, and personnel employed in transporting the divisional artillery and infantry ammunition reserve, or in bringing up the same from the refilling point to the combat trains of organizations. (See Ammunition Service.)

The supply train includes all vehicles, animals, and personnel employed in transporting the divisional ration and grain reserve, or in bringing up the same from the refilling point to the distributing point. To it may also be attached herds of beef cattle, remounts, vehicles carrying reserve quartermaster supplies, and reserve transportation. (See Supply Service.)

The sanitary train includes all vehicles, animals, personnel, and reserve sanitary material, not attached to organizations, employed in collecting and caring for the sick and wounded of the division pending their evacuation by the line of communication. (See Sanitary Service.)

The engineer train includes all vehicles, animals, and personnel for transporting heavy entrenching tools, explosives, and other engineer equipment and material which, under ordinary conditions, is required to accompany the division. (See Engineer Train.)

279. Ammunition, Supply, Sanitary, and Engineer Columns. These columns belong to the line of communications and are attached to the advance section of its supply, sanitary, and telegraph services. They are the means whereby transportation, equipment, supplies, evacuation, and field hospitals, and ambulance companies, not continually required with a division, may be pushed forward when needed. (See par. 377.)

280. Commander of Trains. A commander of trains is assigned for each division, together with the necessary assistants and troops. He controls the marching and camping of the combined ammunition, supply, sanitary, and engineer trains. He is also charged with all matters of general police in the rear of the division while on the march and throughout the command while it is in camp. (See Military Police.)

281. When the trains of more than one division are marching on the same road, the field army commander or other superior authority designates an officer, usually a general staff officer, to decide all questions of precedence in the movement and camping of the trains of the different divisions.

282. When combat is imminent, the ammunition, sanitary, and engineer trains are ordered released from the control of the commander of trains, and thereafter during the period of the combat operate in the manner described hereafter. (See Ammunition, Sanitary Service, and Engineer Trains.)

Upon the completion of the period of combat and when no longer required to operate independently, these trains revert to the control of the commander of trains.

283. When troops are in camp, out of the presence of the enemy, ammunition, supply, sanitary, and engineer trains may be ordered released from the control of the commander of trains and operated directly under the orders of their respective chiefs of service.

SUPPLY SERVICE.

284. The zone of activity of a division operating, for an extended period of time, in a country devoid of local resources, is limited by the extreme radius of supply of the available transportation from the line of communications.

As the amount of transportation with a division is necessarily limited, contact of such force with the line of communications can be maintained for only a short distance to the rear. This distance is dependent on the character and amount of transportation and the condition of the roads.

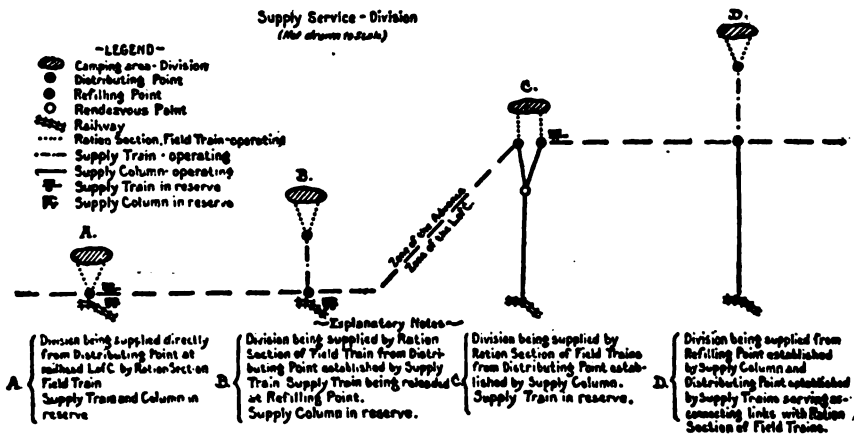
In territory not wholly devoid of local resources, the radius of supply can be increased to a greater or less extent, depending upon the use that can be made of these resources.

285. Refilling Point. A refilling point is the place where the empty vehicles

of the supply train are refilled by the line of communications. It may be a rail, automobile, tractor, wagon, or water head, and it may be at or in advance of the advance supply depot of the line of communications.

286. Distributing Point. A distributing point is the place where the ration sections of the field trains are replenished either from the supply train or the line of communications; in the latter case either directly from its depots or by means of its supply columns. When troops are advancing distributing points will usually be pushed forward close behind the troops, if possible, even up to the camping area, so that the ration vehicles may be able to refill without marching too far. In a retreat it may be advisable to deposit supplies along the probable line of retreat.

287. Rendezvous Point. A rendezvous point is a place to which line of communications supply columns (usually auto-trucks or tractors with wagons) are dispatched and where they are met by an agent of the commander of the field forces and conducted to distributing points. When it is possible to do so, rendezvous points may be fixed with advantage at the actual distributing points.



288. Distributing points are fixed by division commanders.

The commander of a force larger than a division may delegate to his division commander the duty of fixing the refilling or rendezvous points of their respective commands within certain prescribed limitations, or, on the other hand, he may himself fix these points.

In the first instance the division commander is responsible for sending timely information of the point and hour selected to the assistant chief of staff of the advance section of the line of communications. (See Par. 378.)

In the second instance the commander of the field forces notifies the division commander and the commander of the line of communications of the refilling or rendezvous point and the hour at which contact is to be made.

289. Source of Supply. For troops in campaign there are two sources of supply, namely:

1. The theater of operations.
2. The base.

It is generally necessary to utilize to the fullest extent the food, especially the forage, available in the theater of operations. This becomes practically imperative when the line of communications runs through a country devoid of railroads and waterways.

When the theater of operations is in the home country or that of an ally, supplies are obtained by purchase; when in hostile territory, by purchase or requisition. It is a fundamental principle that all supplies available in the theater of operations should be utilized to the utmost.

290. Requisitions. Requisitions are either (1) direct (foraging) or (2) by systematic collection into depots. Requisitions are resorted to only when authorized in orders of the commander of the field forces, and should be enforced by detachments commanded by a commissioned officer. Unauthorized seizure of property is punished as looting. The right to requisition food supplies in a hostile country covers the right to impress labor and means of transportation to facilitate delivery, and to make use of buildings, flour mills, bakeries, blacksmith shops, etc. Property obtained by requisition is either paid for or restored with suitable indemnification. If no reason to the contrary exists, better results are obtained when cash payment is made for supplies taken. If the supplies are not paid for upon delivery, receipts are given, copies or stubs being retained. These receipts are redeemed by the proper officer in accordance with the instructions of the commander of the field forces.

In the interests of the troops themselves, it is well, even in the enemy's country, to treat the inhabitants with the greatest consideration. At the same time, when the gravity of the situation demands it, due severity must be exercised toward hostile inhabitants. Leniency and negligence at the wrong time and place may lead to hardships for the troops.

291. Food supplies gathered by independent cavalry or advance guards in excess of their needs, are turned over to troops in the rear, and, correspondingly, those in excess of the needs of these latter troops or which can not be used for current issues or carried in the field and supply trains, are taken over by the line of communications.

292. While a well-organized system of requisitions is of great service, exclusive reliance can not be placed thereon, even in the most productive countries. As soon as the army halts, or when it advances slowly, recourse must be had to shipments brought up by the line of communications. (See Art. V.)

293. The Ration. Upon arrival of troops at mobilization and concentration camps, the ration savings privilege is suspended and entirely replaced by issues of rations in kind. This same restriction holds during the period of hostilities.

294. The garrison ration is intended to be issued in kind whenever possible. The approximate net weight of the garrison ration is 4.5 pounds.

295. The reserve ration is the simplest efficient ration and constitutes the reserve carried for field service. The approximate net weight of the reserve ration is 2 pounds.

296. The field ration is the ration prescribed in orders by the commander of the field forces. It consists of the reserve ration in whole or in part, supplemented by articles requisitioned or purchased locally or shipped from the rear, provided such supplement or substitutes correspond generally with the component articles or substitute equivalent of the garrison ration.

297. In many cases it will be possible to supply a much more varied ration to troops of the line of communications and to the advance forces, when halted in the immediate vicinity of the line of communications, than to troops at a distance from it. The allowance of transportation for field rations with the division is based on carrying a 3-pound gross weight ration. While it will ordinarily be possible to supply the full garrison ration to troops in mobilization and concentration camps, nevertheless, in the absence of orders to the contrary, these commanders have the same authority as commanders of the field force in the theater of operations with reference to prescribing the ration to be issued their commands.

298. The forage ration is prescribed in Army Regulations.

299. In the field the authorized allowances must often be reduced and supplemented by grazing and other kinds of food, such as green forage, beans, peas, rice, palay, wheat, and rye. The amount of each issued depends upon circumstances. Wheat and rye should be crushed, and fed sparingly (about one-fourth of the allowance). For unshelled corn, add about one quarter weight.

The commander of the field forces in the theater of operations may authorize in written orders the issue of increased allowances of forage for the animals of his command worn down by hard campaigning. Ordinarily this will be possible only during periods when the animals are within the immediate vicinity of the line of communications.

300. On the march grain is the only forage carried, and recourse must be had to grazing, if it is not possible to procure long forage in the country traversed.

The allowance of transportation of the forage ration with a division is based on carrying a 12-pound ration of grain for each horse and a 9-pound ration of grain for each mule.

301. **Disposition of Rations.** Organizations of all arms of a division carry on the man or animal and in field trains the same number of days' rations. The same rule applies to grain carried on animals and vehicles. They are all distributed between men and vehicles of the ration section of the field train in the same manner and, therefore, must be replenished from the supply train or column at the same time.

302. In campaign a command carries as a part of its normal equipment the following rations and forage:

(a) On each man: At least two days' reserve ration. Civil employees, etc., accompanying the combatant forces are also required to carry with them the same reserve as enlisted men.

For each draft animal: On each vehicle, a reserve of 1 day's grain ration for its draft animals.

Reserve rations are consumed only in case of extreme necessity, when no other supplies are available. They are not to be consumed or renewed without an express order from the officer in command of the troops who is responsible for the provision of supplies, namely, the division commander or other independent detachment commander.

Every officer within the limits of his command is held responsible for the enforcement of this regulation.

Reserve rations consumed must be replaced at the first opportunity.¹

In addition to the foregoing, commanders will require each man on the march to carry the unconsumed portion of the day's ration issued the night before, for the noonday meal. In the same manner, cavalry and field artillery carry on their horses a portion of their grain ration issued the night before, for a noonday feed.

(b) In the ration section of the field train: For each man two days' field,* one day's reserve, and for each animal two days' grain rations. Organizations equipped with rolling kitchens carry one day's field ration in the rolling kitchen, a corresponding reduction being made in the number of other vehicles attached to the ration section.

The one day's reserve ration is intended to provide for replacing immediately any reserve ration carried by the man which may be consumed. The two remaining days' field rations are more varied in character.

¹ This includes frequent renewal of the bacon component, which is liable to deteriorate.

² See par. 296 for composition of field ration.

(c) In Supply Train:

Of an infantry division two days' field and grain rations.

Of a cavalry division one day's field and grain rations.

Independent cavalry, when in front or on the flanks of an army, will have to depend to a great extent on the resources of the country. The rapid operations of cavalry often necessitate complete separation from slow moving field and supply trains during extended periods. Autotrucks are employed, whenever possible, in the supply of independent cavalry.

303. Operations of the Supply Service. Ordinarily rations and grain are issued to troops during the afternoon from the ration section of the field train sent forward for the purpose. These supplies provide the evening meal, the following day's breakfast, and the lunch to be carried on the man, and in addition, grain for the evening's feed, the following morning's feed, as well as the noonday feed to be carried in the nosebag. (See Par. 302.)

In the presence of the enemy the same method is used with organizations equipped with rolling kitchens, the endeavor being to furnish two hot meals evening and morning and a cold lunch to be carried on the man. When not in the presence of the enemy and on the march, the rolling kitchen usually marches with the combat train and a hot lunch is supplied.

Empty vehicles of the ration section are conducted to the designated distributing point at the hour specified (usually during the morning), refill, and rejoin the grouped field trains.

Rolling kitchens are refilled whenever empty, usually in the early morning, by the other vehicles of their ration section.

304. The supplies carried in the supply train may be held as a reserve or, on the other hand, the supply train may be so operated as to form the connecting link between the refilling point and the distributing point.

When operating as a connecting link, the supply train of a division is ordinarily divided into sections, each carrying one day's supply.

305. The service of supply is directed and controlled in orders and instructions issued by the division commander. These orders fix the distributing point or points to which the empty vehicles of the ration sections of the field trains are to be sent for resupply. The commander of trains is advised by division headquarters of the location of the refilling point to which the empty vehicles of the supply train can be sent for replenishment. The commander of trains then directs the movement forward of the necessary number of loaded vehicles of the supply train to the distributing points, and makes arrangements for their prompt return and for reloading all empty vehicles of the supply train at refilling points.

306. When supply columns are operated by the line of communications the division commander advises the assistant chief of staff of the advance section as to most convenient rendezvous point and has the supply column met at this point by a representative of the commander of trains and conducted to the distributing points.

307. The positions of the distributing points are subject to frequent changes and are ordinarily communicated to the division daily in orders. It is not necessary to inform the whole division as to the positions of refilling and rendezvous points, but information as to the points fixed must be communicated to the commander of trains.

308. The division quartermaster keeps the chief of staff informed at all times of the state of the ration and forage supply of the division, the condition of the quartermaster equipment and suggests the means for their replenishment. He controls the operation of detachments sent out for the purpose of purchasing or otherwise collecting supplies. Such supplies, transport,

or animals as may be procured are turned over to organizations or to the supply train. He daily formulates and presents to the chief of staff all orders relating to the resupply of the ration vehicles and advises as to the most suitable places for refilling, rendezvous, and distributing points.

309. The quartermaster in charge of the supply train is the subordinate of the commander of trains and operates his train as directed by the latter authority. He is responsible for the efficient operation of the supply train and commands its personnel.

310. Fresh Beef. Whenever possible, troops should be supplied with fresh beef. This supply may be effected either by driving herds of cattle with the supply train or preferably by sending up special transportation from the line of communications with frozen beef to the distributing points. In the first case the cattle are ordinarily slaughtered by the supply train personnel at appropriate times and turned over the field trains at the distributing point.

In the second case the movement of the frozen meat to the designated distributing points is effected by the supply column of the line of communications.

311. Fresh or Field Bread. Fresh or field bread is issued troops as often as possible. The bread is baked by bakery companies attached to the line of communications. Fresh bread is issued to troops in the immediate vicinity of the field bakeries. Field bread is issued and transported by supply and field trains in the same manner as other components of the ration.

312. Sales Stores. Sales stores are not supplied in advance of the line of communications. When troops have gone into permanent camp or cantonment, the advance end of the line of communications will usually be established at that point and stores sold. It may be possible at certain times for the line of communication to send forward to the combatant troops transportation loaded with this class of stores.

AMMUNITION SERVICE.

313. The system of replacing ammunition differs somewhat from that by which rations and grain are replenished. No ammunition is obtainable locally and, therefore, all the mobile ammunition reserves with the division must be replaced by the line of communications. The requirements of rations and grain are continuous, whereas the requirements of ammunition are spasmodic and neither the exact quantity nor the time of replenishment can be foreseen.

314. The organization and operation of the ammunition service is the duty of the field artillery. The commander of the ammunition train is the immediate subordinate of the divisional artillery commander after the ammunition train has been released from the control of the commander of trains.

315. Ammunition carried on the man and on the caissons of the firing batteries is replaced by that carried in organization combat trains. These latter trains are ordinarily refilled from vehicles attached to the ammunition train, though in certain instances they may be refilled directly from the line of communications or from ammunition columns.

316. It is the duty of commanders of all grades to see that due economy is exercised in the expenditure of ammunition and to make provision for its timely replenishment.

No means should remain untried for bringing up ammunition to troops in action and for keeping up the fire, on the maintenance or cessation of which the success of the action may depend.

317. It is the function of the organization commander to which a combat train is assigned to regulate the supply of ammunition from the combat train to the firing line, and to dispatch the empty vehicles of the combat train to the distributing station. Battalion commanders are charged with keeping their combat trains properly filled and equipped.

The principles under which this supply is effected are laid down in drill regulations.

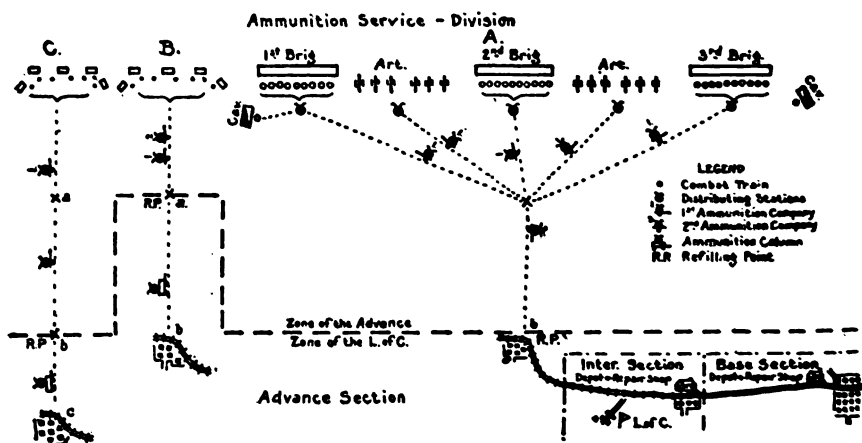
318. Ammunition Distributing Station. An ammunition distributing station is the place where combat trains are sent to be resupplied.³

Ammunition Refilling Point. An ammunition refilling point is the place where the ammunition train is refilled.

Ammunition Rendezvous Point. An ammunition rendezvous point is the place to which the ammunition columns of the line of communications are dispatched and where they are met by agents of the ammunition train and conducted to refilling points.

319. The divisional ammunition service is directed by the commander of the ammunition train, and includes the supply of both small-arms ammunition and field-artillery ammunition.

The ammunition train is organized either into two companies or into two battalions designated, respectively, the first and second ammunition companies or battalions, each battalion or company being further subdivided into infantry and artillery ammunition sections.



320. The ammunition train carries the divisional ammunition reserve from which combat trains are refilled, and is a connecting link in the chain of ammunition supply from the refilling point of the line of communications to the ammunition-distributing station. In principle, it is the function of the ammunition column to push up close to the rear of the troops and to maintain a constant supply of ammunition at the refilling point. This has the effect of shortening the haul for the ammunition train.

If no ammunition column be operated it is preferable to employ the second ammunition company or battalion in bringing up ammunition to some point designated by the ammunition-train commander, and in resupplying the first ammunition company or battalion vehicles at the same point. In the latter case the first ammunition company alone establishes and maintains distributing stations.

321. For each division the positions of the ammunition-refilling point and the rendezvous point are fixed in the same manner as are the refilling and rendezvous points of the supply service (see Par. 288), and are communicated to the commander of the ammunition train by division headquarters.

³ In the field artillery, caissons of the firing battery may also be sent directly to the distributing station.

322. In the case of a deliberate attack on the enemy in position, or when our forces occupy a defensive position, the positions of the ammunition-distributing stations are fixed in orders by the division commander and communicated to the troops. In the case of a *rencontre engagement* the ammunition train is released from the control of the commander of trains and moved forward by its commander to some suitable point from which practicable routes radiate to the different portions of the probable line of battle. This point is usually within 2 or 3 miles of the line of battle. From this point the commander of the ammunition train dispatches agents to the different brigade commanders for the purpose of arranging for the position of distributing stations and for investigating the best lines of approach to the same. If a battle has commenced, the commander of trains releases the ammunition train without waiting for orders and directs it to press forward to the field of battle.

323. Inasmuch as the expenditure of ammunition will not be the same for all portions of the line of battle, it is as a rule desirable to hold the ammunition train together during the earlier stages of the engagement. As the probable course of the engagement becomes known, different portions of the first ammunition company or battalion are pushed out and establish ammunition-distributing stations in the rear of the fighting troops. As fast as the vehicles of the first company or battalion are emptied they return and are refilled or replaced by vehicles of the second company. In the same manner empty vehicles with the second company or battalion are dispatched immediately to the refilling point, refill, and rejoin the filled vehicles.

324. The headquarters of the commander of the ammunition train during a battle is usually at the point of contact between his first and second companies or battalions. This commander sends an agent to connect division headquarters with his headquarters. The commander of each section of the ammunition train establishing a distributing station furnishes an agent to connect such station with the headquarters of the unit it supplies. Ordinarily one ammunition-distributing station is operated for each brigade; however, if required, a greater number may be operated.

325. After an engagement every effort is made to replace, without delay, all ammunition reserves with the division. The ammunition carried on the man, with the firing batteries and on the combat trains is first replaced, then that carried on the ammunition train is replaced.

326. The divisional artillery commander is kept informed at all times of the state of the ammunition supply in the ammunition train; during action by the ammunition-train agent at division headquarters, and at all other times by reports from the commander of the ammunition train.

327. Ammunition-train commanders will comply with demands for ammunition from troops of other commands, provided that their own troops are in a position to spare it. This has particular reference to supplying the needs of independent cavalry operating in the front and on the flanks of the field forces.

328. The positions of the ammunition train and its different sections when the latter are separated from the main train are marked by a red flag during the day and by a red lantern at night.

SANITARY SERVICE.

329. In general, the functions of the sanitary service are as follows:

(a) The institution of all practicable sanitary measures, to the end that the fighting forces suffer no depletion in strength due to avoidable causes.

(b). The temporary care and professional treatment of the sick and wounded

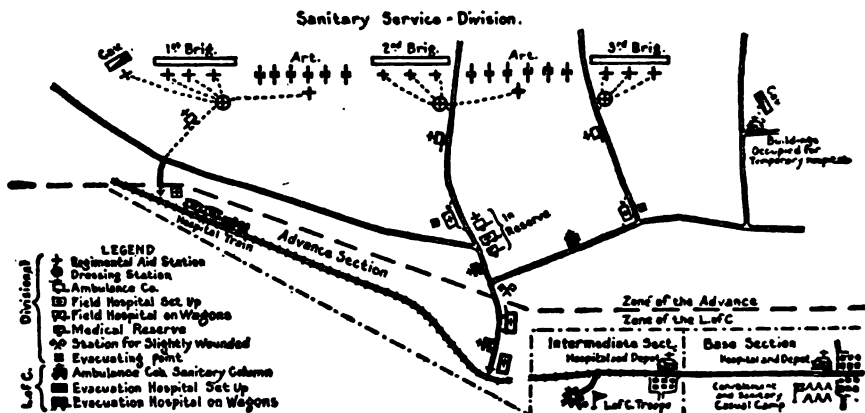
and their transportation to accessible points where they are transferred with as little delay as possible to the line of communications.

(c) The supply of the necessary sanitary equipment.

In addition, the sanitary service is charged with the preparation and preservation of individual records of sickness and injury in order that claims may be adjudicated with justice to the Government and the individual.

330. The personnel of the sanitary service in the zone of the advance may be classified into two general groups, as follows: First, that attached to organizations smaller than a brigade, which functions under the immediate orders of the organization commander and accompanies its unit into combat; second, that attached to the sanitary train, which functions under the orders of the division surgeon in accordance with such general or specific instructions as he may receive from the division commander. When necessary the sanitary personnel attached to organizations may be temporarily detached, in whole or part, and directed to operate with the sanitary train.

331. **Sanitation.** Officers and men of all arms must have a knowledge of sanitation and its importance, to the end that no depletion of the fighting force occurs through avoidable causes. The importance of adopting and carrying out proper sanitary measures cannot be overestimated.



Commanders of all grades are responsible for the sanitary condition of the quarters or localities occupied by their commands and for the enforcement of all sanitary regulations. In addition, they are responsible that all sanitary defects reported to them are promptly corrected.

A medical officer of experience, designated sanitary inspector, is charged, under direction of the division surgeon, with investigating and reporting upon the sanitation of the division to which he is attached. Sanitary inspectors report the result of their inspections to local commanders as well as to the division surgeon.

332. **First-Aid Packet.** Every man with the division carries a first-aid packet. The sanitary detachments with organizations carry pouches containing appliances for first aid and stimulants. The combat train carries litters and the necessary equipment for regimental aid station.

333. **Regimental Aid Station.** This station, established by each regiment or independent battalion during combat and when justified by the number of wounded, is the place to which all wounded of the organization are carried by its sanitary personnel, and where emergency treatment is administered. The position of the station is fixed by the organization commander and is as near

the firing line as possible. This station will often be but little more than a place for assembling the wounded, as its personnel belongs to the organization and, therefore, must be prepared to move with it. After receiving emergency treatment all wounded able to walk (except those with trivial wounds, who are sent back to the line) are directed to the station for slightly wounded; those unable to walk are delivered to the bearers sent forward from the sanitary train.

The equipment of the regimental aid station is carried on the combat train. It is operated by the sanitary personnel of the organization.

334. Dressing Stations. These stations, established during combat by ambulance companies of the sanitary train in the immediate rear of the line of regimental aid stations, are the places where all wounded unable to walk are collected from regimental aid stations by bearers of ambulance companies. If conditions so warrant, these bearers may be assisted in their work by portions of the organization sanitary personnel. From these stations the wounded are transported by ambulance companies back to field hospitals. The equipment of dressing stations is more elaborate than that of the regimental aid station. It provides light nourishment and stimulants for the wounded and affords facilities for more elaborate dressings and for emergency surgery.

The equipment for dressing stations and the necessary personnel are supplied by the ambulance companies of the sanitary train.

335. Ambulance Companies. Ambulance companies push up close to the rear of the fighting troops and as near the line of regimental aid stations as possible and establish dressing stations. In addition to their functions at the dressing stations, they are charged with the transportation of the wounded back to field hospitals and with providing the necessary equipment for infirmary service in camps. When field hospitals have not been set up and when sanitary columns or railway hospital trains of the line of communications are reasonably accessible, ambulance companies transport the wounded directly to them.

336. Field Hospital Companies. Field hospital companies form part of the sanitary train. They are set up when conditions so warrant, ordinarily some 3 or 4 miles from the battlefield and are the places to which the wounded are transported by ambulance companies. Their position must be one accessible both from the front and rear and where good water is available. Field hospitals are not set up when the sick or wounded can be turned over conveniently to elements of the sanitary column or railway hospital trains of the line of communications. Canvas is pitched only when buildings are not available or are inadequate for the purpose of housing the wounded.

The equipment of field hospitals, while more elaborate than that of dressing stations and while providing canvas for protection of the wounded from the weather and facilities for more extended surgical work, is nevertheless limited to providing necessities for the sick and wounded pending their evacuation to the rear by the line of communications. (See also Par. 268.)

337. Evacuation Points. The sanitary column of the line of communications includes ambulance companies and evacuation hospitals; there may also be available railway hospital trains and boats, any or all of which may be used as the means for the evacuation of the sick and wounded from the division. The places at which the sick and wounded are transferred from the division to the line of communications elements are termed evacuating points.

The positions of evacuating points are fixed in the same manner as is the refilling point of the supply service (see Par. 288) and communicated directly from division headquarters to the commander of the sanitary train.

338. Station for Slightly Wounded. A station for slightly wounded is established when combat is imminent to relieve dressing stations and field hospitals of the slightly wounded who can walk and require but little attention. Its position is fixed in division orders. It is operated by the personnel of the sanitary train detailed for the purpose. It is conspicuously marked so that it can be readily found.

339. The Sanitary Train. The sanitary train is composed of ambulance companies, field hospital companies, and camp infirmaries. The sanitary train is commanded by the division surgeon, or in his absence, by the senior medical officer of the attached elements, who, upon its release from the control of the commander of trains, operates it in accordance with orders or instructions received from division headquarters.

340. Service in Camps. In camps an ambulance service is furnished from the sanitary train. Infirmaries are set up at convenient points by order of the division surgeon and operated by the sanitary personnel attached to the organizations which the infirmary serves. Here cases not requiring hospital treatment are cared for, all other cases being promptly removed by the ambulance service. The senior medical officer of the units served by the infirmary assumes charge of the same and is authorized to call directly on the other organizations for their proportionate share of medical officers and sanitary personnel for the infirmary service. The sergeant, Hospital Corps, detailed with the infirmary remains with it in charge of the equipment. If necessary, field hospitals are set up for the reception of the seriously sick and wounded. (C. F. S. R., No. 3, June 22, 1915.)

341. Service on the March. When out of the presence of the enemy ambulances are ordinarily ordered distributed by the division commander throughout the column, in the rear of regiments, battalions, etc. A camp infirmary is assigned to each brigade and marches in its rear, and a field hospital should be so located in the column of march as to permit of its being available for the reception of seriously sick and injured as soon as possible after the arrival of troops in camp. (C. F. S. R., No. 3, June 22, 1915.)

342. During marches in the presence of the enemy, ambulance companies are kept intact. It may be advisable to assign one or more of these companies to a position in the column of the combatant troops, but any further dispersion is inadvisable. When combat is imminent and when so ordered by the column commander, the ambulance companies fall out of the column, and as soon as the combatant troops have passed they proceed to function as described in "Service in Combat." (See Par. 111.)

343. A man falling out from sickness or injury is sent with a pass, showing his name, company, and regiment or corps to the medical officer in the rear. The latter returns the pass, having indicated thereon the disposition made of the man.

If the man is unable to walk he is picked up by the first ambulance and cared for. If able to walk he may either be required to follow immediately behind his organization or ordered to await the arrival of the sanitary train. In the latter case, he is furnished with a tag showing the orders given him.

The arms, personal equipment, and clothing of soldiers who fall out are carried with them.

The horse, saber, and horse equipment of a mounted soldier admitted to the ambulance, or otherwise disposed of, are taken back to the troops by the non-commissioned officer that accompanied him.

344. Service in Combat. In the absence of medical assistance, the wounded apply their first-aid packets, if practicable. With this exception the care of

the wounded devolves upon the sanitary troops, and no combatant, unless duly authorized, is permitted to take or accompany the sick or injured to the rear.

345. The sanitary personnel of organizations must remain with it when advancing into action and during the whole course of an engagement. Accordingly the wounded will be treated where their wounds are received, and the sanitary personnel will pause, if the organization is moving, only so long as is necessary to give appropriate first aid. At a later stage of the combat, when the movement of the organization permits and when justified by the number of wounded, a regimental aid station is established and operated.

346. When combat is imminent, the station for slightly wounded is announced in division orders, and thereafter it is to this station that all disabled men able to walk are ordered to report. They are furnished with a tag showing the orders given them by the medical officer authorizing their proceeding to this station.

347. The evacuation of the wounded from regimental aid stations when established, and the evacuation of the wounded left by the organizations during an advance when a regimental aid station has not been established, devolves on the personnel of the sanitary train. In the case of a deliberate attack on the enemy in position, or when our forces occupy a defensive position, the positions of dressing stations are fixed in orders by the division commander, and communicated to the troops. The division commander in this case advises the commander of the sanitary train as to the position of the field hospitals.

348. In the case of a rencontre engagement, the work of establishing dressing stations, field hospitals, and of evacuating wounded during combat from the dressing station to the field hospital, or in certain cases directly to the line of communications, must be left to a great extent to the initiative and judgment of the commander of the sanitary train and his subordinates. To this end the commander of the sanitary train sends forward one or more ambulance companies to make contact in certain prescribed areas with the sanitary formations of the combatant units. When ambulance companies have been assigned positions in the column of march of combatant troops, they are ordinarily utilized in this work. The remaining ambulance companies ordinarily accompanied by one field hospital and under the immediate command of the sanitary train commander follow, and are held together in reserve at a certain prearranged position selected by the sanitary train commander and by him communicated to the commander of the ambulance companies sent ahead. The other field hospitals remain for the time being under the control of the commander of trains, to be brought forward later if required. The ambulance company commanders ordered to make contact with the combatant organizations push forward agents for the purpose of sanitary reconnaissance and for arranging for the position of the dressing stations and for determining the best lines of approach to them. When so ordered they establish dressing stations and commence collecting wounded from the different regimental aid stations, ultimately sending them back to the field hospital at the prearranged point. The commander of the sanitary train keeps himself advised by means of agents of the progress and development of the battle and the number of casualties in certain areas and from these reports and from orders received from the division surgeon he pushes forward additional ambulance companies when required, prescribing the area of their respective activity and the point to which their wounded are to be transported. At the same time he may order forward such additional field hospitals as may be required.

349. Search for Wounded. After an engagement, commanders organize a

thorough search of the battlefield in their vicinity for the wounded and assist in their protection and removal. The dead are collected by details from the line as soon as practicable after the battle and disposed of as the commander directs. (See also Par. 231.)

350. Before a command enters upon a campaign, every member thereof is provided with an identification tag by which he can be identified if killed or wounded. Such tags are not removed from the dead, but are left on the bodies when interred or otherwise disposed of. Tags found on the bodies of the enemy's dead are collected and turned over to the commander of trains, who sends them to the provost marshal at the base.

351. Retreat. In a retreat such portion of the sanitary personnel of the division as is required will remain with the sick and wounded that can not be moved, under the protection of the Red Cross flag.

352. American National Red Cross Association. The services of this association, its equipment and personnel are utilized under the immediate direction of medical officers to the greatest extent possible in the care of sick and wounded in the service of the interior and on the line of communications. Their services are not utilized in the zone of the advance.

353. Badge of Neutrality. The emblem of neutrality is a red cross on a white ground. All persons belonging to the sanitary service, including the red cross association personnel and chaplains attached to the army, wear on the left arm a brassard bearing this emblem stamped 'by competent authority. Those not uniformed carry a certificate of identity in addition to the brassard.

All sanitary formations and establishments display a red cross flag accompanied by the national flag. At night the positions of sanitary formations are marked by green lanterns.

ENGINEER TRAIN.

354. To each division is attached an engineer train which carries heavy intrenching tools, sandbags, reserve explosives, and other engineer material which may be required by the division during certain periods of combat. (See Par. 278.)

355. The organization and operation of the engineer train is the duty of the engineer corps. The engineer train is commanded by the senior engineer officer present with it, who, upon its release from the control of the commander of trains, operates it in accordance with the instructions of the senior engineer officer of the division.

356. The engineer column which is attached to the advance section of the line of communications includes in it such heavy engineer equipment as may be required, depending upon the character of operations reasonably probable, i.e., searchlights, pile drivers, map reproduction equipment, reserve of heavy intrenching tools, etc.

The engineer column may be temporarily assigned in whole or part to divisions or to operate directly under the orders of field army headquarters in the zone of the advance. When so assigned, it is for the time being removed from the control of the commander of the line of communications. If assigned directly to field army headquarters it operates under the immediate orders of the chief engineer; if assigned to a division, it forms part of the engineer train. When no longer required in the zone of the advance, it reverts to the control of the commander of the line of communications. (See Par. 279.)

⁴ For form of certificate see Rules of Land Warfare, United States Army.

ARTICLE V.

THE ZONE OF THE LINE OF COMMUNICATIONS.

GENERAL.

357. A line of communications is established for each important force about to engage in field operations involving a movement from a base.

When two or more important forces are operating from a single base, they will be under the control of a single superior commander; and only one line of communications will be operated with a single base, and with such number of advance sections as may be required.

358. A line of communications is not organized when a force can safely occupy a territory without military operations of an extensive character. In this case administration and supply naturally and properly follow the same general principles as with troops in the home country.

359. The mission of the tactical units and administrative groups assigned to a line of communications is to relieve the combatant field force as far as possible from every consideration except that of defeating the enemy.

360. The point at which the base of a line of communications is to be established is fixed in War Department orders, upon recommendation of the commander of the field forces. The personnel for the line of communications comprises groups from every branch of the army and is sent ahead by the commander of the force to secure the base, and to make all arrangements for receiving, supplying, and forwarding the troops. If no additional personnel for this purpose has been assigned to the commander by higher authority, he details the necessary officers and men from the force under his command.

361. The zone of the line of communications embraces all territory from and including the base to the point or points where contact is made with the trains of the combatant field forces. The activities of the line of communications personnel are in general limited to this zone, except that lines of information are extended to contact with the headquarters of the field force, and that ammunition, supply, sanitary, and engineer columns will be pushed forward beyond this zone when necessary.

It is the duty of the commander of the line of communications to advance this line from time to time so as to maintain contact with the trains of the field forces.

362. **Command.** All troops, military establishments, and personnel in the zone of the line of communications, are under control of its commander, except such as may be specially exempted by War Department orders. He is responsible for the defense of the line of communications and for the government of that portion of the zone placed under military control.

363. **Administration and Control.** For administration and control the line of communications is organized as follows:

- (a) A service of defense.
- (b) A supply, sanitary, and telegraph service
- (c) A service of military railways.

The senior staff officer of each group of the base section of the supply, sanitary, and telegraph service of the line of communications acts as technical adviser of the commander of the line of communications on all matters relating to the operation of his corps within the zone of the line of communications.

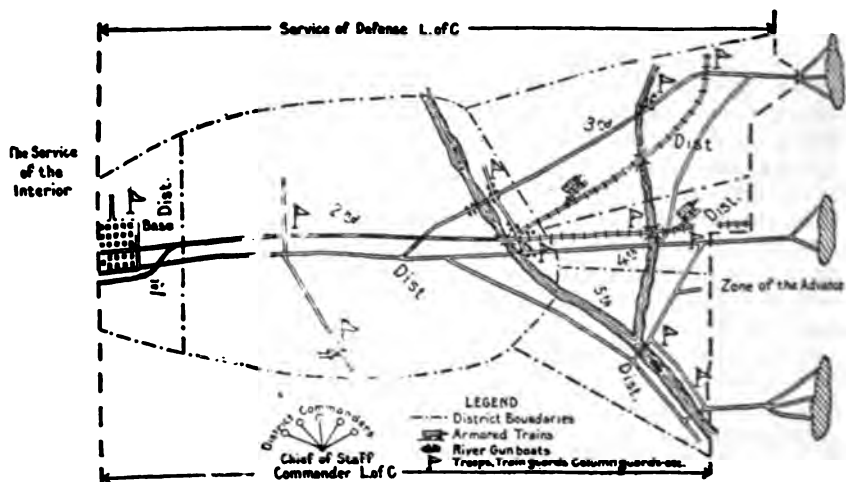
364. Staff officers belonging to organizations assigned to the service of defense have no responsibilities in connection with the operations of the

supply, sanitary, and telegraph service other than those directly connected with their organizations.

365. Upon arrival at the base all persons under the War Department orders or with authority to join the field forces come at once under the orders of the commander of the line of communications and report their arrival at headquarters.

SERVICE OF DEFENSE.

366. Suitable troops are assigned to duty under the commander of the line of communications and are charged under his orders with the defense of the line of communications and with the protection of all columns pushed out by the advance section of the supply, sanitary, and telegraph service. This territory is ordinarily divided into districts, each under a separate commander, who is responsible for the defense and military police of his own district. These commanders have no control over properly authorized movements along the line of communications, of personnel, animals, or matériel, except in case of imminent danger from the enemy. They are then responsible that traffic is stopped until, in their opinion, it may be safely resumed, or until



orders from superior authority are received. The action taken will be at once reported by telegraph to the chief of staff of the line of communications. Troops, ammunitions, or supplies going to the front are not to be diverted for the use of the line of communications troops, except by authority of the commander of the line of communications.

367. When armored trains are used their crews will form part of the line of communications troops and are under the direct orders of the commander of the district in which they are operating. Railway traffic is not to be interfered with by the use of armored trains, except in face of imminent danger from the enemy.

SUPPLY, SANITARY, AND TELEGRAPH SERVICE.

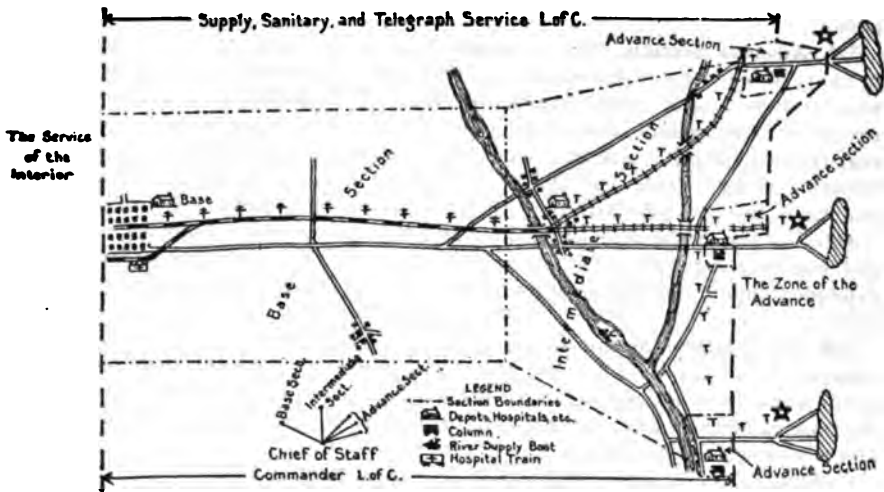
368. The commander of the line of communications is in charge of all supply and sanitary matters and of the construction and maintenance of all lines of information within the limits of his command.

He is responsible that the reserve of supplies on hand in his various depots shall be maintained between the maximum and minimum amounts fixed by

the commander of the field forces. He furnishes the War Department a copy of a list of the stores required, showing the maximum and minimum amounts to be kept on hand, and keeps the War Department informed of the amount of funds needed for the prosecution of his work. He forwards his requisitions for supplies not procurable in the theater of operations to the War Department or to such depots as the War Department may designate for furnishing particular supplies.

He prepares and enforces stringent regulations for the physical examination of officers and enlisted men, who are sick or wounded, to the end that the force in the theater of operations suffers no depletion incident to the return to the home country of malingersers, or those who within a reasonable length of time will be able to return to duty.

369. For purposes of control and coördination of the supply, sanitary, and telegraph service, a line of communications is ordinarily divided into sections, as follows: A base section and an advance section, each with an assistant chief of staff in charge competent to issue orders in the name of the commander



of the line of communications. In certain unusual cases, due to an extensive prolongation of the line of communications, an intermediate section may be required. An advance section is required at the head of each important route of supply diverging from the base.

370. The operations of a base or intermediate section extend up to, but do not include, the depots, sanitary units, and telegraph stations of the next section in advance. Each section provides for the supply of the line of communication troops within its limits. So far as possible formal accountability is terminated and replaced by a system of responsibility when supplies are turned over to troops or trains in the zone of the advance and to troops and trains of the section of defense in the zone of the line of communication. Commanders and staff officers of all grades are responsible for the proper use and disposition of supplies issued to their organizations and for supplies temporarily in their charge.

371. If no service of military railways be organized, it is the function of the base section to provide and operate the necessary means of transport or to make shipments by commercial means between the base and the section next in advance. Under similar conditions it is the function of intermediate sections,

if operated, to connect in the same manner with the section next in advance.

372. All personnel necessary to the proper functioning of the supply, sanitary, and telegraph service report at the base for assignment to duty. Here advance and intermediate sections are organized and sent forward as required.

373. **Base Section.** The assistant chief of staff with the base section is charged with coordinating the work of the quartermaster, medical, engineer, ordnance, and signal base groups.

He is informed of the probable requirements of the advance and intermediate sections, transmits this information to the officers in charge of the various groups, and issues the orders for meeting these requirements.

374. All requisitions are viséed by the assistant chief of staff of the base section before being transmitted to the point from which supplies are furnished.

375. All supplies (except those for the service of military railways) shipped into the base either for use of the field forces or for the troops of the line of communication are consigned to the "Quartermaster," "Surgeon," etc., at the base.

376. **Advance Section.** The assistant chief of staff with the advance section is charged with coordinating the work of the quartermaster, medical, engineer, ordnance, and signal advance groups. The operations of these groups extend to and include the refilling points of the division supply trains, the evacuation points for sick and wounded, and, in certain instances, to the distributing points. (See Par. 287.) The signal advance group establishes and maintains lines of information with the headquarters of the field forces.

377. To the advance section are attached ammunition, supply, sanitary, and engineer columns. The strength and composition of these columns are dependent upon the character of operations reasonably probable. (See Par. 279.)

378. The position of the advance depot is fixed from time to time by the commander of the field forces. The headquarters of the advance section is at the advance depot and it is with the assistant chief of staff at this point that the commanders in advance make all arrangements for the evacuation of sick and wounded, and for supply.

Ordinarily the advance depot will be on a line of railroad, and as near the field forces as possible. In consequence, it is more or less exposed to the enemy and, therefore, an undue accumulation of supplies at this point is undesirable.

The positions of refilling, rendezvous, and evacuation points either may be fixed by the commander of the field forces or he may delegate in orders this authority to division commanders. (See Par. 288.)

379. The allowance of transportation fixed by regulations for the divisional trains is that needed for carrying mobile reserves and for bringing up from the line of communications ammunition, rations, and grain, and for the temporary care only of sick and wounded. For all other classes of supplies, for the evacuation of the sick and wounded, and for special engineer equipment, transportation must, therefore, be provided by the different columns attached to the advance section.

SERVICE OF MILITARY RAILWAYS.

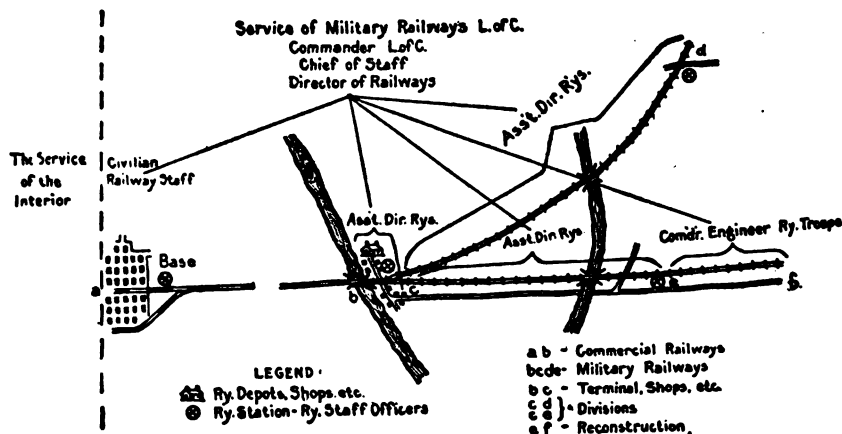
380. A service of military railways is organized when extensive military operations of a field force are dependent on a line or lines of railway for its supply in advance of the base. The construction, operation, and maintenance of these railways is a duty of the Corps of Engineers.

This service takes over from the field force all railways captured, assuming charge of their reconstruction, operation, and maintenance. It is also charged with the construction of new railway lines necessary for the supply of the field forces. It is controlled and directed by an officer detailed as director of railways, with a military controlling staff and an operating and constructing staff.

The director of railways is a member of the staff of the commander of the line of communications and is responsible to that commander for the successful operation, maintenance, and construction of the military railways. He receives his orders from that commander and takes the necessary steps to have them executed by his subordinates.

No military officer not attached to the service of military railways is allowed to give any orders to subordinates of the latter service or to interfere in any manner with the running of trains, except in the case of an impending attack. (See Par. 366.)

381. The military controlling staff is composed of such military assistants to the director of railways as the military conditions and the railway facilities require. Their duty is to represent the director of railways in the various departments or subdivisions of the railway to which they may be assigned,



to facilitate and insure the execution of the approved plans for the working of the railways, and to supply the military knowledge not possessed by the civilian officials and operators.

If two or more lines of military railway exist, a member of the military controlling staff, called an assistant director of railways, may be assigned to each line and made responsible to the director of railways for its successful operation, maintenance, and construction. The director of railways in this case is responsible for the supervision of and coöperation between the several lines.

If any single line becomes long enough to subdivide into divisions, military conditions may require that a member of the controlling staff be assigned to one or more of these divisions. In this case he is responsible to his next military railway superior for its successful operation and maintenance.

At such important railways points as may be necessary there will be assigned railway staff officers, each of whom will be responsible to his next military railway superior for facilitating and expediting the railway operations at his station.

The work of reconstruction at the railhead will ordinarily be kept separate

from the other work on the line in rear and will be done by troops, with such civilian assistance as is procurable. The officer in charge of this work will be directly under the military head of the line of railway on which he is working and is responsible for the prompt reconstruction of the line. As rapidly as practicable such reconstruction sections will be assigned to the division immediately in rear for operation and maintenance.

382. The staff of civilian assistants will consist of such railway officials, operatives, and other employees as may be available or necessary for the proper working of the military railways. As far as military conditions will permit, civilians will be used for the operation, maintenance, and construction of the military railways, officers and soldiers being used only when military conditions render it necessary. These civilians are subject to military supervision, and will be responsible in their various departments and subdivisions for executing the duties assigned to them in accordance with the plans of the director of railways.

383. The relations between the civilians of the railway service, except as modified by the director of railways, will be such as exist between those of corresponding grades on an ordinary railway. The military staff receive their orders and instructions from their next higher military railway superiors, and are subject to them only. Each member of this staff is the military adviser of the senior civilian in charge of the department or subdivision to which he is assigned. He will ordinarily leave the actual working of the road to his civil colleague, advising him of the ends desired and the military conditions involved, and will intervene in the actual working of the road only when convinced that the civilian is not taking the necessary steps to meet the requirements. The officer's decision on matters within his own department or subdivision can be overruled only by his next military railway superior.

384. The military railway supply depots are operated and maintained under the director of railways by the railway staff. All railway supplies and materials shipped into the base will be consigned to the "director of railways."

CHANNELS OF CORRESPONDENCE.

385. The commander of the line of communications must have the greatest possible freedom of action with reference to communicating with the War Department on matters of routine.

All such communications will be signed "By authority of the commander of the field forces" and will in general be confined to the following subjects, viz.:

- (a) Arrangements for maintaining the supply of stores and animals.
- (b) Matters relating to fiscal affairs or requirements.
- (c) Irregularities, defects, and deficiencies which come to his attention in the territorial or administrative zone to the rear of the base.
- (d) Arrangements for augmenting or replacing the staff and civilian personnel of the line of communications.
- (e) Arrangements for the evacuation of prisoners and of sick and wounded from the base.

After the system of supply and evacuation of sick and wounded has been fixed by the commander of the field forces, the commander of the line of communications and the assistant chief of staff of each advance section are authorized to communicate directly with the commanders whom they are ordered to supply on all detail matters relating to supply, evacuation of wounded, and maintenance of lines of information. Inversely, such commanders are authorized to communicate with the assistant chief of staff of the advance section in their immediate rear or with the commander of the line of communications on the same subjects.

ARTICLE VI.

TRANSPORTATION BY RAIL.

386. Troops may be moved by rail over commercial railways or over military railways. The former condition will obtain in all movements in time of peace, and for most concentration movements in time of war. The latter condition will always obtain in the theater of military operations, and may obtain in concentration movements in our own territory.

TRAVEL ON COMMERCIAL RAILWAYS.

387.¹ "In time of war or threatened war preference and precedence shall, upon the demand of the President of the United States, be given, over all other traffic, to the transportation of troops and matériel of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic."

388. The movement of troops and their equipment over commercial railways is the function of the Quartermaster Corps, who plan and prepare for the move in conformity with regulations and orders from competent authority.

389. Orders covering such movements should give an exact return of the command, and transportation will be furnished at the rate of 3 men to each section in tourist sleepers, or 3 men to each two seats in day coaches. When day coaches are used for journeys of over 24 hours' duration, if practicable a seat will be provided for each man.

390. Whenever organizations are moved by rail, with their animals, equipment, and matériel, it is desirable that complete units be kept together in trains divided into convenient train sections. It is preferable to have trains of moderate size with good speed rather than long trains with low speed.

If it is necessary to divide a train, some officers and men will accompany each section. The troops should not be separated from the animals if it can be avoided; but if the animals are shipped in separate sections selected detachments under officers accompany them, and such sections will precede the troops.

391. When supplies are shipped to mobilization or concentration camps, the contents of each car will be marked or placarded on the outside of the car, and the latter, when practicable, is also marked with the name of the organization to which the supplies are sent.

392. **Preparation of Cars.** Upon receipt of orders for the movement of troops by rail, the officer charged with supplying the transportation arranges with the railroad authorities for the necessary cars. He procures lists, with weights, of all property to be shipped and makes out the bills of lading, provides loading facilities and material and blocking and lashing, and constructs the necessary ramps.

Upon arrival of the cars, he inspects to see if they conform to the terms of the contract, and reports the result of his inspection to the commander.

Stock cars are inspected with especial care to see that they are in good order throughout. Projecting nails, bolts, and splinters, loose boards and rotten flooring, broken fixtures on hayracks, doors, or troughs, are sources of danger or discomfort to the animals and of loss to the Government. The cars should be clean before loading, and suitable noninflammable footing be provided.

¹ Extract from Chap. 3591, Part 1, Vol. XXXIV, Statutes at Large of the United States of America.

Passenger cars must be clean, fully supplied with water and ice, and sufficiently lighted and heated. The urinals and closets must be in good condition, well supplied with water and toilet paper, and the sleeping accommodations must be according to contract.

After the cars have been accepted, the number of men allotted to each is marked on the side or steps. The cars are then assigned to organizations and plainly marked.

393. Loading and Entraining. At the proper time loading is begun and is carried on, usually by the troops, pursuant to the orders of the commander. Heavy property may be loaded by details before the arrival of the troops.

Artillery and other carriages are made secure by lashings and by nailing blocks of wood to the flooring under the wheels.

The arrival of troops at the station should be timed so that there will be no delay in waiting for cars. When the barrack, camp, or bivouac is not more than a mile from the station, troops are not required to fall in until notice has been received that the cars are at the station and have been inspected and assigned. The command is then marched to the train and the property and animals loaded. The organizations are then marched opposite their cars and entrained. The cars are entered simultaneously, each company commander distributing his men according to the assignment. Noncommissioned officers have seats near the doors.

Troops traveling by train in time of peace seldom require their arms or all of their equipment. For instance, when sleepers are provided they generally require no equipment other than their canteens and haversacks, the mess kits and necessary toilet articles being carried in the latter. For mounted troops the saddlebags take the place of haversacks. A few revolvers or rifles suffice for the necessary guard duty. Therefore, to add to the comfort of the men train commanders may cause the arms and equipments not required en route to be properly secured and stored in a property or baggage car.

Mounted troops dismount upon arrival and remove the horse equipments, except the halter. Each man's equipment, except halter, canteen, and saddlebags, is then securely tied in a gunny sack, or other suitable receptacle, marked with the number of the man and letter of his troop, and loaded in the proper car. Each troop, except the horse holders, is then marched to its cars, where the men deposit their arms (if not otherwise disposed of), canteens, and saddlebags. It then marches back, relieves the horse holders, and loads the horses. The horse holders, unless otherwise ordered, repair to their cars carrying their arms (if left with them), canteens, and saddlebags. For short journeys the horses may be loaded saddled (stirrups crossed) and bridled or the bridles may be tied on the saddles.

In the field artillery a similar method is pursued. The harness is usually tied up in sets, plainly marked, and loaded in a box car.

Animals can be conveniently loaded through chutes of stockyards, or from freight platforms level with the car floors. In other cases portable or improvised ramps will have to be used. When it is likely that the animals will have to be unloaded at places without facilities, one or more portable ramps or the material for improvising them, should be carried on the train. The loading should proceed without noise or confusion, the animals being led quietly to the car door and turned over to the four men, two for each end, who do the loading. The animals should be packed as closely as possible, except in very hot weather. Halters are not removed. Gentle animals should be placed opposite the doors, and are therefore loaded last. Alternate animals should face in opposite directions.

394. The time required for loading each train depends upon the railroad

facilities and upon the experience of the troops. For troops leaving station to go into the field, or changing station in the field, the time required should not exceed—

One hour for infantry.

One and one-half hours for cavalry and light artillery.

Two hours for heavy artillery and for engineers with bridge train.

395. All movements of the troops in loading, entraining, and detraining, feeding and watering, and exercising men and horses are made, as a rule, in military formation and pursuant to command, thus avoiding confusion and saving time.

396. **Conduct of the Troops.** Delays caused by the troops, whether in loading and entraining or during the journey, are inexcusable. They interfere with railroad schedules and are a source of great annoyance.

The commander is the sole intermediary between the troops and the railroad personnel. In case of deficiencies and other matters requiring correction, he addresses himself to the official in charge only.

The senior noncommissioned officer in each car is responsible for cleanliness and good order. Spitting on the floors, defacing woodwork and windows, and every species of disorder must be prevented.

The commander may station sentinels at the doors of each car to prevent the entrance of unauthorized persons and to keep soldiers from riding on the steps, platforms, or tops of cars, and from leaving without permission. If it is desirable to exercise the troops, they should leave the cars in a body, under their officers.

Smoking is prohibited in cars loaded with animals or forage.

397. In movements by rail kitchen cars are provided, if practicable; otherwise, baggage cars are fitted up by the troops or arrangements are made for procuring meals, or at least liquid coffee, at stations en route.

Careful attention is paid to the messing of the men, whether in kitchen cars or in the coaches where the men ride. A mess officer supervises the preparation and serving of the meals and requires the men to keep their mess kits scrupulously clean.

398. When the stock cars provided are such that the animals can be fed and watered on the trains, it is unnecessary to unload them for exercise or recuperation unless the weather is very hot and the journey long.

399. On account of danger from fire, neither hay nor straw is carried in stock cars. A short ration of grain (about 6 pounds) is sufficient to supply animals while traveling by rail.

400. On occasions when troops have been allowed or required to leave the train for exercise or duty, the commander will cause the "assembly" to be sounded five minutes before departure.

401. **Detraining and Unloading.** The train schedule is arranged, when practicable, for arrival at destination in the morning. The troops are notified in time to prepare for detraining.

The officers and guard are the first to leave the cars. The commander meets the staff officer sent to the train, receives instructions, if any, gets his bearing and orders the troops to detrain. As soon as the passenger coaches or sleeping cars are empty, the quartermaster, or a specially designated officer, accompanied by the conductor, if practicable, makes an inspection of the cars and notes their condition; the result is reported to the commander.

The troops procure their field kits and march to camp without delay, leaving suitable details to unload and bring up the property. If the camp is distant, arms are stacked and a part or all of the command unloads the train.

In the cavalry the men are marched to the vicinity of the stock cars, where the saddlebags and canteens are placed in line on the ground, under guard. The remaining articles of the field kit and horse equipments are then unloaded and

placed with the preceding articles. The horses are then unloaded, saddled, and the troops formed.

Animals are unloaded quietly, each one being led to the opening so that his body will be athwart the car before leaving it.

The command may be marched to camp at once, if near the station; otherwise, picket lines are stretched, or the horses are held while the property is unloaded.

Artillery unloads in a manner similar to that of cavalry.

402. On account of accidents, freight blockades, or action of the enemy, it may be necessary to unload in the open country. In such cases portable or improvised ramps will have to be used. Lacking these, the train may be stopped in a low cut, and crossties, baled hay, car doors, and turf utilized for the rapid construction of ramps of sufficient height to permit unloading of animals.

TRAVEL ON MILITARY RAILWAYS.

403. **Method of Requisitioning for Railway Transportation.** Requisitions should reach the military controlling staff as early as possible and should give concise data as to the number of officers and men, animals, guns, vehicles, and supplies that will be involved in the movement. After the program for the movement has been settled, changes should be avoided as far as practicable.

404. The authority consigning animals or matériel for shipment will be responsible for loading them and for furnishing attendance and forage for the animals while en route. Ordinary shipments of supplies or matériel will be turned over to the railway authorities and will be shipped on an ordinary bill of lading. Important shipments may be accompanied by a representative of the department interested, and by a representative of the operating department.

405. The commander of the line of communications will issue regulations concerning movements of military and civil passengers over the military railways. If necessary to the enforcement of these regulations military police of the service of defense will be placed on duty on trains and at stations for this purpose.

406. **Hospital Trains.** Hospital trains will be fitted up on each line of military railway. The necessary sanitary personnel and special equipment will be supplied from the base section of the supply, sanitary, and telegraph services of the line of communications. As far as practicable such trains, or other trains carrying sick and wounded who can travel sitting up, will leave the railhead at certain fixed hours daily.

In anticipation of an engagement, rolling stock for special hospital trains will be collected and fitted up by the director of railways at suitable points to meet the probable needs. At stations where sick and wounded are to be entrained and detained, rest stations will be organized, under instructions from the commander of the line of communications, by the supply, sanitary, and telegraph services of the line of communications.

407. **Troop Movements by Rail.** In so far as may be practicable, troops will be moved on a military railway in the same manner as on a commercial railway, and the general principles given in Travel on Commercial Railway will be followed; but such conditions will not usually obtain, and troops will often have to be moved in freight equipment or packed into day coaches far in excess of the numbers given for peace movements. Rapidity of movement and economy of rolling stock will take precedence over the comfort of the troops whenever necessary.

408. Troops in the theater of operations carry with them on railway trains only such supplies, equipment, etc., as can be promptly moved away with the

troops at the detraining station, or, in other words, that which is authorized to be carried on the men and animals, and in the combat and field trains.

When large bodies of troops are moved by rail, staff officers, with representatives of the various units and departments, should precede the troops to the destination, in order to make arrangements to receive the troops, and insure their prompt movement away from the detraining point.

409. In drawing up orders for the movement of troops by rail, the following points should be clearly stated:

- (a) Date, place of entraining, destination, route to be followed.
- (b) Hours of departure of trains; time at which troops should reach the entraining place, route that they should follow.
- (c) Details in regard to feeding of troops, and watering and feeding animals en route.
- (d) Places of assembly near entraining and detraining stations.
- (e) Schedule showing assignment of troops, animals, and vehicles to different trains.

Troops will not occupy railway buildings or use the railway facilities or property without authority from the railway staff officers.

410. Duties of a Commander of a Troop Train. An officer from each unit, supplied with a copy of the order directing the movement and a field return of the troops involved, should be sent ahead to the entraining point to ascertain from the railway staff officer the arrangements for the entraining of his unit. He will communicate his information to his commander before the troops reach the station, and will then act as guide to the unit in reaching its trains. The commander of troops to be moved by rail will retain the original copy of his order.

The senior officer on every special troop train is responsible that order is maintained, and will furnish the railway operatives the necessary force to carry out the regulations. He will detail a guard on every troop train to take charge of prisoners, property, etc., and to furnish sentries, as required, at entraining and detraining points, and at stations en route. He is responsible that the regulations of the railway service are observed. Except when necessary, on account of actual or threatened attack by the enemy, he will not interfere with the working of the railway service. If an attack is anticipated, an officer should ride on the locomotive to inform the engineer when, for tactical reasons, it is desirable to stop the train.

ARTICLE VII.

MILITARY POLICE.

411. The duty of military police is to enforce all police regulations in the theater of operations and in mobilization and concentration camps. They protect the inhabitants of the country from pillage and violence and prevent excesses of all kinds; keep all roads clear; arrest all soldiers and civilian employees absent without proper authority from their organizations; arrest all marauders, and collect all stragglers and hand them over to their organizations. They keep a list and description of all camp retainers and followers and watch their conduct. They are charged with relieving organizations from the care of prisoners of war and with their safe conduct to places where they are ordered assembled.

They police all railroad stations, public houses, depots, and public buildings, protect telegraph and telephone lines and railways from damage; keep hostile inhabitants in order, carry out their disarmament, and prevent spying.

412. With the division, the commander of trains and the force under his orders exercise the functions of military police.

413. On the line of communications the commanders of defense districts exercise these functions, following up closely the advance of the division, taking over all prisoners of war, and performing the military police duties in rear of the zone policed by the commander of trains.

414. The defense commander of the area in and about the base of a line of communications is assigned as provost marshal. The functions of a provost marshal, in addition to those of general military police, are to receive and hold all classes of prisoners. He makes records of the prisoners of war, and collects and records the tags taken from the enemy's dead, as required by the laws and usages of war. The records of prisoners of war and of the enemy's dead are transmitted quarterly to the War Department.

415. In mobilization and concentration camps the powers of military police are ordinarily exercised by the commander of trains, though if conditions require, an officer may be assigned as commander of military police.

416. In cases of emergency the military police may call on any troop to assist them. All persons belonging to the military service are required to give every assistance to the military police in the execution of their duties.

417. Officers and enlisted men when actually performing the duty of military police will wear a blue brassard on the left arm half way between the elbow and shoulder bearing the letters "M. P." in white.

418. As a rule, military police on duty will not be reprimanded or placed in arrest except by the superiors under whose command they happen to be. In exceptional cases field officers and officers of higher grades are authorized to order their arrest. Members of the military police when not on duty—that is, when not wearing the blue brassard—have no special privileges.

ARTICLE VIII.

CENSORSHIP.

419. Censorship within the theater of operations is controlled by the commander of the field forces. An officer is assigned as censor and is provided with such assistants as necessary. He performs his duties under the immediate orders of the chief of staff of the commander of the field forces.

420. Censorship includes (1) censorship over private communications and (2) censorship over press publications and communications.

All private communications (post cards, letters, parcels, telegrams. etc.) of officers, soldiers, foreign attachés, newspaper correspondents, and all other individuals, dispatched from the theater of operations are liable to censorship and to such delay in transmission as may be deemed necessary by the military authorities. A censor is authorized to suppress any statement which might be of value to the enemy or prejudicial to the welfare of the forces in the field.

All newspapers or journals in the theater of operations or in localities where martial law is in force are subject to censorship and, if necessary, their publications may be suppressed.

421. The press has public functions to perform with respect to the collection and dissemination of news concerning the operations of the Army in time of war. The dissemination of falsehoods or distortion of facts, no less than the premature disclosure of movements or plans, is so fraught with dangerous consequences that the greatest care should be observed in its prevention. The press occupies a dual and delicate position, being under the necessity of truthfully disclosing to the people the facts concerning the operations of the Army

and, at the same time, of refraining from disclosing those things which, though true, would be disastrous if known to the enemy. It is perfectly apparent to everyone who considers the question that these important functions can not be trusted to irresponsible people and can only be properly performed under reasonable rules and regulations with respect thereto.

CORRESPONDENTS.

422. Conditions of Acceptance. Each applicant shall present to the Secretary of War credentials from the owner or owners, managing editor, or responsible manager of the publication or publications he represents, giving a brief account of his career, stating exactly the nature of the work he is expected to do at the front, certifying to his trustworthiness as working member of his profession, and his personal fitness to accompany the army. His employer or employers shall give a bond for his good conduct in the field, which, in case of the withdrawal of his pass for infraction of any of the regulations shall be forfeited to any charity which the Secretary of War may name. He shall take an oath of loyalty of the usual military form and shall agree to abide in letter and spirit by all the regulations laid down for his guidance. If at any time the number of correspondents becomes so large as to be an encumbrance, the Secretary of War will refuse other passes until such time as he deems expedient; when other applicants who fulfill the conditions will be received in the order of their application.

Not more than one correspondent will be received for any one publication or syndicate of publications or press associations with the same field army. Men who have evidently secured credentials with a view to adventure rather than serious work as correspondents will not be received. Their employers must show that they have been working members of their profession. In addition to the requirements for home correspondents, a foreign correspondent must have served in other campaigns, present credentials as to his character from high officers of the army to which he was attached and accompanying the letter from his employers must present a letter from his ambassador in Washington, personally vouching for him.

423. Photographs and Photographers. An official photographer will accompany each field army or other important independent field force. His films and plates will be sent promptly to Washington, where prints will be issued at a nominal cost to the press. No professional photographers and moving-picture men will be received. No news or professional photographers will be received if representing themselves either as news or mail correspondents. The regular correspondents may carry small hand film cameras. The films will be sent by the censor at the headquarters of the field force to the chief censor's office in Washington, where they will be developed and such of them as pass the censorship sent to any given address promptly.

424. Censorship of Press Matter. A commissioned officer of journalistic experience shall act as chief censor in Washington and one shall be attached as censor to the headquarters of each field army or other important independent field force. All correspondent's news, or private dispatches, mail letters for publication, private letters, drawings and photographs must be submitted to this censor and receive his stamp before being sent. After censorship he will show the correspondent what, if anything, he has elided from correspondent's MSS. He will permit the use of no code words in any private or public communication. He may request a correspondent to rewrite any portion of a dispatch that he may suspect of double meaning without accompanying his request with his reasons for it. The correspondent will not be allowed to send

information concerning the occupation or relinquishment of a position, the news of any victory or defeat, the names of organizations or commanders, the dispositions of troops, the state of supply or transport, the number of sick, the extent of losses, or any other matters of information unless the dispatch or report, containing such information, is passed on and authorized by the censor. Any relaxation in the regulations will rest with the commanding general of the field force. Nothing in these regulations is to be construed as limiting the correspondent's freedom of opinion once there ceases to be a necessity for military secrecy; the sole object of the regulations being to keep information from the enemy at a time when it might be of service to him.

425. Facilities for Work. Immediately on receiving his pass the correspondent shall proceed to the headquarters of the field force to which he is assigned and there report himself to the censor. His pass shall give him transport over all military railways, with the privileges of a commissioned officer. All correspondents will be officially attached to headquarters of field armies or other important field forces. Their transport shall have a place with that of the baggage section of the field train of the headquarters staff. No one except the censor at headquarters shall have the authority of censorship. Correspondents shall have the freedom of the lines of information of the army within such limitations as the censor may, from time to time, indicate. The official army wires shall be open to the correspondents' dispatches when not occupied by official dispatches. Correspondents' dispatches will be sent in the order of filing. The censor may limit the number of words or otherwise make an equitable adjustment of the use of the wire among the different correspondents when the wire is unequal to carrying all the dispatches submitted. Within the censor's discretion, correspondents may send messengers to carry censored dispatches to better wire facilities than those at the immediate front.

426. Messengers. Any correspondent who chooses may have a mounted messenger, who may send neither correspondence nor photographs of his own. Any infraction of the regulations by the messenger will be equivalent to an infraction by the correspondent himself. He must have credentials acceptable to the army and a pass in the correspondents' form, with the privilege of an enlisted man. A similar bond shall be required for him as for the correspondent. Except where permission is given by the headquarters censor, he must remain with the correspondents' transport.

427. Passes. Every correspondent shall be supplied with an official pass, bearing his photograph and his own signature and the signature of the Secretary of War and the commander of the field forces to which he is attached. He shall show this upon the demand of any field officer, company commander, or member of the military police, and shall respect their requests under the penalty of being sent back to army headquarters under guard.

428. Garb. Every correspondent shall provide himself with olive-drab garb for the field. He shall wear no accouterments not of a neutral tint. He shall be supplied with a white brassard $2\frac{1}{2}$ inches in width, bearing the letter C in red, to be worn on the left arm, in order that his status with the army may be known at a glance by both officers and privates. Messengers shall observe the same regulations about garb, with the exception that their brassard shall bear the letter M.

429. Discipline. No correspondent shall leave the army to which he is attached, either to go home or for any other purpose, except by permission of the War Department. A correspondent shall be suspended from all privileges for the distortion of his dispatches in the office of the publication which he represents, and also for the use of language or expressions conveying a hidden meaning which would tend to mislead or deceive the censor or permit the ap-

proval by him of otherwise objectionable dispatches or for any other infraction of these regulations in letter or in spirit. In extreme cases of offense, where the commanding general thinks it justified, the correspondent may be sent to the rear and held under arrest until such time as the War Department may restore his privileges or give him a pass to leave the army.

430. Medical Regulations. Correspondents shall submit to the army medical regulations in the field.

431. Press Regulations for Officers, Enlisted Men, and Civilian Employees of the Army. No officer, enlisted man, or civilian employee of the army shall be permitted to correspond for any publication without the consent of the Secretary of War and the majority of the correspondents attached to the field army in which he serves. No censor or censor's assistant may write anything about the campaign for publication while he holds a commission in the army.

ARTICLE IX.

FIELD POST OFFICE.

432. Arrangements are made with the Post Office Department for establishing and maintaining a postal service in the theater of operations.

This service is directed by an official of the Post Office Department who is stationed at the base of the line of communications. This official coöperates with the assistant chief of staff of the supply, sanitary, and telegraph service of the line of communications, maintaining post offices, agents, etc., with its advance section, and so far as practicable, throughout the zone of the line of communications. In addition to the foregoing a post-office agent accompanies each division, being supplied by the quartermaster corps with the necessary vehicles and animals for the prompt dispatch and distribution of mails.

The commander of trains is responsible for the protection of the postal personnel with divisions and controls their movements.

The necessary instructions relative to the distribution and receipt of mail are issued by the division commander.

APPENDICES.

USEFUL INFORMATION.

APPENDIX 1.

A. WAR STRENGTH, IN ROUND NUMBERS, ROAD SPACE, AND DIMENSIONS OF CAMPS.

| Units. | War strength, in round numbers. | | | Length of columns. | | | Contracted camping space (troops and trains). | |
|--|---------------------------------|-----------------------------|---------------------------|---|----------------------------------|--|---|------------------------------|
| | Men. | Animals (horses and mules). | Vehicles, including guns. | Organizations, including combat trains. | + Field trains without distance. | Ammunition, supply, sanitary, and engineer trains. | Yards. | Approximate number of acres. |
| Divisions: | | | | | | | | |
| Infantry..... | 22,000 | 7,500 | 900 | 10.3 mis. | 11.8 mis. | 3.6 mis. | | 180 |
| Cavalry..... | 10,000 | 12,000 | 500 | 8.0 mis. | 9.5 mis. | 1.5 mis. | | 150 |
| Brigades: | | | | | | | | |
| Infantry..... | 5,500 | 520 | 67 | 1.7 mis. | 2.0 mis. | | | 19 |
| Cavalry..... | 2,500 | 2,900 | 53 | 1.5 mis. | 1.9 mis. | | | 18 |
| Artillery..... | 2,300 | 2,300 | 257 | 2.6 mis. | 2.9 mis. | | | 30 |
| Smaller units (including attached sanitary troops): | | | | <i>Yards.</i> | <i>Yards.</i> | <i>Yards.</i> | | |
| Infantry regiment... | 1,860 | 170 | 22 | 970 | 1,150 | | 160 by 180 | 6.2 |
| Cavalry regiment.... | 1,250 | 1,430 | 26 | 1,310 | 1,640 | | 200 by 200 | 8.2 |
| Field artillery, light, regiment..... | 1,150 | 1,150 | 128 | * 2,240 | 2,500 | | 240 by 300 | 14.7 |
| Field artillery, horse, regiment..... | 1,150 | 1,560 | 131 | 2,670 | 2,970 | | 240 by 400 | 19.6 |
| Field artillery, heavy, regiment..... | 1,240 | 1,340 | 131 | 2,510 | 2,800 | | 260 by 300 | 16.0 |
| Field artillery, mountain, regiment.... | 1,100 | 1,160 | | 1,770 | 2,070 | | 80 by 380 | 6.2 |
| Engineers, pioneer battalion..... | 490 | 160 | 12 | 410 | 470 | | 50 by 200 | 2.0 |
| Engineers, pioneer battalion (mounted) | 270 | 370 | 11 | 350 | 440 | | 50 by 260 | 2.6 |
| Engineers, pontoon battalion..... | 00 | 820 | 145 | 3,360 | 3,480 | | 160 by 315 | 10.0 |
| Signal troops, field battalion..... | 160 | 200 | 15 | 310 | 370 | | 30 by 240 | 1.7 |
| Signal troops, field (cavalry) battalion | 170 | 200 | 11 | 240 | 300 | | 30 by 210 | 1.3 |
| Signal troops, aero squadron (including landing place 150 yards by 350 yards)..... | 90 | | 16 | 140 | 200 | | 175 by 350 | 12.5 |
| Trains: | | | | | | | | |
| Infantry division— | | | | | | | | |
| Ammunition..... | 260 | 750 | 162 | | | 2,440 | 75 by 380 | 5.8 |
| Supply..... | 190 | 630 | 126 | | | 2,000 | 80 by 380 | 6.2 |
| Sanitary..... | 530 | 500 | 90 | | | 1,530 | 100 by 260 | 5.3 |
| Engineer..... | 10 | 40 | 9 | | | 150 | 20 by 140 | .6 |
| Cavalry division— | | | | | | | | |
| Ammunition..... | 60 | 140 | 33 | | | 500 | 30 by 200 | 1.2 |
| Supply..... | 220 | 860 | 75 | | | 1,200 | 80 by 280 | 4.6 |
| Sanitary..... | 300 | 300 | 53 | | | 890 | 50 by 260 | 2.7 |

This table is based upon the road spaces occupied by troops at war strength, infantry in column of squads, cavalry in column of fours, artillery and trains in single column.

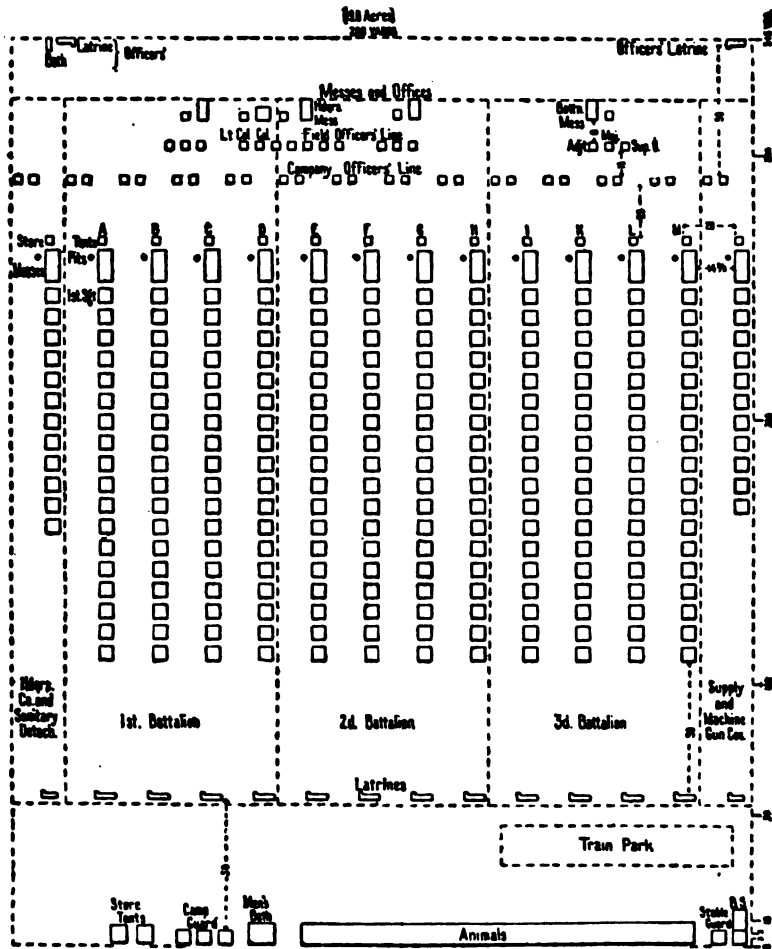
* Combat train 1 mile long.

* Combat train 840 yards long.

* Contracted camping space permits pitching the tents and operation of field hospitals.

B. SEMIPERMANENT CAMPS.

CAMP OF A REGIMENT OF INFANTRY. WAR STRENGTH.



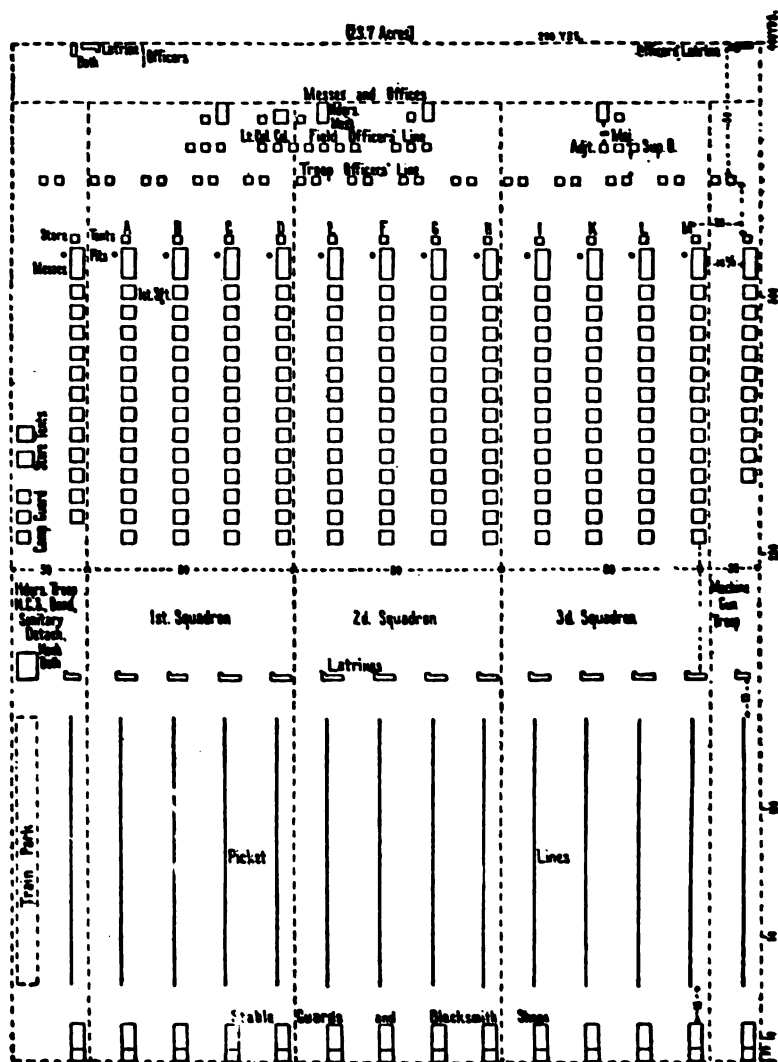
Note to table on page 1676—continued.

The spaces differ but little from the requirements of drill regulations. On the march, after a command is straightened out on the road, elongation always takes place. In calculating the length of a column further allowance must, therefore, be made in accordance with circumstances—sometimes as much as 25 per cent.

The contracted camping spaces afford sufficient room for a one-night halt. They require that the animals and vehicles of a single troop, battery, or company be placed on the same line with the men where practicable to do so within the camp lengths above given; that the men be in double shelter tents (or in double row of shelter tents), and that the lines on which adjacent companies are established be separated by distances not exceeding 11 yards for infantry and other dismounted organizations, double carriage length for field artillery (except mountain), and 12 yards for cavalry and remaining mounted organizations. Latrines are placed on the opposite side of camp from company kitchens and at a minimum distance of 50 yards from the men.

B. SEMIPERMANENT CAMP.

CAMP OF A REGIMENT OF CAVALRY. WAR STRENGTH.



While the preceding diagrams are of semipermanent camps using canvas as shelter, a similar arrangement is observed in more permanent camps, such as mobilization, in which the canvas is replaced by temporary structures. The distances and intervals given are the maximum to be used unless the topography of the camp site demands an increase. They should frequently be reduced.

Note to table on page 1676—concluded.

The camp areas given represent minimum requirements under favorable conditions of terrain and should be increased whenever practicable, particularly for sanitary reasons in those cases where a camp is to be occupied for more than one day.

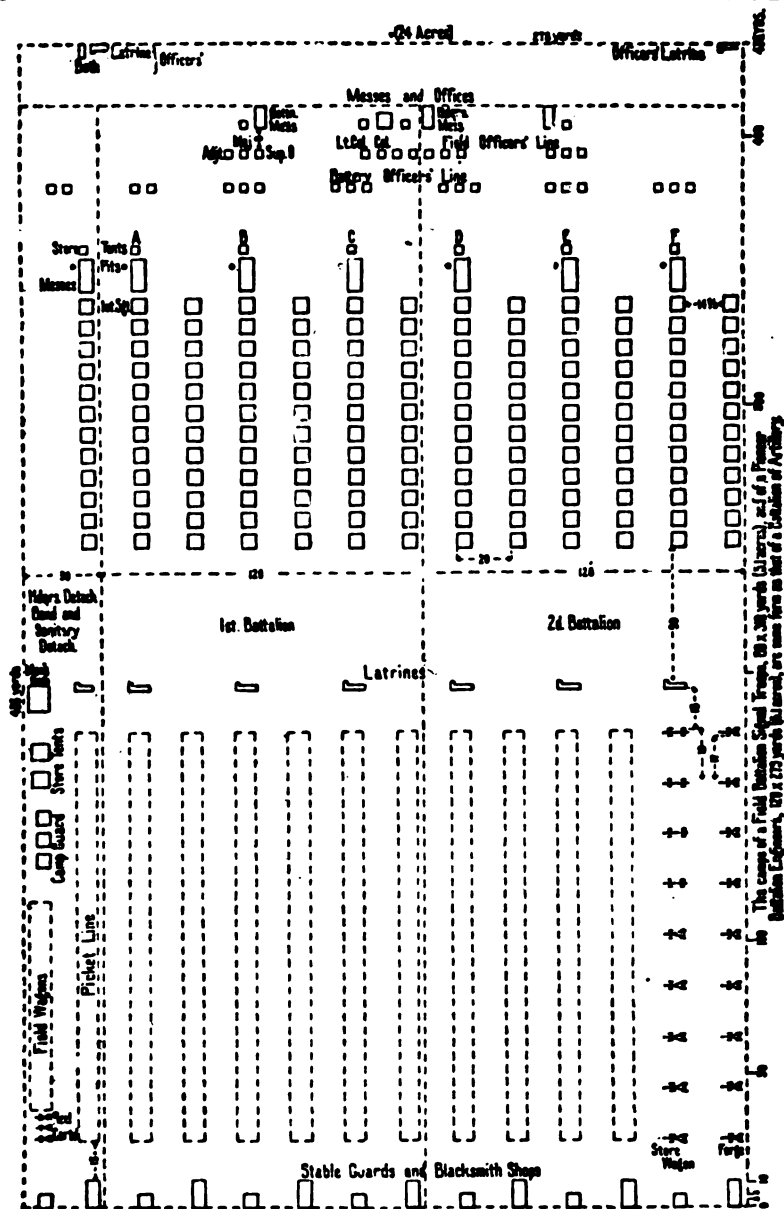
For approximate calculations, assume 1,600 meters = 1 mile; 5 miles = 8 kilometers; the number of acres in a rectangular tract = the product of one-seventieth of the length in yards by one-seventieth of the width in yards.

as indicated below, to economize in guard and police duty, and in the labor of constructing camps.

Battalions and squadrons usually camp in column of companies. Between

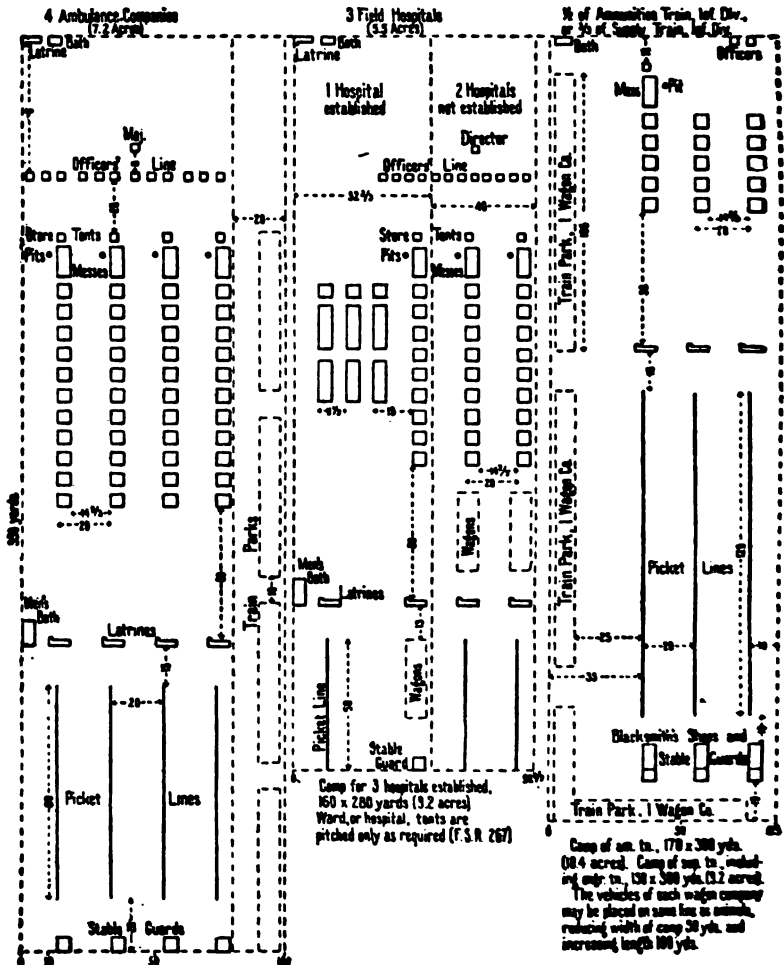
B. SEMIPERMANENT CAMP.

CAMP OF A REGIMENT OF ARTILLERY. WAR STRENGTH.



this distance may be reduced. From latrines 50 yards to nearest occupied tent; but, when a smaller camp is desired, the space between company latrines and the men's tents may be used to park carriages and animals. For picket lines and parks, allow 1 yard per animal and 4 yards per vehicle; but, for shelter for animals in a double row, $2\frac{1}{2}$ lineal feet of structure per animal will suffice. Other distances shown in diagrams may be reduced. Latrine seats are pro-

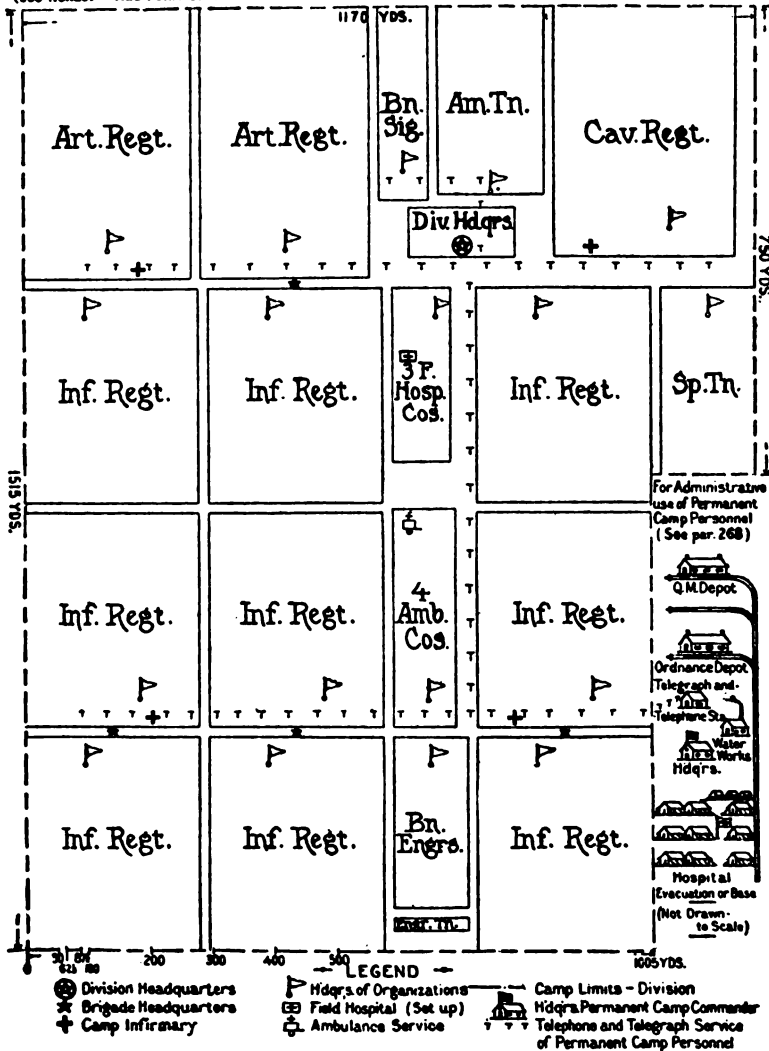
CAMPS OF TRAINS. WAR STRENGTH.



vided at the rate of 1 seat to about every 10 men; shower heads at 1 to every 50 to 100 men, depending upon water pressure; 1 bath house for officers and 1 for men (or a single bath house suitably partitioned) in each regiment or separate battalion; water spigots at the rate of 1 for each mess.

No fixed type of camp is prescribed for use in the theater of operations. In the presence of the enemy, camps and bivouacs must be modified to afford the best protection for men, animals, and trains. This will frequently necessitate the juxtaposition of shelter for the men and picket lines for the animals.

CAMP OF INFANTRY DIVISION. WAR STRENGTH.
(335 ACRES. THIS FORM OF CAMP MUST OFTEN BE MODIFIED, DEPENDING UPON THE NATURE OF THE GROUND).



APPENDIX 2—TYPES OF FIELD INTRENCHMENTS.

See Field Fortifications.

APPENDIX 3.

FORMS OF COMPLETE FIELD ORDERS.

While the following forms are given for the convenience of officers in the field, and with a view of securing uniformity in the service, it must be remembered that no two military situations are the same. The sequence in paragraph 3 is not obligatory, the commander arranging the details according to his best judgment.

FOR AN ADVANCE.

Field Orders

No.—

[Reference to map used]

Troops

[Title]

[Place]

[Date and hour]

(a) Independent Cavalry:

[Commander]

[Troops]

(b) Advance Guard:

[Commander]

[Troops]

(c) Main Body—in order of march:

[Commander]¹

(d) Right (left) Flank Guard:

[Commander]

[Troops]

(e) Signal Troops:

[Commander]

[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander]

3. (a) [Instructions for independent cavalry—place and time of departure, roads or country to be covered, special mission]

(b) [Instructions for advance guard—place and time of departure, or distance at which it is to precede the main body, route, special mission]

(c) [Instructions for main body—distance at which it is to follow the advance guard, or place and time of departure]

(d) [Instructions for flank guard—place and time of departure, route, special mission]

(e) [Instructions for signal troops—lines of information to be established, special mission]

(x) [Instructions for outpost—when relieved, subsequent duties]

4. [Instructions for field train—escort, distance in rear of column, or destination when different from that of main body, if disposition not previously covered in "Orders"]

[Instructions for sanitary, ammunition, supply and engineer trains when necessary]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

FOR ADVANCE GUARDS.

Field Orders

No.—

[Reference to map used]

Troops

[Title]

[Place]

[Date and hour]

(a) Advance Cavalry:

[Commander]

[Troops]

(b) Support:

[Commander]

[Troops]

(c) Reserve—in order of march:

[Troops]

(d) Right (left) Flank Guard:

[Commander]

[Troops]

1. [Information of enemy and of our supporting troops]

2. [Plan of commander]

3. (a) [Instructions for advance cavalry—place and time of departure, roads or country to be covered, special mission]

(b) [Instructions for support—place and time of departure, route, special mission]

(c) [Instructions for reserve—distance at which it is to follow support]

(d) [Instructions for flank guard—place and time of departure, route, special mission]

4. [Instructions for field train—generally to join train of column if not previously covered in orders]

5. [Place of commander, or where messages may be sent, location of lines of information]

[Authentication]

[How and to whom issued]

¹ If a commander is designated for the main body, his name is inserted here.

A HALT FOR THE NIGHT—CAMP WITH OUTPOST.**Field Orders**

No.—

[Title]

[Place]

[Reference to map used]

[Date and hour]

1. [Information of enemy and of our supporting troops, including independent cavalry]

2. [Plan of commander—to encamp or bivouac]

3. (a) [Designation of commander and troops of outposts,* general line to be held, special reconnaissance, connection with other outposts, if any]

(b) [Instructions for troops not detailed for outpost duty—location of camp, designation of camp commander,³ observation of flanks and rear when necessary, lines of information, conduct in case of attack]4. [Instructions for field train—generally to join troops, though, if near enemy, field train of outpost troops may be held in rear]⁴

[Instructions for sanitary, ammunition, supply, and engineer trains, when necessary]

5. [Place of commander or where messages may be sent]

[Authentication]

[How and to whom issued]

FOR OUTPOSTS.**Field Orders**

No.—

[Title]

[Place]

[References to map used]

[Date and hour]

Troops

1. [Information of enemy and of our supporting troops]

2. [Plan of commander—to establish outpost, approximate line of resistance]

(a) Advance Cavalry:

[Commander]

[Troops]

3. (a) [Instructions for advance cavalry—contact with enemy, roads or country to be specially watched, special mission]

(b) Supports:⁵

No. 1. [Commander]

[Troops]

(b) [Instructions for supports—positions they are to occupy, and sections of line of resistance which they are to hold, intrenching, etc.]

No. 2. [Commander]

[Troops]

(c) [Instructions for detached post—position to be occupied, duties, amount of resistance]

No. 3. [Commander]

[Troops]

(d) [Instructions for reserve—location, observation of flanks, conduct in case of attack, duties of special troops]

(c) Detached Post:

[Commander]

[Troops]

4. [Instruction for field train if necessary]

(d) Reserve:

[Commander]

[Troops]

5. [Place of commander or where messages may be sent, location of lines of information]

[Authentication]

[How and to whom issued]⁶

It is sometimes necessary to issue two outpost orders; the first as above, containing general instructions; the second, issued after an inspection of the line, and containing more definite instructions or involving changes.

* Where the advance guard is large the order may direct the advance guard commander to establish the outpost.

³ Omitted when the chief exercises immediate command of the camp.

⁴ May be provided for in "order" issued subsequently.

⁵ Numbered from the right.

⁶ For small outposts it may be more convenient to write this order without a marginal distribution of troops.

FOR POSITIONS IN READINESS.

Field Orders

No.—

[Title]

[Place]

[Reference to map used]

[Date and hour]

1. [Information of enemy and of our supporting troops]
 2. [Plan of commander—to take up a position in readiness at or near—]
 3. (a) [Instructions for cavalry—to reconnoiter in direction of enemy, special mission]
 - (b) [Instructions for artillery—position or place of assembly]
 - (c) [Instructions for infantry—position or place of assembly, points to be especially held, reconnaissance]
 - (d) [Instructions for engineers—position or place of assembly]
 - (e) [Instructions for signal troops—lines of information]
 4. [Instructions for field trains, sanitary, ammunition, supply and engineer trains if not previously covered in orders—generally to halt at designated localities in rear, ready to move in any direction]
 5. [Place of commander or where messages may be sent]
- [Authentication]
- [How and to whom issued]

FOR DEFENSIVE POSITIONS.

Field Orders

No.—

[Title]

[Place]

[Reference to map used]

[Date and hour]

1. [Information of enemy and of our supporting troops]
 2. [Plan of commander—to take up a defensive position at or along —, for the purpose of —]
 3. (a) [Instructions for artillery—position, target, intrenching, etc.]
 - (b) [Instructions for fighting line—division of front into sections and assignment of troops thereto, intrenching, etc.]
 - (c) [Instructions for reserve—troops and position]
 - (d) [Instructions for cavalry—usually to cover with its main force the more exposed flank, a detachment being sent to patrol the other reconnaissance]
 - (e) [Instructions for engineers—defensive work, clearing field of fire, preparation of obstacles, opening roads, etc.]
 - (f) [Instructions for signal troops—to establish lines of information]
 4. [Instructions for sanitary train—location of dressing stations and station for slightly wounded]
 - [Instructions for ammunition train—location of ammunition distributing stations]
 - [Instructions for field and supply trains, if not previously covered in orders]
 5. [Place of commander or where messages may be sent]
- [Authentication]
- [How and to whom issued]

FOR AN ATTACK.

Field Orders

No.—

[Title]

[Place]

[Reference to map used]

[Date and hour]

1. [Information of enemy and of our supporting troops]
2. [Plan of commander—indicating the general plan of attack, usually to envelop a flank]
3. (a) [Instructions for artillery—position, first target, generally hostile artillery]

(b) [Instructions for holding attack¹—commander, troops, direction and objective]

(c) [Instructions for main attack—commander, troops, direction and objective]

(d) [Instructions for reserve—commander, troops, position]

(e) [Instructions for cavalry—generally to operate on one or both flanks, or to execute some special mission]

(f) [Instructions for engineers—any special mission]

(g) [Instructions for signal troops—to establish lines of information between the commander and the main and secondary attacks, artillery, reserves, etc.]

4. [Instructions for sanitary train—location of dressing stations and stations for slightly wounded when practicable]

[Instructions for ammunition train—location of ammunition distributing stations]

[Instructions for field and supply trains, if not previously covered in orders]

5. [Place of commander or where messages may be sent]

[How and to whom issued]

[Authentication]

Note: In war it is not always possible to issue a complete attack order like the above, disposing of an entire command. In unexpected encounters, for instance, orders must be given as the situation develops.

| Field orders | FOR A RETREAT. | [Title] |
|----------------------------------|--|------------------|
| No.— | | [Place] |
| [Reference to map used] | | [Date and hour] |
| Troops | 1. [Information of enemy and of our supporting troops] | |
| | 2. [Plan of commander—to retire in direction of —] | |
| (a) Leading Troops: | 3. (a) [Instructions for leading troops—place and time of departure, route, special mission] | |
| [Commander] | (b) Instructions for main body—place and time of departure, route] | |
| (b) Main Body—in order of march: | (c) [Instructions for rear guard—distance from the main body or place and time of departure, special mission] | |
| [Troops] | (d) [Instructions for flank guard—place and time of departure, special mission] | |
| (c) Rear Guard: | (e) [Instructions for signal troops—lines of information] | |
| [Commander] | (x) [Instructions for outposts—when relieved, subsequent duties—usually forming the rear guard] | |
| [Troops] | 4. [Instructions for field and divisional trains—place and time of departure, route, escort; these trains are generally some distance ahead of the column] | |
| (d) Right (left) Flank Guard: | 5. [Place of commander or where messages may be sent] | |
| [Commander] | | |
| [Troops] | | |
| (e) Signal Troops: | | |
| [Commander] | | |
| [Troops] | | |
| [How and to whom issued] | | [Authentication] |

¹ The term "holding attack" as used in this form is for convenience only; it is never used in actual orders, as the vigor of an attack might be lessened if the troops knew it was "holding" only.

FOR REAR GUARDS.

- Field orders
No.— [Title]
[Reference to map used] [Place]
Troops [Date and hour]
- (a) Reserve—in order of march:
 1. [Information of enemy and of our supporting troops]
 2. [Plan of commander—mission of rear guard]
 - (b) Support:
 3. (a) [Instructions for reserve—place and time of departure, or approximate distance from main body, reconnaissance]
 - (b) [Instructions for support—place and time of departure or distance from reserve, any special reconnaissance]
 - (c) Rear Cavalry:
 - (c) [Instructions for rear cavalry—place and time of departure, road or country to be covered, special mission]
 - (d) Right (left) Flank Guard:
 - (d) [Instructions for flank guard—place and time of departure, route, special mission]
 4. [Instructions for field train when necessary—usually to join train of main body]
 5. [Place of commander or where messages may be sent—location of lines of information]
- [How and to whom issued] [Authentication]

MARCH TABLE.

In movements of large forces on several roads, it is sometimes desirable to prescribe the daily marches of the various columns for two or more days. In such cases the order may often be simplified by appending or incorporating a march table usually in the following form, each column providing its own security.

MARCH TABLE.

—Army, from— [date], to— [date].
[Reference to map used.]

| Date. | — Division. | — Division. | Army Headquarters. |
|-------|--|--|--------------------------------------|
| | Location of main body or of advance guard at end of each day's march, and line of march, if necessary. | Location of main body or of advance guard at end of each day's march, and line of march, if necessary. | Location at end of each day's march. |

APPENDIX 4.

FIELD MAPS AND SKETCHES.

The following abbreviations and signs are authorized for use on field maps and sketches. For more elaborate map work the authorized conventional signs as given in the manual of "Conventional Signs, United States Army Maps," are used.

Abbreviations other than those given should not be used.

ABBREVIATIONS.

| | | | | | |
|-------|------------------|----------|----------------------|-------|--------------|
| A. | Arroyo. | G. S. | General Store. | Pt. | Point. |
| abut. | Abutment. | gir. | Girder. | q. p. | Queen-post. |
| Ar. | Arch. | G. M. | Gristmill. | R. | River. |
| b. | Brick. | i. | Iron. | R. H. | Roundhouse. |
| B. S. | Blacksmith Shop. | I. | Island. | R. R. | Railroad. |
| bot. | Bottom. | Jc. | Junction. | S. | South. |
| Br. | Branch. | k. p. | King-post. | s. | Steel. |
| br. | Bridge. | L. | Lake. | S. H. | Schoolhouse. |
| C. | Cape. | Lat. | Latitude. | S. M. | Sawmill. |
| cern. | Cemetery. | Ldg. | Landing. | Sta. | Station. |
| con. | Concrete. | L. S. S. | Life-Saving Station. | str. | Stone. |
| cov. | Covered. | L. H. | Lighthouse. | str. | Stream. |
| Cr. | Creek. | Long. | Longitude. | T. G. | Tollgate. |
| d. | Deep. | Mt. | Mountain. | Tres. | Trestle. |
| cul. | Culvert. | Mts. | Mountains. | tr. | Truss. |
| D. S. | Drug Store | N. | North. | W. T. | Water Tank. |
| E. | East. | n. f. | Not fordable. | W. W. | Water Works. |
| Est. | Estuary. | P. | Pier. | W. | West. |
| f. | Fordable. | pk. | Plank. | w. | Wood. |
| Ft. | Fort. | P. O. | Post Office. | wd. | Wide. |

SIGNS—FIELD MAPS AND SKETCHES.

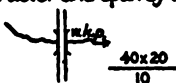
| | | |
|----------------|-------------------------|--|
| Telegraph Line | Symbol (modified below) | |
| | Along improved road | |
| | Along unimproved road | |
| | Along trail | |
| Railroads | Single track | |
| | Double track | |
| | Trolley | |
| Roads | Improved | |
| | Unimproved | |
| | Trail | |
| Fences | barbed wire | |
| | smooth wire | |
| | wood | |
| | stone | |
| | hedge | |

Bridges



Indicate character and span by abbreviations.

Example



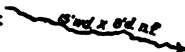
Meaning wooden king post bridge, 40 feet long, 20 feet wide, and 10 feet above the water

Streams



Indicate character by abbreviations.

Example:



Meaning a stream 5 feet wide, 8 feet deep, and not fordable.

House -

Church &

School house = S.H.

Woods



Orchards



Cultivated Land



If boundary lines are fences they are indicated as such.

Brush, crops or grass, important as cover or forage



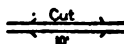
Cemetery



Trees, isolated



Cut and Fill -



cut 10 feet deep



fill 10 feet high

APPENDIX 6.

EXTRACTS FROM INTERNATIONAL CONVENTIONS AND CONFERENCES.

[See rules for Land Warfare, United States Army, for full text of conventions and conferences affecting the conduct of war, and for other rules adopted for the government of the Army of the United States in time of war. The Rules of Land Warfare give the form of certificate to be carried and the garb to be worn in certain instances by civilians authorized to accompany the Army in the theater of operations and which are necessary to the protection of the individual in the event of his capture by the enemy.]

A.

EXTRACTS FROM CONVENTIONS ADOPTED AT THE SECOND INTERNATIONAL PEACE CONFERENCE HELD AT THE HAGUE, 1907.

Each of these conventions stipulates—

(a) The provisions of the present conventions do not apply except to the contracting powers, and then only if all the belligerents are parties to the convention.

(b) Nonsignatory powers may adhere to the present convention.

CHAPTER II.—PRISONERS OF WAR.

Art. IV. Prisoners of war are in the power of the hostile Government, but not of the individuals or corps who capture them.

They must be humanely treated.

All their personal belongings, except arms, horses, and military papers, remain their property.

Art. V. Prisoners of war may be interned in a town, fortress, camp, or other place, and bound not to go beyond certain fixed limits; but they can not be confined except as an indispensable measure of safety and only while the circumstances which necessitate the measure continue to exist.

Art. VI. The State may utilize the labor of prisoners of war according to their rank and aptitude, officers excepted. The tasks shall not be excessive and shall have no connection with the operations of the war.

Prisoners may be authorized to work for the public service, for private persons, or on their own account.

Work done for the State is paid at the rates in force for work of a similar kind done by soldiers of the national army, or, if there are none in force, at a rate according to the work executed.

When the work is for other branches of the public service or for private persons the conditions are settled in agreement with the military authorities.

The wages of the prisoners shall go toward improving their position, and the balance shall be paid them on their release, after deducting the cost of their maintenance.

Art. VII. The Government into whose hands prisoners of war have fallen is charged with their maintenance.

In the absence of a special agreement between the belligerents, prisoners of war shall be treated as regards board, lodging, and clothing on the same footing as the troops of the Government who captured them.

Art. VIII. Prisoners of war shall be subject to the laws, regulations, and orders in force in the army of the State in whose power they are. Any act of insubordination justifies the adoption toward them of such measures of severity as may be considered necessary.

Escaped prisoners who are retaken before being able to rejoin their own army or before leaving the territory occupied by the army which captured them are liable to disciplinary punishment.

Prisoners who, after succeeding in escaping, are again taken prisoners, are not liable to any punishment on account of the previous flight.

Art. IX. Every prisoner of war is bound to give, if he is questioned on the subject, his true name and rank, and if he infringes this rule, he is liable to have the advantages given to prisoners of his class curtailed.

Art. X. Prisoners of war may be set at liberty on parole if the laws of their country allow, and, in such cases, they are bound, on their personal honor, scrupulously to fulfill, both toward their own Government and the Government by whom they were made prisoners, the engagements they have contracted.

In such cases their own Government is bound neither to require of nor accept from them any service incompatible with the parole given.

Art. XI. A prisoner of war can not be compelled to accept his liberty on parole; similarly the hostile Government is not obliged to accede to the request of the prisoner to be set at liberty on parole.

Art. XII. Prisoners of war liberated on parole and recaptured bearing arms against the Government to whom they had pledged their honor, or against the allies of that Government, forfeit their right to be treated as prisoners of war, and can be brought before the courts.

Art. XIII. Individuals who follow an army without directly belonging to it,

such as newspaper correspondents and reporters, sutlers and contractors, who fall into the enemy's hands and whom the latter thinks expedient to detain, are entitled to be treated as prisoners of war, provided they are in possession of a certificate from the military authorities of the army which they were accompanying.

Art. XIV. An inquiry office for prisoners of war is instituted on the commencement of hostilities in each of the belligerent States, and, when necessary, in neutral countries which have received belligerents in their territory. It is the function of this office to reply to all inquiries about the prisoners. It receives from the various services concerned full information respecting internments and transfers, releases on parole, exchanges, escapes, admissions into hospitals, deaths, as well as other information necessary to enable it to make out and keep up to date an individual return for each prisoner of war. The office must state in this return the regimental number, name and surname, age, place of origin, rank, unit, wounds, date and place of capture, internment, wounding, and death, as well as any observations of a special character. The individual return shall be sent to the Government of the other belligerent after the conclusion of peace.

It is likewise the function of the inquiry office to receive and collect all object of personal use, valuables, letters, etc., found on the field of battle or left by prisoners who have been released on parole, or exchanged, or who have escaped, or died in hospitals or ambulances, and to forward them to those concerned.

Art. XV. Relief societies for prisoners of war, which are properly constituted in accordance with the laws of their country and with the object of serving as the channel for charitable effort, shall receive from the belligerents, for themselves and their duly accredited agents, every facility for the efficient performance of their humane task within the bounds imposed by military necessities and administrative regulations. Agents of these societies may be admitted to the places of internment for the purpose of distributing relief, as also to the halting places of repatriated prisoners, if furnished with a personal permit by the military authorities, and on giving an undertaking in writing to comply with all measures of order and police which the latter may issue.

Art. XVI. Inquiry offices enjoy the privilege of free postage. Letters, money orders, and valuables, as well as parcels by post, intended for prisoners of war, or dispatched by them, shall be exempt from all postal duties in the countries of origin and destination, as well as in the countries they pass through.

Presents and relief in kind for prisoners of war shall be admitted free of all import or other duties, as well as of payments for carriage by the State railways.

Art. XVII. Officers taken prisoners shall receive the same rate of pay as officers of corresponding rank in the country where they are detained, the amount to be ultimately refunded by their own Government.

Art. XVIII. Prisoners of war shall enjoy complete liberty in the exercise of their religion, including attendance at the services of whatever church they may belong to, on the sole condition that they comply with the measures of order and police issued by the military authorities.

Art. XIX. The wills of prisoners of war are received or drawn up in the same way as for soldiers of the national army.

The same rule shall be observed regarding death certificates as well as for the burial of prisoners of war, due regard being paid to their grade and rank.

Art. XX. After the conclusion of peace, the repatriation of prisoners of war shall be carried out as quickly as possible.

CHAPTER III.—THE SICK AND WOUNDED.

Art. XXI. The obligations of belligerents with regard to the sick and wounded are governed by the Geneva Convention.

SECTION II.—HOSTILITIES.

CHAPTER I.—MEANS OF INJURING THE ENEMY, SIEGES, AND BOMBARDMENTS.

Art. XXII. The right of belligerents to adopt means of injuring the enemy is not unlimited.

Art. XXIII. In addition to the prohibitions provided by special conventions, it is especially forbidden—

- (a) To employ poison or poisoned weapons;
- (b) To kill or wound treacherously individuals belonging to the hostile nation or army;
- (c) To kill or wound an enemy who, having laid down his arms, or having no longer means of defense, has surrendered at discretion;
- (d) To declare that no quarter will be given;
- (e) To employ arms, projectiles, or material calculated to cause unnecessary suffering;
- (f) To make improper use of a flag of truce, of the national flag, or of the military insignia and uniform of the enemy, as well as the distinctive badges of the Geneva Convention;
- (g) To destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war;
- (h) To declare abolished, suspended, or inadmissible in a court of law the rights and actions of the nationals of the hostile party.

A belligerent is likewise forbidden to compel the nationals of the hostile party to take part in the operations of war directed against their own country, even if they were in the belligerent's service before the commencement of the war.

Art. XXIV. Ruses of war and the employment of measures necessary for obtaining information about the enemy and the country are considered permissible.

Art. XXV. The attack or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited.

Art. XXVI. The officer in command of an attacking force must, before commencing a bombardment, except in cases of assault, do all in his power to warn the authorities.

Art. XXVII. In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided that they are not being used at the time for military purposes.

It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand.

Art. XXVIII. The pillage of a town or place, even when taken by assault, is prohibited.

CHAPTER II.—SPIES.

Art. XXIX. A person can only be considered a spy when, acting clandestinely or on false pretences, he obtains or endeavors to obtain information in the zone of operations of a belligerent, with the intention of communicating it to the hostile party.

Thus, soldiers not wearing a disguise who have penetrated into the zone of operations of the hostile army, for the purpose of obtaining information,

are not considered spies. Similarly, the following are not considered spies: Soldiers and civilians, carrying out their mission openly, intrusted with the delivery of despatches intended either for their own army or for the enemy's army. To this class belong likewise persons sent in balloons for the purpose of carrying despatches and, generally, of maintaining communications between the different parts of an army or a territory.

Art. XXX. A spy taken in the act shall not be punished without previous trial.

Art. XXXI. A spy who, after rejoining the army to which he belongs, is subsequently captured by the enemy, is treated as a prisoner of war, and incurs no responsibility for his previous acts of espionage.

CHAPTER III.—FLAGS OF TRUCE.

Art. XXXII. A person is regarded as bearing a flag of truce who has been authorized by one of the belligerents to enter into communication with the other, and who advances bearing a white flag. He has a right to inviolability, as well as the trumpeter, bugler or drummer, the flag-bearer and interpreter who may accompany him.

Art. XXXIII. The commander to whom a flag of truce is sent is not in all cases obliged to receive it.

He may take all the necessary steps to prevent the envoy taking advantage of his mission to obtain information.

In case of abuse, he has the right to detain the envoy temporarily.

Art. XXXIV. The envoy loses his right of inviolability if it is proved in a clear and incontestable manner that he has taken advantage of his privileged position to provoke or commit an act of treachery.

CHAPTER IV.—CAPITULATIONS.

Art. XXXV. Capitulations agreed upon between the contracting parties must take into account the rules of military honor.

Once settled, they must be scrupulously observed by both parties.

CHAPTER V.—ARMISTICES.

Art. XXXVI. An armistice suspends military operations by mutual agreement between the belligerent parties. If its duration is not defined, the belligerent parties may resume operations at any time, provided always that the enemy is warned within the time agreed upon, in accordance with the terms of the armistice.

Art. XXXVII. An armistice may be general or local. The first suspends the military operations of the belligerent States everywhere; the second only between certain fractions of the belligerent armies and within a fixed radius.

Art. XXXVIII. An armistice must be notified officially and in good time to the competent authorities and to the troops. Hostilities are suspended immediately after the notification, or on the date fixed.

Art. XXXIX. It rests with the contracting parties to settle, in the terms of the armistice, what communications may be held in the theater of war with the inhabitants and between the inhabitants of one belligerent State and those of the other.

Art. XL. Any serious violation of the armistice by one of the parties gives the other party the right of denouncing it, and even, in cases of urgency, of recommencing hostilities immediately.

Art. XLI. A violation of the terms of the armistice by private persons acting on their own initiative only entitles the injured party to demand the punishment of the offenders or, if necessary, compensation for the losses sustained.

SECTION III.—MILITARY AUTHORITY OVER THE TERRITORY OF THE HOSTILE STATE.

Art. XLII. Territory is considered occupied when it is actually placed under the authority of the hostile army.

The occupation extends only to the territory where such authority has been established and can be exercised.

Art. XLIII. The authority of the legitimate power having in fact passed into the hands of the occupant, the latter shall take all the measures in his power to restore, and insure, as far as possible, public order and safety, while respecting, unless absolutely prevented, the laws in force in the country.

Art. XLIV. A belligerent is forbidden to force the inhabitants of territory occupied by it to furnish information about the army of the other belligerent, or about its means of defense.

Art. XLV. It is forbidden to compel the inhabitants of occupied territory to swear allegiance to the hostile power.

Art. XLVI. Family honor and rights, the lives of persons, and private property, as well as religious convictions and practice, must be respected.

Private property can not be confiscated.

Art. XLVII. Pillage is formally forbidden.

Art. XLVIII. If, in the territory occupied, the occupant collects the taxes, dues, and tolls imposed for the benefit of the State, he shall do so, as far as is possible, in accordance with the rules of assessment and incidence in force, and shall in consequence be bound to defray the expenses of the administration of the occupied territory to the same extent as the legitimate Government was so bound.

Art. XLIX. If, in addition to the taxes mentioned in the above article, the occupant levies other money contributions in the occupied territory, this shall only be for the needs of the army or of the administration of the territory in question.

Art. L. No general penalty, pecuniary or otherwise, shall be inflicted upon the population on account of the acts of individuals for which they can not be regarded as jointly and severally responsible.

Art. LI. No contribution shall be collected except under a written order, and on the responsibility of a commander-in-chief.

The collection of the said contribution shall only be effected as far as possible in accordance with the rules of assessment and incidence of the taxes in force.

For every contribution a receipt shall be given to the contributors.

Art. LII. Requisitions in kind and services shall not be demanded from municipalities or inhabitants except for the needs of the army of occupation. They shall be in proportion to the resources of the country, and of such a nature as not to involve the inhabitants in the obligation of taking part in military operations against their own country.

Such requisitions and services shall only be demanded on the authority of the commander in the locality occupied.

Contributions in kind shall as far as possible be paid for in cash; if not, a receipt shall be given and the payment of the amount due shall be made as soon as possible.

Art. LIII. An army of occupation can only take possession of cash, funds, and realizable securities which are strictly the property of the State, depots of arms, means of transport, stores and supplies, and, generally, all movable property belonging to the State which may be used for military operations. All appliances, whether on land, at sea, or in the air, adapted for the transmission of news, or for the transport of persons or things, exclusive of cases

governed by naval law, depots of arms, and, generally, all kinds of ammunition of war, may be seized, even if they belong to private individuals, but must be restored and compensation fixed when peace is made.

Art. LIV. Submarine cables connecting an occupied territory with a neutral territory shall not be seized or destroyed except in the case of absolute necessity. They must likewise be restored and compensation fixed when peace is made.

Art. LV. The occupying State shall be regarded only as administrator and usufructuary of public buildings, real estate, forests, and agricultural estates belonging to the hostile State, and situated in the occupied country. It must safeguard the capital of these properties and administer them in accordance with the rules of usufruct.

Art. LVI. The property of municipalities, that of institutions dedicated to religion, charity and education, the arts and sciences, even when State property, shall be treated as private property.

All seizure of, destruction or willful damage done to institutions of this character, historic monuments, works of art and science, is forbidden and should be made the subject of legal proceedings.

CONVENTION RESPECTING THE RIGHTS AND DUTIES OF NEUTRAL POWERS AND PERSONS IN WAR ON LAND.

* * * * *

[Translation.]

CHAPTER I.—THE RIGHTS AND DUTIES OF NEUTRAL POWERS.

Article I. The territory of neutral powers is inviolable.

Art. II. Belligerents are forbidden to move troops or convoys of either munitions of war or supplies across the territory of a neutral power.

Art. III. Belligerents are likewise forbidden to:

(a) Erect on the territory of a neutral power a wireless-telegraphy station or other apparatus for the purpose of communicating with belligerent forces on land or sea;

(b) Use any installation of this kind established by them before the war on the territory of a neutral power for purely military purposes, and which has not been opened for the service of public messages.

Art. IV. Corps of combatants can not be formed nor recruiting agencies opened on the territory of a neutral power to assist the belligerents.

Art. V. A neutral power must not allow any of the acts referred to in Articles II to IV to occur on its territory.

It is not called upon to punish acts in violation of its neutrality unless the said acts have been committed on its own territory.

Art. VI. The responsibility of a neutral power is not engaged by the fact of persons crossing the frontier separately to offer their services to one of the belligerents.

Art. VII. A neutral power is not called upon to prevent the export or transport, on behalf of one or other of the belligerents, of arms, munitions of war, or, in general, of anything which can be of use to an army or a fleet.

Art. VIII. A neutral power is not called upon to forbid or restrict the use on behalf of the belligerents of telegraph or telephone cables or of wireless telegraphy apparatus belonging to it or to companies or private individuals.

Art. IX. Every measure of restriction or prohibition taken by a neutral power in regard to the matters referred to in Articles VII and VIII must be impartially applied by it to both belligerents.

A neutral power must see to the same obligation being observed by companies or private individuals owning telegraph or telephone cables or wireless telegraphy apparatus.

Art. X. The fact of a neutral power resisting, even by force, attempts to violate its neutrality can not be regarded as a hostile act.

CHAPTER II.—BELLIGERENTS INTERNED AND WOUNDED TENDED IN NEUTRAL TERRITORY.

Art. XI. A neutral power which receives on its territory troops belonging to the belligerent armies shall intern them, as far as possible, at a distance from the theater of war.

It may keep them in camps and even confine them in fortresses or in places set apart for this purpose.

It shall decide whether officers can be left at liberty on giving their parole not to leave the neutral territory without permission.

Art. XII. In the absence of a special convention to the contrary, the neutral power shall supply the interned with food, clothing, and relief required by humanity.

At the conclusion of peace the expenses caused by the internment shall be made good.

Art. XIII. A neutral power which receives escaped prisoners of war shall leave them at liberty. If it allows them to remain in its territory it may assign them a place of residence.

The same rule applies to prisoners of war brought by troops taking refuge in the territory of a neutral power.

Art. XIV. A neutral power may authorize the passage into its territory of the sick and wounded belonging to the belligerent armies, on condition that the trains bringing them shall carry neither personnel nor war material. In such a case, the neutral power is bound to take whatever measures of safety and control are necessary for the purpose.

The sick or wounded brought under these conditions into neutral territory by one of the belligerents, and belonging to the hostile party, must be guarded by the neutral power so as to insure their not taking part again in the military operations. The same duty shall devolve on the neutral State with regard to wounded or sick of the other army who may be committed to its care.

Art. XV. The Geneva Convention applies to sick and wounded interned in neutral territory.

CHAPTER III.—NEUTRAL PERSONS.

Art. XVI. The nationals of a State which is not taking part in the war are considered as neutrals.

Art. XVII. A neutral can not avail himself of his neutrality:

(a) If he commits hostile acts against a belligerent;

(b) If he commits acts in favor of a belligerent, particularly if he voluntarily enlists in the ranks of the armed force of one of the parties.

In such a case, the neutral shall not be more severely treated by the belligerent as against whom he has abandoned his neutrality than a national of the other belligerent State could be for the same act.

Art. XVIII. The following acts shall not be considered as committed in favor of one belligerent in the sense of Article XVII, letter (b):

(a) Supplies furnished or loans made to one of the belligerents, provided that the person who furnishes the supplies or who makes the loans lives neither in the territory of the other party nor in the territory occupied by him, and that the supplies do not come from these territories;

(b) Services rendered in matters of police or civil administration.

CHAPTER IV.—RAILWAY MATERIAL.

Art. XIX. Railway material coming from the territory of neutral powers, whether it be the property of the said powers or of companies or private persons, and recognizable as such, shall not be requisitioned or utilized by a belligerent except where and to the extent that it is absolutely necessary. It shall be sent back as soon as possible to the country of origin.

A neutral power may likewise, in case of necessity, retain and utilize to an equal extent material coming from the territory of the belligerent power.

Compensation shall be paid by one party or the other in proportion to the material used, and to the period of usage.

* * * * *

CONVENTION RELATIVE TO THE LAYING OF AUTOMATIC SUBMARINE CONTACT MINES.

* * * * *

Article I. It is forbidden:

1. To lay unanchored automatic contact mines, except when they are so constructed as to become harmless one hour at most after the person who laid them ceases to control them;
2. To lay anchored automatic contact mines which do not become harmless as soon as they have broken loose from their moorings;
3. To use torpedoes which do not become harmless when they have missed their mark.

Art. II. It is forbidden to lay automatic contact mines off the coast and ports of the enemy, with the sole object of intercepting commercial shipping.

Art. III. When anchored automatic contact mines are employed, every possible precaution must be taken for the security of peaceful shipping.

The belligerents undertake to do their utmost to render these mines harmless within a limited time, and, should they cease to be under surveillance, to notify the danger zones as soon as military exigencies permit, by a notice addressed to shipowners, which must also be communicated to the Governments through the diplomatic channel.

Art. IV. Neutral powers which lay automatic contact mines off their coasts must observe the same rules and take the same precautions as are imposed on belligerents.

The neutral power must inform shipowners, by a notice issued in advance, where automatic contact mines have been laid. This notice must be communicated at once to the Governments through the diplomatic channel.

Art. V. At the close of the war, the contracting powers undertake to do their utmost to remove the mines which they had laid, each power removing its own mines.

As regards anchored automatic contact mines laid by one of the belligerents off the coast of the other, their position must be notified to the other party by the power which laid them, and each power must proceed with the least possible delay to remove the mines in its own waters.

Art. VI. The contracting powers which do not at present own perfected mines of the pattern contemplated in the present convention, and which, consequently, could not at present carry out the rules laid down in Articles I and III, undertake to convert the matériel of their mines as soon as possible, so as to bring it into conformity with the foregoing requirements.

* * * * *

**DECLARATION PROHIBITING THE DISCHARGE OF PROJECTILES AND EXPLOSIVES
FROM BALLOONS.**

* * * * *

The contracting powers agree to prohibit, for a period extending to the close of the third peace conference, the discharge of projectiles and explosives from balloons or by other new methods of a similar nature.

The present declaration is only binding on the contracting powers in case of war between two or more of them.

It shall cease to be binding from the time when, in a war between the contracting powers, one of the belligerents is joined by a noncontracting power.

* * * * *

**TABLE OF RATIFICATIONS AND ADHESIONS TO SUCH OF THE CONVENTIONS
AS ARE MENTIONED IN THE TEXT.**

[A convention may be ratified by a signatory power or adhered to by a nonsignatory power. In the table the following nomenclature is used: R= Ratified. RR= Ratified with reservations. A=Adhered to.]

| | Convention concerning the laws and customs of war on land. | Convention concerning the rights and duties of neutral powers and persons in case of war on land. | Convention relating to the laying of automatic sub- marine contact mines. | Declaration relative to prohibiting the throwing down of projectiles and explosives from balloons, aeroplanes, etc. |
|----------------------|--|---|--|--|
| Germany..... | RR | R | RR | ..... |
| United States..... | R | R | R | R |
| Austria-Hungary..... | RR | R | R | ..... |
| Belgium..... | R | R | R | R |
| Bolivia..... | R | R | ..... | R |
| China..... | ..... | A | ..... | R |
| Cuba..... | R | R | ..... | ..... |
| Denmark..... | R | R | R | ..... |
| France..... | R | R | RR | ..... |
| Great Britain..... | R | ..... | RR | R |
| Guatemala..... | R | R | R | ..... |
| Haiti..... | R | R | R | R |
| Japan..... | R | R | R | ..... |
| Luxemburg..... | R | R | R | R |
| Mexico..... | R | R | R | ..... |
| Netherlands..... | R | R | R | R |
| Nicaragua..... | A | A | A | A |
| Norway..... | R | R | R | R |
| Panama..... | R | R | R | R |
| Portugal..... | R | R | ..... | R |
| Roumania..... | R | R | R | ..... |
| Russia..... | RR | R | ..... | ..... |
| Salvador..... | R | R | R | R |
| Siam..... | R | R | RR | R |
| Sweden..... | R | R | ..... | ..... |
| Switzerland..... | R | R | R | R |

B.

INTERNATIONAL RED CROSS CONVENTION.

[Revision of the Geneva Convention.]

The International Convention for the Amelioration of the Condition of the Wounded and Sick in Armies in the Field, Geneva, 1906, is as follows:

CHAPTER I.—THE WOUNDED AND SICK.

Article 1. Officers and soldiers, and other persons officially attached to armies, shall be respected and taken care of when wounded or sick, by the belligerent in whose power they may be, without distinction of nationality.

Nevertheless, a belligerent who is compelled to abandon sick or wounded to the enemy shall, as far as military exigencies permit, leave with them a portion of his medical personnel and material to contribute to the care of them.

Art. 2. Except as regards the treatment to be provided for them in virtue of the preceding article, the wounded and sick of an army who fall into the hands of the enemy are prisoners of war, and the general provisions of international law concerning prisoners are applicable to them.

Belligerents are, however, free to arrange with one another such exceptions and mitigations with reference to sick and wounded prisoners as they may judge expedient; in particular they will be at liberty to agree—

To restore to one another the wounded left on the field after a battle;

To repatriate any wounded and sick whom they do not wish to retain as prisoners, after rendering them fit for removal or after recovery;

To hand over to a neutral State, with the latter's consent, the enemy's wounded and sick to be interned by the neutral State until the end of hostilities.

Art. 3. After each engagement the commander in possession of the field shall take measures to search for the wounded, and to insure protection against pillage and maltreatment both for the wounded and for the dead.

He shall arrange that a careful examination of the bodies is made before the dead are buried or cremated.

Art. 4. As early as possible each belligerent shall send to the authorities of the country or army to which they belong the military identification marks or tokens found on the dead, and a nominal roll of the wounded or sick who have been collected by him.

The belligerents shall keep each other mutually informed of any internments and changes, as well as of admissions into hospital and deaths, among the wounded and sick in their hands. They shall collect all the articles of personal use, valuables, letters, etc., which are found on the field of battle or left by the wounded or sick who have died in the medical establishments or units, in order that such objects may be transmitted to the persons interested by the authorities of their own country.

Art. 5. The competent military authority may appeal to the charitable zeal of the inhabitants to collect and take care of, under his direction, the wounded or sick of armies, granting to those who respond to the appeal special protection and certain immunities.

CHAPTER II.—MEDICAL UNITS AND ESTABLISHMENTS.

Art. 6. Mobile medical units (that is to say, those which are intended to accompany armies into the field) and the fixed establishments of the medical service shall be respected and protected by the belligerents.

Art. 7. The protection to which medical units and establishments are entitled ceases if they are made use of to commit acts harmful to the enemy.

Art. 8. The following facts are not considered to be of a nature to deprive a medical unit or establishment of the protection guaranteed by article 6—

1. That the personnel of the unit or of the establishment is armed, and that it uses its arms for its own defense or for that of the sick and wounded under its charge.

2. That in default of armed orderlies the unit or establishment is guarded by a piquet or by sentinels furnished with an authority in due form.

3. That weapons and cartridges taken from the wounded and not yet handed over to the proper department are found in the unit or establishment.

CHAPTER III.—PERSONNEL.

Art. 9. The personnel engaged exclusively in the collection, transport, and treatment of the wounded and the sick, as well as in the administration of medical units and establishments, and the chaplains attached to armies, shall be respected and protected under all circumstances. If they fall into the hands of the enemy they shall not be treated as prisoners of war.

These provisions apply to the guard of medical units and establishments under the circumstances indicated in article 8 (2).

Art. 10. The personnel of voluntary aid societies, duly recognized and authorized by their Government, who may be employed in the medical units and establishment of armies, is placed on the same footing as the personnel referred to in the preceding article, provided always that the first-mentioned personnel shall be subject to military law and regulations.

Each State shall notify to the other, either in time of peace or at the commencement of or during the course of hostilities, but in every case before actually employing them, the names of the societies which it has authorized, under its responsibility, to render assistance to the regular medical service of its armies.

Art. 11. A recognized society of a neutral country can only afford the assistance of its medical personnel and units to a belligerent with the previous consent of its own Government and the authorization of the belligerent concerned.

A belligerent who accepts such assistance is bound to notify the fact to his adversary before making any use of it.

Art. 12. The persons designated in articles 9, 10, and 11, after they have fallen into the hands of the enemy, shall continue to carry on their duties under his direction.

When their assistance is no longer indispensable, they shall be sent back to their army or to their country at such time and by such route as may be compatible with military exigencies.

They shall then take with them such effects, instruments, arms, and horses as are their private property.

Art. 13. The enemy shall secure to the persons mentioned in article 9, while in his hands, the same allowances and the same pay as are granted to the persons holding the same rank in his own army.

CHAPTER IV.—MATERIAL.

Art. 14. If mobile medical units fall into the hands of the enemy they shall retain their material, including their teams, irrespectively of the means of transport and the drivers employed.

Nevertheless, the competent military authority shall be free to use the material for the treatment of the wounded and sick. It shall be restored under the conditions laid down for the medical personnel, and so far as possible at the same time.

Art. 15. The buildings and material of fixed establishments remain subject to the laws of war, but may not be diverted from their purpose so long as they are necessary for the wounded and the sick.

Nevertheless, the commanders of troops in the field may dispose of them, in case of urgent military necessity, provided they make previous arrangements for the welfare of the wounded and sick who are found there.

Art. 16. The material of voluntary aid societies which are admitted to the privileges of the convention under the conditions laid down therein is considered private property, and, as such, to be respected under all circumstances, saving only the right of requisition recognized for belligerents in accordance with the laws and customs of war.

CHAPTER V.—CONVOYS OF EVACUATION.

Art. 17. Convoys of evacuation shall be treated like mobile medical units, subject to the following special provisions—

1. A belligerent intercepting a convoy may break it up if military exigencies demand, provided he takes charge of the sick and wounded who are in it.

2. In this case, the obligation to send back the medical personnel, provided for in article 12, shall be extended to the whole of the military personnel detailed for the transport or the protection of the convoy, and furnished with an authority in due form to that effect.

The obligation to restore the medical material, provided for in article 14, shall apply to railway trains and boats used in internal navigation, which are especially arranged for evacuations, as well as to the material belonging to the medical service for fitting up ordinary vehicles, trains, and boats.

Military vehicles, other than those of the medical service, may be captured with their teams.

The civilian personnel and the various means of transport obtained by requisition, including railway material and boats used for convoy, shall be subject to the general rules of international law.

CHAPTER VI.—THE DISTINCTIVE EMBLEM.

Art. 18. As a compliment to Switzerland, the heraldic emblem of the red cross on a white ground, formed by reversing the Federal colors, is retained as the emblem and distinctive sign of the medical service of armies.

Art. 19. With the permission of the competent military authority this emblem shall be shown on the flags and armlets (brassards), as well as on all the material belonging to the medical service.

Art. 20. The personnel protected in pursuance of articles 9 (par. 1), 10, and 11 shall wear, fixed to the left arm, an armlet (brassard) with a red cross on a white ground delivered and stamped by the competent military authority, and accompanied by a certificate of identity in the case of persons who are attached to the medical service of armies, but who have not a military uniform.

Art. 21. The distinctive flag of the convention shall only be hoisted over those medical units and establishments which are entitled to be respected under the convention, and with the consent of the military authorities. It must be accompanied by the national flag of the belligerent to whom the unit or establishment belongs.

Nevertheless, medical units which have fallen into the hands of the enemy, so long as they are in that situation, shall not fly any other flag than that of the Red Cross.

Art. 22. The medical units belonging to neutral countries which may be authorized to afford their services under the conditions laid down in article 11 shall fly, along with the flag of the convention, the national flag of the belligerent to whose army they are attached.

The provisions of the second paragraph of the preceding article are applicable to them.

Art. 23. The emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" shall not be used, either in time of peace or in time of war, except to protect or to indicate the medical units and establishments and the personnel and material protected by the convention.

CHAPTER VII.—APPLICATION AND CARRYING OUT OF THE CONVENTION.

Art. 24. The provisions of the present convention are only binding upon the contracting powers in the case of war between two or more of them. These provisions shall cease to be binding from the moment when one of the belligerent powers is not a party to the convention.

Art. 25. The commanders in chief of belligerent armies shall arrange the details for carrying out the preceding articles, as well as for cases not provided for, in accordance with the instructions of their respective Governments and in conformity with the general principles of the present convention.

Art. 26. The signatory Governments will take the necessary measures to instruct their troops, especially the personnel protected, in the provisions of the present convention, and to bring them to the notice of the civil population.

CHAPTER VIII.—PREVENTION OF ABUSES AND INFRACTIONS.

Art. 27. The signatory Governments, in countries the legislation of which is not at present adequate for the purpose, undertake to adopt or to propose to their legislative bodies such measures as may be necessary to prevent at all times the employment of the emblem or the name Red Cross or Geneva Cross by private individuals or by societies other than those which are entitled to do so under the present convention, and in particular for commercial purposes as a trade-mark or trading mark.

The prohibition of the employment of the emblem or the names in question shall come into operation from the date fixed by each legislature, and at the latest five years after the present convention comes into force. From that date it shall no longer be lawful to adopt a trade-mark or trading-mark contrary to this prohibition.

Art. 28. The signatory Governments also undertake to adopt, or to propose to their legislative bodies, should their military law be insufficient for the purpose, the measures necessary for the repression in time of war of individual acts of pillage and maltreatment of the wounded and sick of armies, as well as for the punishment, as an unlawful employment of military insignia, or the improper use of the Red Cross flag and armlet (brassard) by officers and soldiers or private individuals not protected by the present convention.

They shall communicate to one another, through the Swiss Federal Council, the provisions relative to these measures of repression at the latest within five years from the ratification of the present convention.

GENERAL PROVISIONS.

Art. 29. The present convention shall be ratified as soon as possible. The ratification shall be deposited at Berne.

When each ratification is deposited a procès-verbal shall be drawn up, and a copy thereof certified as correct shall be forwarded through the diplomatic channel to all the contracting powers.

Art. 30. The present convention shall come into force for each power six months after the date of the deposit of its ratification.

Art. 31. The present convention, duly ratified, shall replace the convention of the 22d August, 1864, in relations between the contracting States.

The convention of 1864 remains in force between such of the parties who signed it who may not likewise ratify the present convention.

Art. 32. The present convention may be signed until the 31st December next by the powers represented at the conference which was opened at Geneva on the 11th June, 1906, as also by the powers, not represented at that conference, which signed the convention of 1864.

Such of the aforesaid powers as shall not have signed the present convention by the 31st December, 1906, shall remain free to accede to it subsequently. They shall notify their accession by means of a written communication addressed to the Swiss Federal Council, and communicated by the latter to all the contracting powers.

Other powers may apply to accede in the same manner, but their request shall only take effect if within a period of one year from the notification of it to the Federal Council no objection to it reaches the council from any of the contracting powers.

Art. 33. Each of the contracting powers shall be at liberty to denounce the present convention. The denunciation shall not take effect until one year after the written notification of it has reached the Swiss Federal Council. The council shall immediately communicate the notification to all the other contracting parties.

The denunciation shall only affect the power which has notified it.

The ratifications of the following States have up to the present been deposited:

| | | |
|----------------|------------------|------------|
| Great Britain. | Denmark. | Servia. |
| Siam. | Brazil. | Norway. |
| United States. | Luxemburg. | Honduras. |
| Russia. | Belgium. | Portugal. |
| Italy. | Spain. | Roumania. |
| Switzerland. | Austria-Hungary. | Sweden. |
| Congo. | Japan and Corea. | Guatemala. |
| German Empire. | Netherlands. | Bulgaria. |
| Mexico. | Chile. | |

The following accessions have been notified:

| | | |
|------------|-----------|-------------|
| Nicaragua. | Colombia. | Costa Rica. |
| Venezuela. | Cuba. | Salvador. |
| Turkey. | Paraguay. | |

Great Britain signed under reserve of articles 23, 27 and 28. Persia under reserve of article 18.

APPENDIX 7.

MISCELLANEOUS DATA.

1. Ranges. For convenience of reference ranges are classified as follows:

| Range. | Rifle, yards.. | Field artillery, yards. | Heavy artillery, yards. |
|----------------|---------------------|-------------------------|-------------------------|
| Distant..... | Over 2,000..... | Over 4,500..... | Over 6,500. |
| Long..... | 2,000 to 1,200..... | 4,500 to 3,500..... | 6,500 to 4,000. |
| Effective..... | 1,200 to 600..... | 3,500 to 2,500..... | 4,000 to 2,500. |
| Close..... | Under 600..... | Under 2,500..... | Under 2,500. |

The ground effectively covered by a shrapnel is elliptical in form and at the effective ranges does not exceed 200 yards in depth by 25 yards in width.

2. Penetration of rifle bullet:

| Material. | Inches. | | Material. | Inches. | |
|--------------------------------------|------------|------------|------------------------------|------------|------------|
| | 200 yards. | 600 yards. | | 200 yards. | 600 yards. |
| Commercial steel. | 0.30 | 0.20 | Sand, dry ¹ | 18.18 | 11.96 |
| 1 inch broken stone, gravel..... | 4.80 | 4.28 | Concrete, Port. 1-3-5 | 3.00 | 1.86 |
| Hard coal between 1-inch boards..... | 9.00 | 7.00 | Oak..... | 26.46 | 12.46 |
| Brickmasonry, cement ¹ | 2.20 | 1.16 | Sand, wet..... | 30.00 | 13.00 |
| Brick masonry, lime ¹ . | 2.40 | 1.14 | Pine..... | 25.72 | 13.00 |
| | | | Earth, loam..... | 30.00 | 16.12 |
| | | | Greasy clay..... | 60.00 | 32.00 |

¹ For single shot.² In sacks, about one-half these figures.**3. Effect of artillery fire:**

Up to 3,000 yards, the 3-inch field gun, using high explosive shell, is effective against ordinary types of overhead cover for field trenches, brick buildings, and stone walls 2 feet thick. It is ineffective against earthen parapets.

The heavier types of field guns and howitzers are effective against all kinds of field works, and protection against this kind of fire must be secured by concealment.

4. Communicating radius of Signal Corps equipment:

Field battalion signal troops (infantry division)—

1 wire company:

4 wire sets (reel carts) 20 miles (total).

1 radio company—

2 radio sets (wheel) 200 miles radius.

2 radio sets (pack) 30 miles radius.

Field battalion signal troops (cavalry division)—

1 headquarters company—

2 radio sets (wheel) 200 miles radius.

2 wire sets (reel carts) 10 miles (total).

1 radio company—

4 radio sets (pack) 30 miles radius.

5. Length of bridges:

Pontoon battalion—

1 company (light equipage) 3 bridge divisions, each 184 feet, total 552 feet.

1 company (heavy equipage) 6 bridge divisions, each 225 feet, total 1,350 feet.

6. Capacity of field hospital company and evacuation hospital:

Field hospital company, number of beds in equipment,¹ 216.

Evacuation hospital, number of beds in equipment,¹ 324.

7. Average net cargoes of vehicles, pack mules, and transportation units:

| | Pounds. |
|---|---------|
| 4-mule army wagon (except that loads on combat trains are fixed at 2,465 pounds)..... | 2,765 |
| Pack mules | 250 |
| Autotrucks | 3,000 |
| Wagon company | 75,000 |
| Autotruck company | 80,000 |
| Pack train company (no grain carried) | 12,000 |

¹ By utilizing local facilities a greater number of patients can be taken care of by personnel.

8. Average results of one man hour labor:**Excavation—**

| In easy soil— | Cubic feet.* |
|----------------------------------|--------------|
| First hour | 30 |
| Second hour | 25 |
| Third hour | 15 |
| Thereafter continuous work | 10 |

In hard soil, about half the above.

In loose earth, 60 cubic feet.

Filling sand bags, 20 bags (0.5 cubic foot each).

Revetment construction (material and tools on hand):

Rough brush wood or plank.....square feet per man hour.. 40

Bushwood hurdles, rough—

Makingdo.... 15

Placingdo.... 30

Sand bags—

Fillingdo.... 10

Placingdo.... 20

Sod—

Obtaining sod fordo.... 7

Placingdo.... 10

Obstacle construction (material and tools on hand)—

Abatis, wired (1 strong row)linear feet.. 1.5

Wire entanglement—

Highsquare feet.. 27

Lowdo.... 90

Clearing¹—

Thickets up to 1.5 inches diametersquare yards.. 25

Light clearings of soft woods, trees to 12 inches in diameter

.....square yards.. 25

Medium clearingdo.... 15

9. Water—Approximate daily requirements:

1 gallon per man on march.

5 gallons per man in camp.

6 to 10 gallons per animal on march and camp.

(The above figures apply to water taken from streams, where animals are watered at the streams, and cooking water carried. In estimating the daily supply for permanent or semipermanent camps, where water is piped to kitchens, bath houses, etc., the requirements will be 25 to 30 gallons per man and 10 to 15 gallons per animal, depending on climatic conditions.)

Estimating quantity of water in stream:

$B \times D \times V \times 10,800 =$ gallons in 24 hours. B = average width, D = average depth, V = average velocity (all in feet).

10. Practicability of slopes. Slopes from 0° to 5° are practicable for maneuvering all arms, singly or combined.

On slopes from 5° to 10° all arms can still be maneuvered, but with increasing difficulty.

On slopes from 10° to 15° all arms can be moved up or down.

Slopes from 15° to 30° are practicable for small detachments only.

On slopes from 30° to 45° foot troops can move with difficulty.

War material can be dragged up any slope.

* By working in two reliefs above figures can be increased by one-third.

¹ Removal of cuttings in both cases involves an equal amount of labor.

| Slope fractions. ¹ | Degrees. | Operations. |
|-------------------------------|------------------|--|
| $\frac{1}{50}$ | 1 | Maximum for railroads. |
| $\frac{1}{25}$ | 3 | Maximum for first-class roads. |
| $\frac{1}{12}$ | 5 | Practicable for all arms. Somewhat difficult for cavalry to charge descending. |
| $\frac{1}{6}$ | 6 | Maximum for cavalry charge in mass ascending. Infantry in close order descends with some difficulty. |
| $\frac{1}{4}$ | 7 | Cavalry can descend at a trot. |
| $\frac{1}{3}$ | 8 | Not practicable for heavily loaded vehicles. |
| $\frac{1}{2}$ | 9 $\frac{1}{2}$ | Field artillery can no longer maneuver. |
| $\frac{3}{4}$ | 14-15 | Maximum up to which all arms can move. |
| $\frac{1}{2}$ | 18 $\frac{1}{2}$ | Light vehicles can ascend. |
| $\frac{1}{2}$ | 26 | Individuals and mules can ascend or descend. |
| $\frac{1}{2}$ | 45 | Foot troops can ascend or descend aided by hands. |

11. Fords, practicable depth:

3-3.5 feet deep for infantry

4-4.5 feet deep for cavalry.

3 feet deep for artillery.

2.3 feet deep for wagons.

} Depending on current and nature of bottom.

12. Stream flow:

Velocity in miles = 0.7 of velocity in feet per second.

13. Strength of ice:

3 inches' thick will support small group of men.

4 $\frac{1}{2}$ to 7 inches thick will support cavalry and light guns.

8 to 12 inches thick will support heavy guns and wagons.

14. Estimating transport capacity of ships:

Allow 3 to 4 gross tons per man and 8 to 10 per animal for ships of more than 5,000 tons, and 4 to 5 per man and 10 to 12 per animal for smaller ship. This allowance includes rations, water, forage, etc., for the voyage and a margin for reserve supplies. The tonnage allowance for animals is sufficient to provide for vehicles, it being assumed that no vehicle will be separated from its draft animals, and that the integrity of units is preserved as far as possible. The gross tonnage of a ship is her total internal space capacity, which is completely closed in and protected from sea and weather, measured in register tons. A register ton is 100 cubic feet.

A ship's ton on which basis freight is computed is 40 cubic feet:

15. Time by compass bearing (approximate):

Take true azimuth (or bearing) of sun (T. A.); (T. A. — 180°) 4/60 = hours before or after 12 o'clock.

16. Use of watch as compass (approximate):

Direct hour hand toward sun. A bearing half way between hour hand and the 12 o'clock mark on the watch is the true south.

APPENDIX 8.—SOUND SIGNALS.

See Signal Book.

APPENDIX 9.**LIST OF ABBREVIATIONS.****Tactical organizations:**

3d Div. Third Infantry Division.

1st Cav. Div. First Cavalry Division.

¹ Natural tangent of angle between slope and horizontal; read 1 on 50, etc.

1st Sep. Brig.First Separate Brigade.
 8th Brig. 3d Div.....Eighth Infantry Brigade of Third Infantry Division.
 2d Brig. 1st Cav. Div...Second Cavalry Brigade of First Cavalry Division.
 4th Brig. F. A.Fourth Brigade of Field Artillery.
 5th Hv. A.Fifth Regiment of Heavy Artillery.
 4th M. A.Fourth Regiment of Mountain Artillery.
 1st Pon. Bn.First Pontoon Battalion.
 1st Aero Sq.First Aero Squadron.
 3d Inf.Third Regiment of Infantry.
 2d Cav.Second Regiment of Cavalry.
 3d L. A.Third Regiment of Light Artillery.
 6th II. A.Sixth Regiment of Horse Artillery.
 1st Bn. Engrs.First Pioneer Battalion of Engineers.
 1st Bn. mtd. Engrs...First Pioneer Battalion of Engineers, Mounted.
 1st Bn. Sig.First Field Battalion Signal Troops.
 1st Bn. Sig. cav.First Field Battalion Signal Troops, Cavalry.
 1st Tel. Bn.First Telegraph Battalion.

Trains:

C. Tn.Combat train.
 F. Tn.Field train.
 B. Sec. F. Tn.Baggage section field train.
 R. Sec. F. Tn.Ration section field train.
 Am. Tn.Ammunition train.
 Sp. Tn.Supply train.
 Sn. Tn.Sanitary train.
 1st Amb. Co.First Ambulance Company.
 2d F. Hosp. Co.....Second Field Hospital Company.
 1st Med. Res. Co.First Medical Reserve Company.
 Engr. Tn.Engineer train.

Columns (1 of c):

Am. Col.Ammunition column.
 Sp. Col.Supply column.
 Sn. Col.Sanitary column.
 Engr. Col.Engineer column.

FRACTIONAL ORGANIZATION.**Infantry:**

3d Div. (less cav. and 1 bn. F. A.)
 2d Brig. (less 1 regt.)
 1st Inf. (less 6 cos. and M. G. Co.)
 1 bn. 6th Inf.
 1st Bn. 6th Inf. (less 1 co.)
 Co. A 1st Inf. (less 1 plat.)

Cavalry:

1st Cav. Div. (less 1 brig.)
 2d Brig. (less 1 regt.)
 3d Cav. (less 1 sq. and M. G. detach.)
 1 Sq. 4th Cav.
 1st Sq. 4th Cav. (less 1 tr.)
 Tr. C 4th Cav. (less 2 plats.)

Artillery:

4th Brig. F. A. (less 1 bn.)
 3d L. A. (less 1 bn.)
 1 bn. 1st L. A. (less 1 btry.)
 1st L. A. (less 2 btries.)
 Btry. A 6th H. A.
 5th Hv. A (less 1 bn. 6" How.)
 1 Bn. 4.7" How., 5th Hv. A.
 1 Btry. 4.7" gun, 5th Hv. A.

Engineers:

1st Bn. Engrs. (less 1 co.)
 Co. A Engrs. (less 1 sec.)
 2 Secs. Engrs.
 1st Pon. Bn. (less 1 co. heavy equip.)
 1 pon. co. light equip. (less 2 bridge div.)

Signal:

1st Bn. Sig. (less 1 wire plat.)
 1 rad. Co. Sig.
 1 wire Co. Sig.
 1 rad. sec. pack, Sig.
 1 rad. plat. wagon, Sig.
 1 wire sec. Sig.
 1 wire plat. Sig.

Miscellaneous:

Adj.adjutant.
 Adm. Sec. G. S.administrative section, general staff.
 A. D. of Ry.assistant director of railways.
 Am.ammunition.
 Adv. Gd.advance guard.
 Adv. Sec. L. of C.advance section, line of communications.
 Asst. C. of S.assistant chief of staff.
 Base Sec. L. of C.base section, line of communications.
 Brig. Gen.brigadier general.
 Capt.captain.
 C. G.commanding general.
 C. G. L. of C.commanding general, line of communications.
 C. O.commanding officer.
 Col.colonel.
 C. of S.chief of staff.
 Comdg.commanding.
 Comb. Sec. G. S.combat section, general staff.
 Detch.detachment.
 D. of Ry.director of railways.
 E. O.engineer officer.
 F. O.field order.
 F. S. R.field service regulations.
 Gd.guard.
 Gen.general.
 G. O.general order.
 Insp.inspector.
 Int. Sec. G. S.intelligence section, general staff.

Int. Sec. L. of C. intermediate section, line of communications.
J. A. judge advocate.
L. of C. line of communications.
Lt. lieutenant.
Lt. Col. lieutenant colonel.
Lt. Gen. lieutenant general.
Maj. major.
Maj. Gen. major general.
M. P. military police.
N. C. O. noncommissioned officer.
O. O. ordnance officer.
Q. M. quartermaster.
S. A. Am. small arms ammunition
Sig. O. signal officer.
S. O. special order.
Surg. surgeon.

RULES OF LAND WARFARE

**NOTE.—THE TEXTS OF THE TREATIES AND CONVENTIONS
PUBLISHED IN THE APPENDIX HAVE BEEN OMITTED.
EXTRACTS OF THESE MAY BE FOUND IN THE APPEN-
DIX OF THE FIELD SERVICE REGULATIONS.**

**War Department,
Office of the Chief of Staff,
Washington, April 25, 1914.**

**The following Rules of Land Warfare are approved and herewith published
for the information and government of the armed land forces of the United
States.**

By order of the Secretary of War.

**W. W. WOTHERSPOON,
Major General, Chief of Staff.**

ABBREVIATIONS OF TITLES OF BOOKS, ETC., REFERRED TO IN THE TEXT

| | |
|---------------------------|--|
| Ariga | La Guerre Russo-Japonaise au point de vue continental et le droit International. By N. Ariga, 1908. |
| Birkhimer | Military Government and Martial Law, second edition, 1904. |
| Bonfils | Manuel de Droit. International Public. |
| Cranch | Reports of the Supreme Court of the United States. |
| Dig. Op. J. A. G. | Digest of Opinions of the Judge Advocate General of the United States Army. |
| F. S. R. | Field Service Regulations of the United States, 1914. |
| French Manual | Conventions Internationales concernant la Guerre sur Terre. Publiées ensuite de decision du Conseil fédéral du 31 octobre, 1910. |
| Gall | Gallison, United States Supreme Court Reporter. |
| Genève Conference | Convention de Genève. Actes de la Conference de Revision. Genève, 1906. |
| G. C. | The Geneva Convention of 1906. |
| G. O. 100, 1863 | Instructions for the Government of the Armies of the United States in the Field, 1863. |
| H. C. III | Hague Convention No. III of October 18, 1907. |
| H. C. IV | Hague Convention No. IV of October 18, 1907. |
| H. C. V | Hague Convention No. V of October 18, 1907. |
| H. C. VIII | Hague Convention No. VIII of October 18, 1907. |
| H. C. IX | Hague Convention No. IX of October 18, 1907. |
| H. C. XI | Hague Convention No. XI of October 18, 1907. |
| H. D. | Hague Declaration of 1899. |
| H. R. | The Rules of Land Warfare contained in annex to Hague Convention No. IV of October 18, 1907. |
| Hall | International Law, fifth edition. |
| Higgins | The Hague Peace Conference. 1909. |
| Holland | The Laws of War on Land. 1908. |
| Holls | The Peace Conference at The Hague. 1910. |
| Inst. Int. Law | Conventions Internationales concernant la Guerre sur Terre. Publiées ensuite de decision du Conseil fédéral du octobre, 1910. |
| Int. Peace Conf. Actes. . | Deuxieme Conference International de la Paix. Actes et documents. The Hague, 1907. |
| Jour. Int. Law | The Journal of the Institute of International Law. |
| Kriegsbrauch | Kriegsbrauch im Landkriege. Edited by the German Great General Staff (Military Historical Section). Berlin, 1902. |
| Les Lois | Le Lois de la Guerre Continentale. Lieut. Robert Jacomet. Preface de M. Louis Renault; second edition, 1913. |
| Magoon | The Law of Civil Government under Military Occupation, third edition, 1903. |
| Moore's Digest | A Digest of International Law. By J. B. Moore, Washington, 1906. |
| Op. | Opinions of the Attorney General of the United States. |
| P. H. IV | Preamble to The Hague Convention No. IV Respecting the Laws and Customs of War on Land. |
| Pet. | Peters, United States Supreme Court Reporter. |
| Spaight | War Rights on Land. 1911. |
| Takahashi | International Law applied to the Russo-Japanese War. By S. Takahashi. (English edition.) |
| U. S. | United States Supreme Court Reports. |
| Wall | Wallace, Reports of the Supreme Court of the United States. |
| Westlake | International Law, part 2, War, 1913. |
| Wilson | Wilson on International Law, H. S. edition, 1910. |

RULES OF LAND WARFARE

CHAPTER I.

THE LAWS OF WAR ON LAND.

INTRODUCTION.

1. How Regulated. The conduct of war is regulated by certain well-established and recognized rules that are usually designated as "the laws of war," which comprise the rules, both written and unwritten, for the carrying on of war, both on land and at sea.

THE WRITTEN RULES.

2. Conventions and Treaties. During the past 50 years many of these rules have been reduced to writing by means of conventions or treaties entered into by the principal civilized nations of the world after full discussion at The Hague, Geneva, Brussels, and St. Petersburg.

3. Those Relating to War on Land. The rules contained herein relate to war on land, and the principal written agreements relating to the conduct of war on land are the following, viz.:¹

(a) The Declaration of St. Petersburg of the 11th of December, 1868, forbidding in time of war the use of explosive projectiles under 400 grams weight.²

(b) The Declaration of The Hague of the 29th of July, 1899, forbidding the employment of projectiles which have for their only object the diffusion of asphyxiating or deleterious gases.³

(c) The Declaration of The Hague of the 29th of July, 1899, preventing the employment of bullets which expand or flatten in the human body.⁴

(d) The Geneva convention of the 6th of July, 1906, for the "Amelioration of the condition of the sick and wounded of armies in the field."⁵

(e) Convention No. III of The Hague of the 18th of October, 1907, with regard to the opening of hostilities.

(f) Convention No. IV of The Hague of the 18th of October, 1907, concerning the laws and customs of war on land.⁶

(g) Convention No. V of The Hague of the 18th of October, 1907, concerning the rights and duties of neutral powers and persons in war on land.⁷

¹ For full text of these conventions, see appendices.

² This has never been ratified by the United States, but see paragraph "e," Article XXIII, convention IV, Hague Rules, 1907, *infra*, par. 184.

³ Those States which have not acceded to or ratified the Geneva convention of 1906 but who are signatories of the Geneva convention of 1864 for "The amelioration of the condition of the wounded and sick of armies in the field" are bound by the provisions of this latter.

⁴ The Hague convention of 1899 "Concerning the laws and customs of war on land" are still binding on those signatory States who have not acceded to or ratified the convention of 1907.

⁵ Vide Ch. XI and Appendix 3.

(h) A portion of the Convention No. IX of The Hague of the 18th of October, 1907, concerning the bombardment by naval forces in time of war.*

(i) Convention No. VIII of The Hague of the 18th of October, 1907, relative to the laying of submarine mines.[†]

(j) A portion of Convention No. XI of The Hague of the 18th of October, 1907, relative to the right of capture in naval warfare.[‡]

(k) The declaration of The Hague of the 18th of October, 1907, prohibiting the discharge of projectiles and explosives from balloons.[§]

4. The foregoing do not constitute a complete code as appears from the preamble of Convention IV of October 18, 1907:

According to the views of the high contracting parties, these provisions, the preparation of which has been inspired by the desire to diminish the evils of war, as far as military requirements permit, are intended to serve as a general rule of conduct for the belligerents in their mutual relations and in their relations with the inhabitants.

It has not, however, been found possible at present to prepare regulations covering all the circumstances which may arise in practice.

On the other hand, the high contracting parties clearly do not intend that unforeseen cases should, in the absence of written undertaking, be left to the arbitrary judgment of military commanders.

Until a more complete code of the laws of war has been formulated, the high contracting parties deem it expedient to declare that, in cases not covered by the regulations adopted by them, the inhabitants and belligerents remain under the protection and the rule of the principles of the law of nations, as they result from the usages established among civilized peoples, from the laws of humanity, and the dictates of public conscience.

5. **Publication of Rules.** H. IV, Art. I. The contracting powers shall issue instructions to their armed land forces which shall be in conformity with the regulations respecting the laws and customs of war on land, annexed to the present convention.[¶]

6. **To Whom Applicable.** H. IV, Art. II. The provisions contained in the regulations referred to in article I, as well as in the present convention, do not apply except between contracting powers, and then only if all the belligerents are parties to the convention.

7. **Nature and Binding Force.** These declarations and conventions, freely signed and ratified by a very great number of the civilized powers of the world, constitute true rules of international law that are binding upon those who are parties thereto in a war in which all belligerents engaged are parties. In case one power, who is a party to the war, has not agreed to these conventions, or having been a party has denounced the same, or has made reservations as to one or more articles, then and in that case the other parties belligerent will not be bound by the convention or by the reserved articles.^{||}

* Vide infra, Ch. VI, Sec. IV, pars. 212, note 32, and 227.

† Vide infra, Ch. XII.

‡ Vide infra.

§ Vide infra, Ch. VI, Sec. I, pars. 174-175, p. 1746.

¶ Vide Bulletin No. 6; W. D., Feb. 19, 1913, and appendices.

|| "The observance by the French Army of the rules announced is implicitly subordinated to the condition of reciprocity on the part of the opposing belligerent, for if France imposes certain limitations upon her means of action against future enemies, it is naturally upon the condition that they impose upon themselves the same restrictions." (*Les Lois de La Guerre Continentale*, by Lieut. Jacomet, p. 26)

THE UNWRITTEN RULES.

8. Usage. In addition to the written rules there exist certain other well-recognized usages and customs that have developed into, and have become recognized as, rules of warfare. These usages and customs are still in process of development.

9. How Developed. The development of the laws and usages of war is determined by three principles. First, that a belligerent is justified in applying any amount and any kind of force which is necessary for the purpose of the war; that is, the complete submission of the enemy at the earliest possible moment with the least expenditure of men and money. Second, the principle of humanity, which says that all such kinds and degrees of violence as are not necessary for the purpose of war are not permitted to a belligerent. Third, the principle of chivalry, which demands a certain amount of fairness in offense and defense and a certain mutual respect between opposing forces.¹²

GENERAL PRINCIPLES.

10. The Object of War. The object of war is to bring about the complete submission of the enemy as soon as possible by means of regulated violence.¹³

11. Military Necessity. Military necessity justifies a resort to all the measures which are indispensable for securing this object and which are not forbidden by the modern laws and customs of war.

12. What Military Necessity Admits of. Military necessity admits of all direct destruction of life or limb of armed enemies, and of other persons whose destruction is incidentally unavoidable in the armed contests of war; it allows of the capturing of every armed enemy, and of every enemy of importance to the hostile government, or of peculiar danger to the captor; it allows of all destruction of property, and obstruction of ways and channels of traffic, travel, or communication, and of all withholding of sustenance or means of life from the enemy; of the appropriation of whatever the enemy's country affords that is necessary for the subsistence and safety of the army, and of such deception as does not involve the breaking of good faith, either positively pledged, regarding agreements entered into during the war, or supposed by the modern law of war to exist.¹⁴

13. What Military Necessity Does Not Admit of. Military necessity does not admit of cruelty—that is, the infliction of suffering for the sake of suffering or for revenge, nor of maiming or wounding except in fight, nor of torture to extort confessions. It does not admit of the use of poison in any way, nor

¹² Land Warfare, Opp., C. I., par. 3.

¹³ G. O. 100, 1863, art. 20. "Public war is a state of armed hostility between sovereign nations or governments. It is a law and requisite of civilized existence that men live in political, continuous societies, forming organized units called States or nations, whose constituents bear, enjoy, and suffer, advance and retrograde together, in peace and in war."

Von Moltke said: "The greatest kindness in war is to bring it to a speedy conclusion. It should be allowable, with that view, to employ all methods save those which are absolutely objectionable. I can by no means profess agreement with the Declaration of St. Petersburg, when it asserts that the weakening of the military forces of the enemy is the only lawful procedure in war. No; you must attack all the resources of the enemy's government—its finances, its railways, its stores, and even its prestige." Letter to Professor Bluntschli, Dec. 11, 1880, cited Holland, War on Land, p. 12.

¹⁴ G. O. 100, 1863, art. 15.

of the wanton devastation of a district. It admits of deception, but disclaims acts of perfidy; and, in general, military necessity does not include any act of hostility which makes the return to peace unnecessarily difficult."¹³

14. Martial Law. Martial law is simply military authority exercised in accordance with the laws and usages of war.¹⁴

In the case of *ex parte Milligan* (4 Wall., 2), Chief Justice Chase, in a dissenting opinion, which did not affect the merits of the case under consideration, drew a distinction in military jurisdiction as follows: "There are under the Constitution three kinds of military jurisdiction—one to be exercised in both peace and war; another to be exercised in time of foreign war without the boundaries of the United States, or in time of rebellion or civil war within States or districts occupied by rebels treated as belligerents; and, third, to be exercised in time of invasion or insurrection within the limits of the United States, or during rebellion within the limits of States maintaining adherence to the National Government, when the public danger requires its exercise. The first of these may be called jurisdiction under military law, and is found in acts of Congress prescribing rules and articles of war, or otherwise providing for the government of the national forces; the second may be distinguished as military government, superseding, as far as may be deemed expedient, the local law, and exercised by the military commander under the direction of the President, with the express or implied sanction of Congress; while the third may be denominated martial law proper, and is called into action by Congress, or temporarily, when the action of Congress can not be invited, and in the case of justifying or excusing peril, by the President, in times of insurrection or invasion, or of civil or foreign war, within districts or localities where ordinary law no longer adequately secures public safety and private rights." This distinction has never since been sustained by the Supreme Court, although military writers have made use of the term "military government" to designate the jurisdiction exercised over enemy territory by the military, regarding enemy territory to include that of a foreign state and also that part of the belligerent state that has been accorded recognition of belligerency, and "martial law" to designate the jurisdiction exercised by the military power over parts of the dominant state that is in rebellion or insurrection without being recognized as belligerents, or, in a word, treating "martial law" as a domestic fact. (*Vide Military Government and Martial Law*, Birkhimer, p. 21. 2d ed.)

The term "martial law" as defined in the text conforms with that given in Great Britain, where the same distinction is made between "military law," "martial law," and "martial law in the home territory." (*Vide Law of War on Land*, Holland, pp. 14-17; *vide also Jour. Mil. Ser. Inst.*, Vol. XV, article by Carbaugh.)

15. Extends to Property and Persons. Martial law extends to property and to all persons in the occupied territory, whether they are subjects of the enemy or aliens to that government.¹⁵

16. Military Jurisdiction. Military jurisdiction is of two kinds: First, that which is conferred and defined by statute; second, that which is derived from the common law of war. Military offenses under the statute law must be tried in the manner therein directed, but military offenses which do not come within the statute must be tried and punished under the common law of war. The character of the courts which exercise these jurisdictions depends upon

¹³ G. O. 100, 1863, art. 16.

¹⁴ G. O. 100, 1863, art. 4.

¹⁵ G. O. 100, 1863, art. 7. *Vide also infra* Chaps. VIII and IX.

the local laws of each particular country. In the armies of the United States the first is exercised by courts-martial, while cases which do not come within the Rules and Articles of War, or the jurisdiction conferred by statute on courts-martial, are tried by military commissions.¹⁸

17. In Cases of Individual Offenders. Whenever feasible, martial law is carried out in cases of individual offenders by military courts; but sentences of death shall be executed only with the approval of the Chief Executive, provided the urgency of the case does not require a speedier execution, and then only with the approval of the commander of the occupying forces.¹⁹

18. Cruelty, Bad Faith, Extortion, Revenge, Etc., Prohibited. The law of war not only disclaims all cruelty and bad faith concerning engagements concluded with the enemy during the war, but also the breaking of treaty obligations entered into by belligerents in time of peace and avowedly intended to remain in force in case of war between the contracting powers. It disclaims all extortion and other transactions for individual gain; all acts of private revenge, or connivance at such acts. Offenses to the contrary shall be severely punished, and especially so if committed by officers.²⁰

CHAPTER II.

HOSTILITIES.

THE COMMENCEMENT OF HOSTILITIES.

19. Declaration of War Required. H. Con. III, Art. I. The contracting parties recognize that hostilities between themselves must not commence without previous and explicit warning in the form either of a reasoned declaration of war or of an ultimatum accompanied by a conditional declaration of war.¹

¹⁸ Vide Justification of Martial Law, by G. Norman Lieber, p. 3, who says:

“Military jurisdiction is of four kinds, viz.:

“1. Military law, which is the legal system that regulates the government of the military establishment. Military law is a branch of municipal law, and in the United States derives its existence from special constitutional grants.

“2. The law of hostile occupation, or military government, as it is sometimes called; that is, military power exercised by a belligerent over the inhabitants and property of an enemy's territory, occupied by him. This belongs to the law of war, and, therefore, to the law of nations.

“3. Martial law applied to the army; that is, military power extended in time of war, insurrection, or rebellion over persons in the military service, as to obligations arising out of such emergency, and not falling within the domain of military law, nor otherwise regulated by law. It is an application of the doctrine of necessity, founded on the right of national self-preservation.

“4. Martial law at home, or as a domestic fact; by which is meant military power exercised in time of war, insurrection, or rebellion, in parts of the country retaining allegiance, and over persons and things not ordinarily subjected to it.”

¹⁹ G. O. 100, 1863, art. 12.

²⁰ G. O. 100, 1863, art. 11.

¹ The framers of the Hague Rules were agreed to one rule, namely, that “an attack which nothing foreshadowed would be infamous.” A gross violation of international law would be committed by the commencement of hostilities in time of peace without a previous controversy and negotiations with a view to a peaceful settlement. (Vide Hague Peace Conferences, Higgins, p. 203.)

20. Surprise Still Possible. Nothing in the foregoing rule requires that any time shall elapse between the actual declaration of war and the commencement of hostilities. It is still possible, therefore, to make a sudden and unexpected declaration of war and thus surprise an unprepared enemy.²

21. Notification to Neutrals. H. Con. III, Art. II. The existence of a state of war must be notified to the neutral powers without delay, but shall not take effect in regard to them until after the receipt of a notification, which may, however, be given by telegraph. Neutral powers, nevertheless, can not rely on the absence of notification if it is clearly established that they were in fact aware of the existence of a state of war.³

22. It Is Binding Between Parties. H. Con. III, Art. III. Article I of the present convention shall take effect in case of war between two or more of the contracting powers. Article II is binding as between a belligerent power which is a party to the convention and neutral powers which are also parties to the convention.

23. Importance, Both Legal and Commercial. This convention is important from both the legal and commercial point of view since it requires belligerents themselves to publicly announce a definite date for the commencement of hostilities, from which date they become entitled to exercise the rights of belligerency, and are themselves required to comply with and to exact from neutrals the obligations of neutrality.

TREATMENT OF RESIDENT ENEMY SUBJECTS.

24. Legal Status. "Public war is a state of armed hostility between sovereign nations or governments."⁴ So that the first effect of war between two states is to cause every subject of the one to become an enemy of every subject of the other, since it is impossible to sever the subjects from their state.⁵

25. Right of Control. Every belligerent state possesses the inherent right to take such steps as it may deem necessary for the control of all persons whose conduct or presence appears dangerous to its safety.⁶ In strict law

² The French proposal to The Hague Peace Conference of 1907, based substantially on resolutions of the Inst. Int. Law at Ghent in September, 1906, consisted of three articles. The first two were embodied substantially as in the text above, while the third, "Hostilities should not begin till after the expiry of a delay sufficient to insure that the rule of previous and unequivocal notice may not be considered as evaded," was rejected.

³ See Chap. XI on "The rights and duties of neutral powers," *infra*, par. 389.

⁴ G. O. 100, 1863, art. 20.

⁵ G. O. 100, 1863, art. 21. "The citizen or native of a hostile country is thus an enemy, as one of the constituents of the hostile state or nation, and as such is subjected to the hardships of the war." The foregoing is both the American and English view. (Vide Land Warfare, *Opp.*, p. 15.)

⁶ Int. Law Dig. Moore, sec. 1116. "Various measures have been adopted by governments in relation to alien enemies residing within their territory. Such persons may, says Rivier, be detained, especially those subject to military service; or they may be interned in determinate places, or yet may be expelled, a brief delay being allowed them to settle up their affairs. But such measures, although justified by the right of self-preservation, are less and less practiced, and are often criticised as not being in harmony with the spirit of modern war."

enemy subjects located or resident in hostile territory may be detained, interned in designated localities, or expelled from the country.⁷

26. Modern Practice as to Status. It is now universally recognized that hostilities are restricted to the armed forces of belligerents, and that the unarmed citizens who refrain from acts of hostility and pursue their ordinary avocations must be distinguished from the armed forces of the belligerent, must be treated leniently, must not be injured in their lives or liberty, except for cause or after due trial, and must not, as a rule, be deprived of their private property.⁸

27. Practice as to Detention and Internment. Enemy subjects are not made prisoners en masse⁹ on the breaking out of hostilities.¹⁰ Persons known to be active or reserve officers, or reservists, of the hostile army, as well as persons suspected of communicating with the enemy, will be detained and, if deemed advisable, interned on the ground of self-preservation, in the exercise of the right of control.¹¹

28. Practice as to Expulsion. In modern practice the expulsion of the citizens or subjects of the enemy is generally decreed from seaports, fortresses, de-

⁷ Act July 6, 1798: 1 Stat., 577; R. S., sec. 4067. "Whenever there is a declared war between the United States and any foreign nation or government, or any invasion or predatory incursion is perpetrated, attempted, or threatened against the territory of the United States, by any foreign nation or government, and the President makes public proclamation of the event, all male natives, citizens, denizens, or subjects of the hostile nation or government, who are 14 years old and upward, and who are not actually naturalized, may be liable for removal as alien enemies; and the President is authorized to direct the conduct to be observed, on the part of the United States toward aliens who are liable to removal, the manner and degree of restraint to which they may be subjected, and the security upon which their residence may be permitted." Sec. 4069: The courts of the United States having criminal jurisdiction are authorized to enforce such proclamations.

The President need not call in the judiciary to enforce these provisions. (*Lockington v. Smith*, Pet. C. C., 466.)

"The Government may prescribe the conditions under which its executive officers are to deal with its alien enemies." (*C. & O. R. R. v. U. S.*, 20, C. Cls., 49.)

⁸ G. O. 100, 1863, art. 22. "Nevertheless, as civilization has advanced during the last centuries, so has likewise steadily advanced, especially in war on land, the distinction between the private individual belonging to a hostile country and the hostile country itself, with its men in arms. The principle has been more and more acknowledged that the unarmed citizen is to be spared in person, property, and honor as much as the exigencies of war will admit." As to what is meant by "armed forces," see *infra*, Ch. III, pp. 1720-1723.

⁹ Napoleon based his action in making prisoners of war of all British subjects between 18 and 60 years of age in 1803 (the last case of the kind) on the ground of retaliation or reprisal.

¹⁰ Hague Convention, 1907, Actes, Vol. III, p. 109, discussed the following proposition: "Subjects of a belligerent residing in the territory of the adverse party will not be placed in confinement unless the exigencies of war render it necessary." It was suggested that the words "nor expelled," be inserted after the word "confined," but no action was taken. (*Vide also*, pp. 9, 10, and 110.)

¹¹ *Vide notes 6 and 7, par. 25. supra; also Land Warfare. Opp.*, pp. 15-16.

fended areas, and the actual or contemplated theaters of operation.¹² From other territory the practice is not uniform, expulsion being resorted to usually for grave reasons of state only.¹³ When decreed, the persons expelled should be given such reasonable notice, consistent with public safety, as will enable them to arrange for the collection, disposal, and removal of their goods and property.¹⁴

CHAPTER III.

THE ARMED FORCES OF BELLIGERENTS.

29. General Division of Enemy Population. The enemy population is divided in war into two general classes, known as the armed forces and the peaceful population. Both classes have distinct rights, duties, and disabilities, and no person can belong to both classes at one and the same time.¹

30. Who Are Lawful Belligerents. H. R. Art. I. The laws, rights, and duties of war apply not only to armies, but also to militia and volunteer corps fulfilling the following conditions:

¹² During the Crimean War British subjects were expelled from the Russian seaports of Cronstadt, Odessa, and Sevastopol.

Japanese subjects were expelled from Siberia, Vladivostok, and Port Arthur in 1904. (Ariga, pp. 363-4.)

In 1905 the Japanese expelled all foreigners from Port Arthur, except about 20, as soon as the defenses were completed.

In 1870 every German in Paris and Department of The Seine was ordered to leave.

¹³ In the Crimean War Russian subjects were allowed to reside without molestation in Great Britain and France.

In 1870 Frenchmen were permitted to remain in Germany. On the contrary, German citizens were at first permitted to remain in France, but afterwards were required to leave, on the ground of personal safety and public defense.

In 1877 Turkish subjects in Russia were permitted to remain and continue their business, subject to the laws.

In the Spanish-American War the subjects of both belligerents were permitted to remain or withdraw.

In the Russo-Japanese War Russian subjects were authorized to remain in Japan and were assured of the protection of their lives, honor, and property, although a reservation was made as to surveillance or other measures taken by military or naval authorities for military purposes, and limitations were placed as to change of domicile or journeys in case the Government saw fit. (Ariga, p. 43.)

Japanese subjects were allowed to continue, under the protection of the Russian laws, their sojourn and the exercise of peaceful occupations in the Russian Empire, except in territories which are under the control of the Imperial viceroy in the Far East.

In 1879 Chileans were expelled from Bolivia and their goods confiscated.

¹⁴ U. S. R. Stat., sec. 4068: "When an alien who becomes liable to removal as an enemy is not chargeable with actual hostility or other crimes against public safety, he must be allowed for the recovery, disposal, and removal of his goods and effects, and for his departure, the full time which may be stipulated in any treaty; and where no such treaty exists the President may fix such reasonable time as may be consistent with public safety and according to the dictates of humanity and national hospitality."

¹ Vide H. Con. V, Art. XVII (b), "Rights and duties of neutral powers and persons in war on land." Ch. XI.

1. To be commanded by a person responsible for his subordinates;
2. To have a fixed distinctive emblem recognizable at a distance;
3. To carry arms openly; and
4. To conduct their operations in accordance with the laws and usages of war. In countries where militia or volunteer corps constitute the army, or form part of it, they are included under the denomination "army."

31. **The Army.** The members of the army as above defined are entitled to recognition as belligerent forces whether they have joined voluntarily, or have been compelled to do so by state law, and whether they joined before or after war is declared, and whether they are nationals of the enemy or of a neutral state.²

32. **The First Condition for Militia and Volunteer Corps.** This condition is satisfied if commanded by a regularly or temporarily commissioned officer, or by a person of position and authority, or if the officers, noncommissioned officers, and men are furnished with certificates or badges, granted by the government of the state, that will distinguish them from persons acting on their own responsibility.³

33. **The Distinctive Sign.** This requirement will be satisfied by the wearing of a uniform, or even less than a complete uniform. The distance that the sign must be visible is left vague and undetermined and the practice is not uniform. This requirement will be satisfied certainly if this sign is "easily distinguishable by the naked eye of ordinary people" at a distance at which the form of an individual can be determined.⁴ Every nation making use of these troops

² Two classes of militia and volunteer corps are referred to—the one which forms part of or the entire army and includes territorial forces; the other which must fulfill the four conditions mentioned.

³ The German rule in 1870 that "every prisoner of war must prove his status as a French soldier by the production of an order issued by a competent authority and addressed to himself showing that he has been summoned to the colors and is borne on the rolls of a military unit raised by the French Government," and their apparent refusal to recognize individual irregulars and small bands unless they can prove that they have state authorization, is not now legal under The Hague Rules.

⁴ Ariga, pp. 85–86. "The Japanese Government will not consider as belligerents the free corps of the national army referred to in the Russian note unless they can be easily distinguished by the naked eye of ordinary people, or unless they fulfill the conditions required of the militia and volunteer corps by The Hague rule."

"As encounters now take place at long ranges, at which it is impossible to distinguish the color or the cut of the clothing, it would seem advisable to provide irregulars with a helmet, slouch hat, or forage cap, as being completely different in outline from the ordinary civilian dress. It may be objected, however, that a headdress does not legally fulfill the condition that the sign must be fixed. Something of the nature of a badge sewn on the clothing should therefore be worn in addition." (Land Warfare Opp., pp. 19–20.)

In 1870 the French mobile national guard and franc tireurs wore blue or gray blouses with a red arm band. The former wore, in addition, a forage cap (kepis). The Germans refused to recognize this as sufficient, because the blouse was the native costume and the red band could be seen at so short a distance, besides being readily removed, so that it was impossible to distinguish these troops from the ordinary citizen.

Ariga, p. 82. At Ping-yang Japanese civilians wore a white helmet and European clothes, with a flower embroidered in red thread on their coats.

should adopt, before hostilities commence, either a uniform or a distinctive sign which will fulfill the required conditions and give notice of the same to the enemy, although this notification is not required.*

34. Carrying Arms Openly. This condition is imposed to prevent making use of arms for active opposition and afterwards discarding or concealing them on the approach of the enemy, and will not be satisfied by carrying concealed weapons, such as pistols, daggers, sword sticks, etc.

35. Compliance With the Laws of War. When such troops are utilized they must be instructed in and be required to conform to the laws of war, and especially as to certain essentials, such as the use of treachery, maltreatment of prisoners, the wounded and dead, violations of or improper conduct toward flags of truce, pillage, unnecessary violence, and destruction of property, etc.

36. Levee en Masse. H. R., Art. II. The inhabitants of a territory which has not been occupied, who, on the approach of the enemy, spontaneously take up arms to resist the invading troops without having had time to organize themselves in accordance with Article I, shall be regarded as belligerents if they carry arms openly and if they respect the laws and customs of war.*

37. Can Not Be Treated as Brigands, Etc. No belligerent has the right to declare that he will treat every captured man in arms of a *levy en masse* as a brigand or bandit.*

38. Deserters, Etc., Do Not Enjoy Immunity. Certain classes of those forming part of a *levee en masse* can not claim the privileges accorded in the preceding paragraph. Among these are deserters, subjects of the invading belligerent; and those who are known to have violated the laws and customs of war.*

* Ariga, pp. 85-87. The Russians at Saghalien wore no uniform, but had a cross with the letters M. R. (Manchurian Regiment) on their caps, on their sleeves a red band about two-thirds of an inch broad, with a red edging on their overcoats. Some of these troops were executed for violation of the laws of war. The author gives the impression that this was because they did not wear the distinctive marks, not having been issued, or, if issued, were thrown away.

The Russians notified the Japanese of the uniform adopted for the irregular troops in Saghalien.

* Note that the first two requirements for militia and volunteer corps are not required, i.e., no responsible commander and no distinctive sign is required. The American rule, from which the above was taken, is contained in G. O. 100, 1863, art. 51. "If the people of that portion of an invaded country which is not yet occupied by the enemy, or of the whole country, at the approach of a hostile army, rise, under a duly authorized levy, en masse to resist the invader, they are now treated as public enemies, and, if captured, are prisoners of war." The new rule actually "duly authorizes" the levy, and omits including specifically "or of the whole country," making use of the words "the inhabitants of a territory."

Mr. Oppenheim, in *Land Warfare*, p. 21, art. 31, says: "The word 'territory' in this relation is not intended to mean the whole extent of a belligerent state, but refers to any part of it which is not yet invaded."

* G. O. 100, 1863, art. 52, par. 1.

* G. O. 100, 1863, art. 48. "Deserters from the American Army, having entered the service of the enemy, suffer death if they fall again into the hands of the United States, whether by capture or being delivered up to the American Army; and if a deserter from the enemy, having taken service in the Army of the United States, is captured by the enemy, and punished by them with death or otherwise, it is not a breach against the law and usages of war, requiring redress or retaliation."

39. Uprisings in Occupied Territory. If the people of a country, or any portion of the same, already occupied by an army, rise against it, they are violators of the laws of war, and are not entitled to their protection.⁹

40. Duty of Officers as to Status of Troops. The determination of the status of captured troops is to be left to courts organized for the purpose. Summary executions are no longer contemplated under the laws of war. The officers' duty is to hold the persons of those captured, and leave the question of their being regulars, irregulars, deserters, etc., to the determination of competent authority.¹⁰

41. Colored Troops. The law of nations knows no distinction of color, so that the enrolling of individuals belonging to civilized colored races and the employment of whole regiments of colored troops is duly authorized. The employment of savage tribes or barbarous races should not be resorted to in wars between civilized nations.¹¹

42. Armed Forces Consist of Combatants and Noncombatants. H. R., Art. III. The armed forces of the belligerent parties may consist of combatants and noncombatants. In case of capture by the enemy, both have a right to be treated as prisoners of war.

CHAPTER IV.

PRISONERS OF WAR.

43. Definition. A prisoner of war is an individual whom the enemy, upon capture, temporarily deprives of his personal liberty on account of his participation directly or indirectly in the hostilities, and whom the laws of war prescribe shall be treated with certain considerations.¹

44. Treatment. The law of nations allows every sovereign Government to make war upon another sovereign State, and, therefore, admits of no rules or laws different from those of regular warfare, regarding the treatment of prisoners of war, although they may belong to the army of a Government which the captor may consider as a wanton and unjust assailant.²

45. Who Can Claim the Status of Prisoners of War. H. R., Art. III. The armed forces of the belligerent parties may consist of combatants and non-combatants. In the case of capture by the enemy, both have a right to be treated as prisoners of war.³

46. Individuals Who Follow an Army Without Belonging to It. H. R., Art. XIII. Individuals who follow an army without directly belonging to it, such as newspaper correspondents, and reporters, sutlers, and contractors,

⁹ G. O. 100, 1863, art. 52, par. 2, vide *infra*, Chps. VIII and X.

¹⁰ Land Warfare, Opp., par. 37.

¹¹ G. O. 100, 1863, art. 57. "So soon as a man is armed by a sovereign government and takes the soldier's oath of fidelity, he is a belligerent; his killing, wounding, or other warlike acts are not individual crimes or offenses. No belligerent has a right to declare that enemies of a certain class, color, or condition when properly organized as soldiers, will not be treated by him as public enemies."

¹ Vide G. O. 100, 1863, art. 49.

² G. O. 100, 1863, art. 67.

³ As to persons enjoying special exemptions when captured or upon falling into the hands of the enemy, vide *infra*, Geneva Convention, arts. 6 to 13, *infra*, secs. 118 et seq.; as to persons not directly attached to the army, see *infra*, secs. 46 et seq.; as to persons who can not claim the rights of prisoners of war when captured, see sec. 82 and secs. 367 et seq.

who fall into the enemy's hands and whom the latter thinks expedient to detain, are entitled to be treated as prisoners of war, provided they are in possession of a certificate from the military authorities of the army which they accompanied.⁴

47. What Civilians Made Prisoners of War. In addition to the armed forces, both combatant and noncombatant, and civilians authorized to accompany armies, the following may be made prisoners of war:

(a) The sovereign and members of the royal family, the President or head of a republican State, and the ministers who direct the policy of a State.⁵

(b) Civil officials and diplomatic agents attached to the army.

(c) Persons whose services are of particular use and benefit to the hostile army or its government, such as the higher civil officials, diplomatic agents, couriers, guides, etc.; also all persons who may be harmful to the opposing State while at liberty, such as prominent and influential political leaders, journalists, local authorities, clergymen, and teachers, in case they incite the people to resistance.⁶

(d) The citizens who rise en masse to defend their territory or district from invasion by the enemy.⁷

48. Military Attachés and Agents of Neutrals. Military attachés and diplomatic agents of neutral powers accompanying an army in the field, or found within a captured fortress, are not ordinarily held as prisoners, provided they have proper papers of identification in their possession and take no part in the hostilities. They may, however, be ordered out of the theater of war, and, if necessary, handed over by the captor to the ministers of their respective countries.⁸

49. Wounded and Sick Prisoners. G. C., art. 2, par. 1. Subject to the care that must be taken of them under the preceding article (G. C., Art. I), the sick and wounded of an army who fall into the power of the other belligerent become prisoners of war, and the general rules of international law in respect to prisoners become applicable to them.⁹

50. H. R., Art. IV. Prisoners of war are in the power of the hostile government, but not of the individuals or corps who capture them. They must be humanely treated.

51. Subject to Military Jurisdiction. All physical suffering, all brutality which is not necessitated as an indispensable measure for guarding prisoners, are formally prohibited. If prisoners commit crimes or acts punishable according to the ordinary penal or military laws, they are subjected to the military jurisdiction of the state of the captor.¹⁰

52. Personal Belongings Retained. H. R., Art. IV, par. 3. All their per-

⁴ F. S. R., 1914, Art. VIII, pars. 426-431, pp. 168-9, Ariga, pp. 123-124. Certain newspaper correspondents, subjects of the United States, attached to the Russian Army, also a medical officer missionary captured by the Japanese at Lio Yang, were sent under guard to Japan.

For forms of certificate, vide appendices A and B, this chapter.

⁵ G. O. 100, 1863, art. 50, par. 2.

⁶ Vide supra, art. 36, and infra, art. 369; also G. O. 100, 1863, arts. 49 and 51.

⁷ Ariga, p. 122. One foreign naval officer and two officers, military attachés, with the Russian army captured at Mukden by the Japanese were treated with consideration, and sent to Kobe, Japan, where they were turned over to their respective delegations.

⁸ Vide infra, par. 107. As to treatment to be accorded to medical personnel and chaplains, vide G. C., art. 9, infra, par. 130.

⁹ Lois de la Guerre Continentale, Jacomet, p. 31, art. 8.

sonal belongings, except arms, horses, and military papers, remain their property.

53. Can Not Retain Large Sums of Money. This rule does not authorize prisoners to retain large sums of money, or other articles which might facilitate their escape. Such money and articles are usually taken from them, receipts are given, and they are returned at the end of the war.¹⁰

54. Belongings Not Transportable. This rule does not compel the captor to be responsible for such personal belongings of prisoners as they are unable to transport with them.¹¹

55. Includes Uniform, Etc. In practice personal belongings are understood to include military uniform, clothing, and kit required for personal use, although technically they may belong to their Government.¹²

56. Booty. All captures and booty, except personal belongings of prisoners, become the property of the belligerent Government and not of individuals or units capturing them.¹³

57. H. R., Art. IX. Every prisoner of war, if he is questioned on the subject, is bound to give his true name and rank, and if he infringes this rule he is liable to have the advantages accorded to prisoners of his class curtailed.

58. Although a prisoner of war is bound, under the penalties named, to state truthfully his name and rank, yet he is not bound to reply to other questions. The captor is entitled to take advantage of every means, humane and not coercive, in order to obtain all information possible from a prisoner with regard to the numbers, movements, and location of the enemy, but the prisoner can not be punished for giving false information about his own army.¹⁴

59. Internment. H. R., Art. V. Prisoners of war may be interned in a town, fortress, camp, or other place, and bound not to go beyond certain fixed limits; but they can not be confined except as an indispensable measure of safety and only while the circumstances which necessitate the measure continue to exist.

60. Not Criminals. The distinction herein intended is between restriction to a specified locality and close confinement. Prisoners of war must not be regarded as criminals or convicts. They are guarded as a measure of security and not of punishment.¹⁵

61. Internment. The object of internment is solely to prevent prisoners from further participation in the war. Anything, therefore, may be done that is necessary to secure this end, but nothing more. Restrictions and inconveniences are unavoidable, freedom of movement within the area of internment should be permitted unless there are special reasons to the contrary. The place selected for internment should not possess an injurious climate.¹⁶

¹⁰ Holland, *Laws of War on Land*, p. 21, art. 24; Opp. *Land Warfare*, par. 70 and note. They should be made to prove ownership of such money and articles to determine that they are not state property. Such property is subject to requisition as other property. Vide *infra*, arts. 345 et seq.

¹¹ Ariga, p. 325.

¹² Opp. *Land Warfare*, par. 69 and note. Ariga, p. 161.

¹³ G. O. 100, 1863, art. 45. Vide *infra*, art. 337.

¹⁴ *Kriegsbrauch*, p. 16. Opp. *Land Warfare*, par. 68.

¹⁵ Holland, *Laws of War on Land*, par. 25. Opp. *Land Warfare*, pars. 86, 87.

¹⁶ Prisoners of war will usually be interned in some town, fortress, camp, or other place. Certain limits will be fixed, beyond which they are not permitted to go, and may be required to respond to certain roll calls and subjected to other surveillance to prevent their return to their own army. Opp. *Land Warfare*, par. 90.

62. Where Confined. Prisoners of war when confined for security should not be placed in prisons, penitentiaries, or other places for the imprisonment of convicts, but should be confined in rooms that are clean, sanitary, and as decent as possible."

63. Maintained by Captor. H. R., Art. VII. The Government into whose hands prisoners of war have fallen is charged with their maintenance.

In the absence of a special agreement between the belligerents, prisoners of war shall be treated, as regards board, lodging, and clothing, on the same footing as the troops of the Government who captured them."

64. Captured Supplies Used. Prisoners are only entitled to what is customarily used in the captor's country, but due allowance should, if possible, be made for differences of habits, and captured supplies should be used if they are available.

65. Can Utilize Services. H. R., Art. VI. The State may utilize the labor of prisoners of war according to their rank and aptitude, officers excepted. The tasks shall not be excessive and shall have no connection with the operations of the war.

Prisoners may be authorized to work for the public service, for private persons, or on their own account. Work done for the State is paid at the rates in force for work of a similar kind done by soldiers of the national army, or, if there are none in force, at a rate according to the work executed.

When the work is for other branches of the public service or for private persons the conditions are settled in agreement with the military authorities. The wages of the prisoners shall go toward improving their position, and the balance shall be paid them on their release, after deducting the cost of their maintenance.

66. Work, even upon fortifications, at a distance from the scene of operations, would not seem to be prohibited by this article. That the excess of money earned by prisoners, over that paid for purchasing comforts and small luxuries, can be retained by the captor in compensation for cost of maintenance, in case their Government fails to provide for their maintenance in the treaty of peace, is well settled. The practice, however, is against such retention."

ATTEMPTS TO ESCAPE.

67. H. R., Art. VIII. Prisoners of war shall be subject to the laws, regulations, and orders in force in the army of the State in whose power they are. Any act of insubordination justifies the adoption towards them of such measures of severity as may be considered necessary.

68. Execution of. Prisoners of war may be fired upon and may be shot down while attempting to escape, or if they resist their guard, or attempt to assist their own army in any way." They may be executed by sentence of a proper

"For disciplinary measures, vide H. R., Art. VIII infra, par. 67.

"The Japanese granted 60 yen (30 cents) per day to officers and 30 yen (15 cents) to noncommissioned officers and soldiers—Russian prisoners of war—during captivity, which was nearly double the amount allowed for their own troops. (Ariga, p. 113.)

At the close of the Russo-Japanese War it was agreed in the treaty of peace that each belligerent should pay the cost of maintenance of its soldiers while prisoners of war.

"Such is the practice of Great Britain. Mr. Holland says that she expects reciprocity of treatment in this regard. (Laws of War on Land, p. 22, par. 26.)

"They should be summoned to halt or surrender before firing. (Hague Con., 1899, Pt. I, pp. 86, 87.)

court for any offense punishable with death under the laws of the captor, after due trial and conviction. It may well be doubted whether such extreme necessity can ever arise that will compel or warrant a commander to kill his prisoners on the ground of self-preservation.²¹

69. Trial and Punishment. For all crimes and misdemeanors, including conspiracy, mutiny, revolt, or insubordination, prisoners of war are subject to trial and punishment in the same way as soldiers of the army which captured them.

70. Conspiracy. If a conspiracy is discovered, the purpose of which is a united or general escape, the conspirators may be rigorously punished, even with death; and capital punishment may also be inflicted upon prisoners of war who are found to have plotted rebellion against the authority of the captors, whether in union with fellow prisoners or other persons.²²

71. Crimes Committed Before Capture. A prisoner of war remains answerable for his crimes committed against the captor's army or people, committed before he was captured, and for which he has not been punished by his own army.²³

72. Parole. H. R., Art. X. Prisoners of war may be set at liberty on parole if the laws of their country allow, and, in such cases, they are bound, on their personal honor, scrupulously to fulfill, both towards their own Government and the Government by whom they were made prisoners, the engagements they have contracted.

In such cases their own Government is bound neither to require of nor accept from them any service incompatible with the parole given.

73. The parole should be in writing and be signed by the prisoners.²⁴ The conditions thereof should be distinctly stated, so as to fix as definitely as possible exactly what acts the prisoner must refrain from doing; that is, whether he is bound to refrain from all acts against the captor or whether he must refrain only from taking part directly in military operations against the captor, and may accept office and render indirect aid or assistance to his own Government.²⁵

²¹ G. O. 100, 1863, art. 60, in referring to giving of quarter, says: "But a commander is permitted to direct his troops to give no quarter in great straits, when his own salvation makes it impossible to cumber himself with prisoners." The German Kriegsbrauch of 1902 says: "Prisoners can be killed * * * in case of extreme necessity, when other means of security are not available and the presence of the prisoners is a danger to one's own existence. * * * Exigencies of war and the safety of the state come first, and not the consideration that prisoners of war must at any cost remain unmolested." No instance of resort to such executions have occurred since 1799, when Napoleon bayonnetted the Arabs at Jaffa.

²² G. O. 100, 1863, art. 77.

²³ G. O. 100, 1863, art. 59. Vide *infra*, Ch. X.

²⁴ It is customary to make out paroles in duplicate, one of which is sent to the enemy. G. O. 100, 1863, art. 125. "When paroles are given and received there must be an exchange of two written documents, in which the name and rank of the paroled individuals are accurately and truthfully stated."

²⁵ Ariga, p. 115. "C'est l'article 7 de la capitulation qui réglementa la procédure de la libération sur parole. Cet article de la capitulation disait que 'la parole sera donnée par écrit de ne pas reprendre les armes contre le Japon et de n'agir en aucune façon contre les intérêts de ce pays jusqu'à la fin de la guerre actuelle.'"

74. No noncommissioned officer or private can give his parole except through an officer. Individual paroles not given through an officer are not only void, but subject the individuals giving them to the punishment of death as deserters. The only admissible exception is where individuals properly separated from their commands have suffered long confinement without the possibility of being paroled through an officer.*

75. Commissioned officers can give their parole only with the permission of a military superior, as long as such superior in rank is within reach.*

76. No paroling on the battle field, no paroling of entire bodies of troops after a battle, and no dismissal of large numbers of prisoners, with a general declaration that they are paroled, is permitted or of any value.*

77. A belligerent Government may declare, by a general order, whether it will allow paroling, and on what conditions it will allow it. Such order is communicated to the enemy.*

78. H. R., Art. VIII, par. 2. Escaped prisoners who are retaken before being able to rejoin their own army or before leaving the territory occupied by the army which captured them are liable to disciplinary punishment.

79. The words "disciplinary punishment" are intended to exclude a sentence of death. The usual punishment for attempts to escape consist in curtailment of privileges or closer confinement or detention.*

80. **Not Punishable for Previous Escape.** H. R., Art. VIII, par. 3. Prisoners who, after succeeding in escaping, are again taken prisoners, are not liable to punishment on account of the previous flight.

81. **Can Not Force to Accept Parole.** H. R., Art. XI. A prisoner of war can not be compelled to accept his liberty on parole; similarly the hostile Government is not obliged to accede to the request of the prisoner to be set at liberty on parole.

82. **Violation of Parole.** H. R., Art. XII. Prisoners of war liberated on parole and recaptured bearing arms against the Government to whom they

* G. O. 100, 1863, art. 127. The parole is essentially an individual act. The agreement executed by an officer for his subordinates is valid as to each only after his adherence. Vide G. O. 100, 1863, art. 121.

* G. O. 100, 1863, art. 126. As to paroling of officers interned in neutral territory, vide *infra*, art. 414, Ch. XI.

* G. O. 100, 1863, art. 128.

* G. O. 100, 1863, art. 132. But vide *Les Lois de la Guerre Continentale*, by Jacomet, par. 17, p. 36. "It is understood that the reserve formulated above in regard to the legislation of one of the belligerents will be binding only on the nationals of the belligerent and not the government of the adverse State.

"The belligerent who grants liberty on parole to prisoners of war is not bound to know if the laws of the country authorize them to accept their liberty.

"Their government is bound by these obligations (par. 2, H. R.) even if its laws and regulations prohibit freedom on parole, but it has the right to inflict upon its nationals who may have accepted their freedom on parole authorized punishments for violations of laws in force or else make them return to the enemy.

"If liberty on parole is disavowed by his government his duty is to return himself to captivity, but if the enemy refuse to receive him or to relieve him of his parole, the prisoner is bound to conform to the agreements he has entered into."

* Hague Conference, 1899, pt. 1, p. 86 et seq. •

had pledged their honor, or against the allies of that Government, forfeit their right to be treated as prisoners of war, and can be brought before the courts.⁸¹

BUREAU OF INFORMATION.

83. Function of Prisoners' Information Bureau. H. R., Art. XIV, par. 1. A bureau of information for prisoners of war is instituted on the commencement of hostilities in each of the belligerent States, and, when necessary, in neutral countries which have received belligerents in their territory. It is the function of this office to reply to all inquiries about the prisoners. It receives from the various services concerned full information respecting internments and transfers, releases on parole, exchanges, escapes, admissions into hospitals, deaths, as well as other information necessary to enable it to make out and keep up to date an individual return⁸² for each prisoner of war. The office must state in this return⁸³ the regimental number, name and surname, age, place of origin, rank, unit, wounds, date and place of capture, internment, wounding, and death, as well as any observations of a special character. The individual return shall be sent to the Government of the other belligerent after the conclusion of peace.⁸⁴

84. Valuables on Battle Field. H. R., Art. XIV, par. 2. It is likewise the function of the bureau to receive and collect all objects of personal use, valuables, letters, etc., found on the field of battle or left by prisoners who have been released on parole, or exchanged, or who have escaped, or died in hospitals or ambulances, and to forward them to those concerned.

85. Bureaus Enjoy Free Postage, Etc. H. R. Art. XVI, par 1. Bureaus of information enjoy the privilege of free postage. Letters, money orders, and valuables, as well as parcels by post, intended for prisoners of war, or dispatched by them, shall be exempt from all postal duties in the countries of origin and destination, as well as in the countries they pass through.⁸⁵

85a. Free Import Duties. H. R., Art. XVI, par. 2. Presents and relief in kind for prisoners of war shall be admitted free of all import or other duties, as well as of payments for carriage by the state railways.⁸⁶

86. Censorship. The foregoing rule does not preclude censorship and regulations which the belligerent holding the prisoners may decide to establish with regard to receipt and dispatch of letters and other articles referred to.

PRISONERS' RELIEF SOCIETIES.

87. Duties of. H. R., Art. XV. Relief societies for prisoners of war which are properly constituted in accordance with the laws of their country and with the object of serving as the channel for charitable effort shall receive from the

⁸¹ The courts referred to are the military courts contemplated under first paragraph of H. R. XII. According to the French Military Code, art. 204, sec. 2, "Every prisoner of war who, having broken his parole, is recaptured with arms in hand, is punished with death." *Les Lois Jacomet*, art. 20, p. 37.

⁸² The word "card" is perhaps a better translation than the word "return."

⁸³ See G. C., art. 4. It appears that some regulations should be formulated by the United States Government for carrying into effect this article, as also article 4 of the Geneva convention, in view of the requirement to keep each other informed even during the continuance of the war with information about the sick and wounded prisoners.

⁸⁴ Vide note 33, par. 83, *supra*. This article will require postal conventions and additional legislation for full compliance.

⁸⁵ No special legislation has been passed by Congress, but regulations have been formulated by the Treasury Department for giving effect to this treaty stipulation.

belligerents, for themselves and their duly accredited agents, every facility for the efficient performance of their humane task within the bounds imposed by military necessities and administrative regulations. For the purpose of distributing relief, agents of these societies may be admitted to the places of internment, as also to the halting place of repatriated prisoners, if furnished with a personal permit by the military authorities and on giving an undertaking in writing to comply with all measures of order and police which the latter may issue.

PAY OF OFFICERS.—RELIGIOUS PRIVILEGES.—WILLS.

88. Pay of Officers. H. R., Art. XVII. Officers taken prisoners shall receive the same rate of pay as officers of corresponding rank in the country where they are detained, the amount to be ultimately refunded by their own Government.³⁷

89. Religious Freedom. H. R., Art. XVIII. Prisoners of war shall enjoy complete liberty in the exercise of their religion, including attendance at the services of the church to which they may belong, on the sole condition that they comply with the measures of order and police issued by the military authorities.³⁷

90. Prisoners' Wills. H. R., Art. XIX. The wills of prisoners of war are received or drawn up in the same way as for soldiers of the national army.

The same rules shall be observed regarding death certificates as well as for the burial of prisoners of war, due regard being paid to their grade and rank.³⁸

EXCHANGES.

91. Exchange Can Not Be Demanded. The exchange of prisoners is an act of convenience to both belligerents. If no general cartel has been concluded, it can not be demanded by either of them. No belligerent is obliged to exchange prisoners of war.³⁹

92. When Exchange Made. No exchange of prisoners shall be made except after complete capture, and after an accurate account of them and a list of the captured officers have been taken.⁴⁰

93. Exchange of Prisoners. Exchanges of prisoners take place, number for number, rank for rank, disability for disability, with added condition for added condition—such, for instance, as not to serve for a certain period.⁴¹

94. Substitutions. In exchanging prisoners of war such numbers of persons of inferior rank may be substituted as an equivalent for one of superior rank as may be agreed upon by cartel, which requires the sanction of the Government or of the commander of the army in the field.⁴²

³⁷ But see G. C., Art. 13, par. 142, which prescribes that the medical personnel shall receive the "same pay and allowances" as persons of corresponding rank in the enemy's army.

³⁸ The simplest method for carrying out this obligation is to allow ministers of their religion to have access to the prisoners at the usual times of service. Chaplains attached to armies, so long as they confine themselves to their spiritual duties, can not be made prisoners of war, but they should be permitted to accompany prisoners of war into captivity if they desire to do so.

³⁹ Vide H. R. 14, supra, and G. C., art. 4. infra.

⁴⁰ G. O. 100, 1863, art. 109.

⁴¹ G. O. 100, 1863, art. 110.

⁴² G. O. 100, 1863, art. 105.

⁴³ G. O. 100, 1863, art. 106.

95. Surplus. The surplus number of prisoners of war remaining after an exchange has taken place is sometimes released either for the payment of a stipulated sum of money or, in urgent cases, of provisions, clothing, or other necessities. Such arrangement, however, requires the sanction of the highest authority.⁴³

96. Persons Not Entitled to Demand Treatment of Prisoners of War. Spies, war traitors, and war rebels are not exchanged according to the common law of war. The exchange of such persons would require a special cartel, authorized by the Government, or, at a great distance from it, by the chief commander of the army in the field.⁴⁴

97. In modern wars, exchange of prisoners has not been common, but the foregoing rules state accurately the practice of nations in this regard.

98. Repatriation. H. R., Art. XX. After the conclusion of peace, the repatriation of prisoners of war shall be carried out as quickly as possible.

99. When Repatriation Delayed. The immediate repatriation of prisoners of war is not always possible, due to the following causes:

1. Insufficiency of transport;
2. Obvious risk to captor State in restoring to the vanquished power troops of which it has been deprived; and
3. Some prisoners of war may be undergoing punishment for offenses committed during their imprisonment.

APPENDIX A. CORRESPONDENT'S PASS.

War Department,
Washington,, 191...

The Bearer, Mr., whose photograph and signature are hereto attached, is hereby accredited to the Commanding General,
....., United States Army, as news correspondent of the
with permission to accompany said troops, subject to the Regulations Govern-
ing Correspondents with Troops in the Field and the orders of the commander
of said troops.

This pass entitles the correspondent to passage on military railways and, when accommodations are available, on Army transports, with the privileges of a commissioned officer, including purchase of subsistence, forage and in-
dispensable supplies when they can be spared.

LINDLEY M. GARRISON,
Secretary of War.

Official: ,

.....,

The Adjutant General.

.....

[Signature of the correspondent.]

.....

Headquarters
....., 191...
.....,
Commanding.
.....
.....
.....

⁴³ G. O. 100, 1863, art. 108.

⁴⁴ G. O. 100, 1863, art. 103.

CHAPTER V.

THE SICK, WOUNDED, AND DEAD.

100. Regulations Concerning, Where Found. H. R., Art. XXI. The duties of belligerents with regard to the wounded and sick are governed by the Geneva Convention (of 1906).¹

101. Duties of Neutral Powers. The duties of neutral powers as regards wounded and sick who are permitted to enter their territories are dealt with in the "Convention concerning the rights and duties of neutral powers and persons" at The Hague in 1907.²

THE SICK AND WOUNDED.

102. Care of Obligatory. G. C., Art. 1, par. 1. Officers, soldiers and other persons officially attached to armies, who are sick or wounded, shall be respected and cared for, without distinction of nationality, by the belligerent in whose power they are.

103. What Persons Included. This provision extends to all belligerents, as previously defined, who may be described as all those persons who may demand the treatment and privileges accorded to prisoners of war.³

104. Inhabitants Not Included. It does not impose obligations to aid inhabitants or other persons not officially attached to armies who may be wounded by chance or accident as a result of the hostilities in progress. But the dictates of humanity demand that inhabitants so wounded be aided if the other inhabitants are without facilities to give them proper care, and they can be so aided without neglecting the sick and wounded of either belligerent.⁴

105. Sick and Wounded Abandoned. G. C., art. 1, par. 2. A belligerent, however, when compelled to leave his sick or⁵ wounded in the hands of his adversary, shall leave with them, so far as military conditions permit, a portion of the personnel and matériel of his sanitary service to assist in caring for them:

106. Determination of the Exigency. Necessarily the commander of the army, who is compelled by the military situation to abandon his wounded, must determine what the precise exigencies of the situation permit him to do with regard to leaving his medical personnel and matériel behind for the care of his wounded and sick; but it is clearly intended by this article that he shall relieve the victor left in possession of the battle field, as far as practicable, of

¹ The convention for the amelioration of the condition of the sick and wounded of armies in the field, July 6, 1906, became operative six months after signature (art. 30). When duly ratified it replaced the convention at Geneva of Aug. 22, 1864, between the contracting states. The latter convention remains operative between those signatories who did not ratify the subsequent convention of 1906 (art. 31). Other powers were authorized to subsequently ratify the convention of 1906, and it became operative as to them within one year from date of ratification in case no one of the parties filed an objection thereto (art. 32). Any party to this convention can denounce the same by written notice. Such denunciation becomes operative one year after receipt of such written notice (art. 33).

² Convention V of The Hague relates to "The rights and duties of neutral persons in warfare on land." Convention XIII relates to neutral rights and duties in maritime war.

³ Vide ante, Ch. III, pars. 42 and Ch. IV.

⁴ Opp., Land Warfare, art. 177 and note.

⁵ The omission of the words "sick or" in the official transmission is clearly a typographical error. Vide original French and translation.

the additional burdens involved in the care of the enemy sick and wounded as well as his own.⁶

107. Prisoners of War. G. C., art. 2, par. 1. Subject to the care that must be taken of them under the preceding article, the sick and wounded of an army who fall into the power of the other belligerents become prisoners of war, and the general rules of international law in respect to prisoners become applicable to them.⁷

108. Agreements, Exceptions, and Mitigations. G. C., art. 2, par. 2. The belligerents remain free, however, to mutually agree upon such clauses, by way of exception or favor, in relation to the wounded or sick as they may deem proper. They shall especially have authority to agree—

(a) To mutually return the sick and wounded left on the field of battle after an engagement.

(b) To send back to their own country the sick and wounded who have recovered, or who are in a condition to be transported and whom they do not desire to retain as prisoners.

(c) To send the sick and wounded of the enemy to a neutral State, with the consent of the latter and on condition that it shall charge itself with their internment until the close of hostilities.

109. Suggestions Merely. These must be regarded purely as suggestions to commanders as proper relaxations of the rigor of the rules applicable to the wounded or sick, since commanders are "free to agree" as to the foregoing, as well as to many other questions not suggested by these rules, regardless of this article of the convention.⁸

110. Search of Battle Field. G. C., art. 3, par. 1. After every engagement the belligerent who remain in possession of the field of battle shall take measures to search for the wounded and to protect the wounded and dead from robbery and ill-treatment.

111. Police of Battle Field. The foregoing duty of policing the field of battle imposed upon the victor after the fight contemplates that he shall take every means in his power to comply therewith.⁹

112. Punishment of Violations of Article. The obligations imposed upon commanders as to protection of the wounded and sick from pillage and maltreatment contemplate that all guilty persons, whether subject to military law or civilians, shall be severely punished for acts of pillage and maltreatment of the wounded and dead. No statute has been passed by Congress specifically applicable to the punishment of violators of this article since the convention was agreed to and as contemplated by article 28 of the same convention. In the absence of such legislation, however, offenders, both military and civilian, will be proceeded against as marauders by commanding officers in the field.¹⁰

113. Rolls to be Sent to Enemy. G. C., art. 4, par. 1. As soon as possible each belligerent shall forward to the authorities of their country or army * * * a list of names of the sick and wounded taken in charge by him.¹¹

114. Internments, Changes, and Admissions Must be Mutually Noticed. G. C., art. 4, par. 2. Belligerents will keep each other mutually advised of internments and transfers, together with admissions to hospitals and deaths which occur among the sick and wounded in their hands.

115. The foregoing provisions relate obviously to the wounded and sick of

⁶ Holland, War on Land, p. 28, par. 42.

⁷ Vide Hague Con. V, Art. XIII post, Chap. XI, pars. 417-418 and 422.

⁸ Holland, War on Land, p. 28, art. 43.

⁹ For regulations governing this subject see F. S. R., 1914, pars. 231, 349; vide also, Ariga, pp. 153-158, Takahashi, pp. 152, 154.

¹⁰ Vide Chap. X, pars. 171, 374, and notes. Curry v. Collins, 37 Mo., 324, 328.

¹¹ Vide post, par. 166.

the enemy, since the duties referred to with regard to wounded, sick, and dead of his own army will be regulated by the internal laws of the belligerent. The proper channel of communication of such information to the enemy is through the Prisoners' Bureau of Information.

116. Appeals to Inhabitants in Behalf of Wounded, etc. G. C., art. 5. Military authority may make an appeal to the charitable zeal of the inhabitants to receive and, under its supervision, to care for the sick and wounded of the armies, granting to persons responding to such appeals special protection and certain immunities.¹¹

117. Modification of Convention of 1864. The corresponding article of the Geneva convention of 1864 is so modified in this that commanders in the field are relieved of the suggested obligation of informing the inhabitants of the appeal addressed to their humanity. It also withdraws the privileges contained in the convention of 1864, and very properly places the entire subject under military supervision. The collection and removal of the wounded are best performed under military supervision, even when the labor must be requisitioned, because it is only under such supervision that it can be properly regulated and controlled.¹²

SANITARY FORMATIONS AND ESTABLISHMENTS.

118. Privileges of the Sanitary Formations. G. C., art. 6. Mobile sanitary formations (i.e., those which are intended to accompany armies in the field) and the fixed establishments belonging to the sanitary service shall be protected and respected by belligerents.

119. What Are Mobile Sanitary Formations. By mobile sanitary formations must be understood all organizations which follow the troops on the field of battle. In our service is included the following: (1) Regimental equipment; (2) Ambulance companies; (3) Field hospitals; (4) The reserve medical supply; (5) The sanitary column, including (a) Ambulance column, (b) Evacuation hospital; (6) Hospital trains; (7) Hospital boats; (8) Red Cross transport column.¹³

120. Fixed Establishments. The term "fixed establishments" is clearly intended to cover stationary or general hospitals, whether actually movable or located on the line of communications, or at a base, and in our service would include: (1) The base medical supply depot; (2) Base hospitals; (3) Casual camps; (4) Convalescent camps; and (5) Red Cross hospital columns.¹⁴

121. What Meant by Respect and Protection. By "respect and protection"

¹¹ Art. 5, Gen. Con., 1864. "Inhabitants of the country who may bring help to the wounded shall be respected and shall remain free. The generals of the belligerent powers shall make it their duty to inform the inhabitants of the appeal addressed to their humanity and of the neutrality which will be the consequence of it. Any wounded man entertained and taken care of in a house shall be considered as a protection thereto. Any inhabitant who shall have received wounded men into his house shall be exempted from the quartering of troops, as well as from a part of the contributions of war which may be imposed."

¹² The modification of the article of 1864 was due to the fact that, in the absence of military supervision, opportunities were afforded for pillage and maltreatment of the dead and wounded. It was also found that the effect of the article was not to ameliorate the condition of the wounded, but to encourage the inhabitants to move wounded men who should not be removed and to prevent them from receiving proper medical treatment when most needed. Vide Opp., Land Warfare, pars. 182-183.

¹³ Vide Medical Manual, pars. 601, 626, 651, 681, 688, 697, 726.

¹⁴ Vide Medical Manual, pars. 713, 720-722, also Cir. 8, S. G. O., 1912.

it is intended that they shall not be fired upon and shall be protected in the discharge of their duties, and this is applicable to both classes, irrespective of the fact of the actual presence therein of the sick or wounded. They are protected from deliberate attack.¹⁶

122. Must Not Commit Harmful Acts. G. C., art. 7. The protection due to sanitary formations and establishments ceases if they are used to commit acts injurious to the enemy.

123. Cessation of Immunity for Harmful Acts. By cessation of protection is understood that these units may be fired on and the personnel taken prisoners and in a proper case reprisals may be resorted to. As examples of harmful acts may be cited—taking part in the campaign, sheltering spies of combatants, placing these units directly in the line of fire of the enemy, or in a strategic position, where they restrict military operations or conceal guns, or making use of sanitary trains to transport effectives, etc. Since sanitary formations should be placed in concealed points where protected from the enemy's fire, the placing of such units as indicated may excuse their being fired upon and the detention of their personnel, but before firing upon them it is best, if possible, to direct them to withdraw.¹⁷

124. Acts Which Will Not Forfeit Protection. G. C., art. 8. A sanitary formation or establishment shall not be deprived of the protection accorded by article 6 by the fact:

1. That the personnel of a formation or establishment is armed and uses its arms in self-defense or in defense of its sick and wounded.

125. What Meant by Self-Defense. Although the sanitary personnel may carry arms for self-defense, they should not resist with such arms their being captured by the enemy. These arms are for their personal defense and for protection of the sick and wounded under their charge against marauders and the like.¹⁸

126. Pickets and Sentinels. G. C., art. 8, par. 2. That in the absence of armed hospital attendants, the formation is guarded by an armed detachment or by sentinels acting under competent orders.

127. Guard for Medical Unit Protected. Due to the fact that in some armies trained soldiers are used as medical orderlies, it is expressly provided that a picket or sentinel taken from a combatant arm may be used as a guard to a sanitary formation. Such guard, when furnished with authority in due form, is entitled to the same privileges as those of the medical personnel while so employed.

¹⁶ Vide post, G. C., art. 9, par. 130. Land Warfare, Opp., par. 184, and note 1.

¹⁷ In the French Conventions Internationales concernant La Guerre sur Terre, p. 65, art. 7, note, it is stated, in explanation of what is meant by "protection ceases," that "in such case it is permitted to fire upon these formations and make them prisoners. Under certain circumstances where there is a manifest abuse of the immunity reprisals may be resorted to." And in explanation of the injurious acts referred to says: "Whether in a direct manner, by taking part in the combat, or indirectly, for example, when the sanitary trains are used for the transport of effective combatants," etc. "A distinction must be drawn between an act intentionally injurious and where, by its presence only, a sanitary establishment interferes with a military operation, or again, where the sanitary personnel is found in the midst of the enemy troops, could give information of the dispositions made. In such case the respect due to the personnel ceases to be obligatory, but only to the extent demanded by the conduct and security of the operations. In other words, the sanitary service can be ordered to retire, and, if it is necessary, this personnel can be forcibly detained." Vide, also, Ariga, pp. 207 et seq.

¹⁸ Vide Land Warfare, Opp., p. 45, par. 188.

128. Written Order Indispensable. It is indispensable, however, that such picket or sentinel be provided with a written order that he can show to the adversary.²⁰ Such pickets or guards will not be made prisoners of war.²¹

129. Weapons and Cartridges. G. C., art. 8, par. 3. That arms or cartridges, taken from the wounded and not yet turned over to the proper authorities, are found in the formation or establishment.²²

PERSONNEL.

130. Privileges of Personnel. G. C., art. 9. The personnel charged exclusively with the removal, transportation, and treatment of the sick and wounded, as well as with the administration of sanitary formations and establishments, and the chaplains attached to armies, shall be respected and protected under all circumstances. If they fall into the hands of the enemy they shall not be considered as prisoners of war.

These provisions apply to the guards of sanitary formations and establishments in the case provided for in section 2 of article 8.

131. Personnel Contemplated. The personnel here intended by the words "charged exclusively" is clearly the officers and men of the army service corps, including drivers of transports attached to the medical service for the entire campaign, so that musicians and other soldiers, temporarily employed as litter bearers, are not placed under the protection of the convention. These latter should be supplied with a special brassard or certificate.

132. Protection Afforded. The medical personnel above referred to, chaplains, and guards, are protected from deliberate attack. There is no just cause for complaint, as a violation of the convention, if they are accidentally killed or wounded in the execution of their duties.²³

133. Voluntary Aid Societies. G. C., art. 10. The personnel of voluntary aid societies, duly recognized and authorized by their own Governments, who are employed in the sanitary formations and establishments of armies, are assimilated to the personnel contemplated in the preceding article, upon condition that the said personnel shall be subject to military laws and regulations.

Each State shall make known to the other, either in time of peace or at the opening or during the progress of hostilities, and in any case before actual employment, the names of the societies which it has authorized to render assistance, under its responsibility, in the official sanitary service of its armies.²⁴

²⁰ The original French of the article is "d'un mandat regulier," which contemplates an order or written authority duly authenticated by proper authority. Nothing is said about such guard being obliged to wear the brassard.

²¹ Vide, also, G. C., art. 9, par. 2, post par. 130.

²² These arms and ammunition should be turned in as soon as practicable, and, in any event, are subject to confiscation.

²³ Land Warfare, Opp., art. 184, and note 1. "It [medical personnel] can not, naturally, be made immune from the effects of shell and bullet fired at ranges at which badges and uniform are not distinguishable."

²⁴ The American National Red Cross, duly incorporated under the laws of the United States, Jan. 5, 1905 (vide 33 Stat., 600, and amendment, 36 Stat., 604), is, under the proclamation of the President, published in G. O. 170, W. D., Dec. 27, 1911, the only volunteer society now authorized by this Government to render aid to its land and naval forces in time of war, and any other society desiring to render similar assistance can do so only through the American National Red Cross.

Such portion of the society as may render aid to the land and naval forces will constitute a part of the sanitary services thereof.

The War and Navy Departments are duly authorized to communicate directly with the president of the society, arranging for and specifying the character

134. The National Red Cross. The National Red Cross of America is the only volunteer aid society that can be employed by the land and naval forces of the United States in future wars to aid the medical personnel, and their employment must be under the responsibility of the Government as part of the medical personnel and establishments of its Army, and they must be assigned to duties in localities designated by competent military authority.

135. Conditions Prescribed for Employment. The personnel and establishments of voluntary aid societies, while so employed, are entitled to the same privileges and protection as that to which the Army Medical Service is entitled under certain conditions, which are:

(a) That the societies are duly recognized and authorized by their Government.²⁴

(b) That the names of the societies to be employed must be notified to the enemy before any of the personnel is actually employed.²⁵

(c) That the personnel is subject to military law.²⁶

136. Reasons for Conditions Imposed. In past wars so many irregularities and even acts of hostility have been committed by members of volunteer aid societies that the conditions above mentioned have been found necessary. Commanders, before permitting their employment, should therefore assure themselves that these conditions have been strictly complied with.²⁷

137. Volunteer Societies of Neutrals. G. C., art. 11. A recognized society of a neutral State can only lend the services of its sanitary personnel and formations to a belligerent with the prior consent of its own Government and the authority of such belligerent. The belligerent who has accepted such assistance is required to notify the enemy before making any use thereof.

138. Conditions of Employment. It is necessary to secure the consent of the of services required, and designating where the personnel and matériel will be assembled.

It is prescribed that any member of the American National Red Cross when on duty with the land and naval forces of the United States, pursuant to a proper call, will be subject to the military laws and regulations as provided in article 10 of the International Red Cross Convention of 1906 (Geneva), and will be provided with the necessary brassard and certificate of identity.

Except in cases of great emergency, the personnel of the American National Red Cross will not be assigned to duty at the front, but will be confined to hospitals in the home country, at the base of operations, on hospital ships, and along lines of communication of the land and naval forces of the United States.

²⁴ In this country the society is recognized by the statutes (vide note 23, par. 133). The personnel must be provided with the emblem (brassard) and also with a certificate as prescribed. The certificate should give a reasonably accurate description of the person employed, i.e., the age, color, sex, race, height, weight, color of eyes, hair, and complexion. In addition should be added the finger print of the index finger of the right hand with distinguishing marks. The certificate should also contain the number of the brassard issued to each person. For form of certificate, vide Appendix A, this chapter. This certificate should always be on the person and might properly be inclosed in a light metallic case stamped with the same number as the certificate, which would serve as an identification tag.

The employment of a distinctive uniform consisting of a blouse and shirt of blue and a cap of designated design would prevent confusion and injury on the part of the enemy.

²⁵ This will be done by the Government at the outbreak of hostilities, of which notice will be had by commanders.

²⁶ Vide statute cited in note 23, par. 133.

²⁷ Land Warfare, Opp., p. 46, par. 192.

neutral Government as well as that of the belligerent into whose service it proposes to enter, but it is not necessary to obtain the consent of the other belligerent who is notified of the fact of employment.²⁸ Such employment in this country must be accomplished through the American National Red Cross.²⁹

CAPTURED MEDICAL PERSONNEL.

139. Privileges and Duties. G. C., art. 12. Persons described in articles 9, 10, and 11 will continue in the exercise of their functions, under the direction of the enemy, after they have fallen into his power.

When their assistance is no longer indispensable they will be sent back to their army or country, within such period and by such route as may accord with military necessity. They will carry with them such effects, instruments, arms, and horses as are their private property.

140. Interpretation of These Obligations. In interpreting the foregoing obligations two things, among others, must be carefully considered: (1) That the sanitary formations must not be placed in position to take back useful information to their army, and (2) that these rules are not meant to justify depriving the enemy of the services of his medical personnel for an indefinite period of time. The former clearly precludes the absolute freedom of movement of this medical personnel in the theater of war, even though claiming to be engaged in collecting, aiding, or removing the wounded and sick. Medical personnel of the enemy persisting in approaching places after being ordered to halt may be fired on as an extreme measure. There is nothing in the Geneva convention conferring immunity from search of its medical personnel and units, and they may be stopped by the same means as a ship.

141. Detention and Route of Return. The medical personnel of a force which capitulates may be detained to attend the sick and wounded included in the surrender and sent back gradually. It is not left to this captured personnel to choose its own route, or the time of its return, both of which are determined by the captor in conformity to military exigencies.³⁰

142. Pay and Allowances. G. C., art. 13. While they remain in his power, the enemy will secure to the personnel mentioned in article 9 the same pay and allowances to which persons of the same grade in his own army are entitled.

143. Personnel of Aid Societies Not Included. The foregoing article has no application to the personnel of voluntary aid societies, since it is limited exclusively to those of article 9.

MEDICAL MATÉRIEL.

144. Mobile Formations. G. C., art. 14. If mobile sanitary formations fall into the power of the enemy, they shall retain their matériel, including the teams, whatever may be the means of transportation, and the conducting personnel. Competent military authority, however, shall have the right to employ it in caring for the sick and wounded. The restitution of the matériel shall take place in accordance with the conditions prescribed for the sanitary personnel, and, as far as possible, at the same time.

145. Limit on Obligation. The obligation to return the teams of mobile sanitary formations is applicable to teams secured by requisition, but there is no

²⁸ Vide Geneva Conference Actes, p. 115.

²⁹ Vide G. O. 170, Dec. 27, 1911, W. D., par. 2, proclamation of President.

³⁰ Under the convention of 1864 medical personnel (arts. 3 and 4) might and did demand to be sent back to the outposts of their own army. The manifest impracticability of this rule and forced noncompliance at times caused the modification adopted in 1906. Vide Opp., Land Warfare, p. 46, par. 196 and note; Ariga, pp. 197, 206, 207, where instances are set forth.

obligation to provide teams to facilitate the return of the matériel of captured mobile sanitary formations should they have lost all or part of their own animals by casualties."

146. Fixed Establishments. G. C., art. 15. Buildings and matériel pertaining to fixed establishments shall remain subject to the laws of war, but can not be diverted from their use so long as they are necessary for the sick and wounded. Commanders of troops engaged in operations, however, may use them, in case of important military necessity, if, before such use, the sick and wounded who are in them have been provided for."

147. Disposition of Buildings and Material. The buildings of fixed medical establishments, hospitals, and depots can not, from their nature, be sent back to the enemy. It is contemplated that they shall be used for medical purposes so long as necessary for the wounded and sick, except in cases of urgent military necessity; but if other arrangements are made for the welfare of the wounded and sick found in them, there is nothing to prohibit the fortification and use of such buildings by the captor. The matériel in such hospital or other fixed sanitary establishment follows the fate of the buildings and becomes the property of the captor.

148. Matériel of Volunteer Aid Societies. G. C., art. 16. The matériel of aid societies admitted to the benefits of this convention, in conformity to the conditions therein established, is regarded as private property and, as such, will be respected under all circumstances, save that it is subject to the recognized right of requisition by belligerents in conformity to the laws and usages of war.

149. Uncertainty as to the Rule. There is a marked distinction as to treatment accorded to matériel of mobile sanitary formations, of fixed establishments, and of convoys for the evacuation of the sick and wounded; and since volunteer aid societies employ matériel in the same units, it is uncertain what treatment should be accorded it when found in fixed establishments and with convoys. It is believed that this matériel should be treated under all circumstances as private property; but, wherever found, it is subject to requisition."

" Ariga, pp. 206, 207, relates that after the Battle of Mukden the Japanese provided sufficient transport for 60 Russian personnel to return direct to their army, but sent the remaining 710 persons through Chinese territory. Vide also Opp., *Land Warfare*, par. 204 and note. Every assistance practicable should be rendered for the return in such cases on account of the sick and wounded.

" " This article applies only to military hospitals. In conformity with art. 56, R. G. T., there is no authority for taking possession of hospitals which are utilized in time of peace for civilian sick. These hospitals must be maintained for their ordinary purposes. Although they can not be diverted from their primitive object, they can, however, be used by the military under requisition." Vide *Conventions Internationales concernant La Guerre sur Terre*, p. 70. Also " *Les Lois*," etc., by Jacomet, p. 51, art. 45.

" *Land Warfare*, Opp. p. 48, par. 209 and note e. " The difficulties of applying this clause will be great, for in some armies, notably the Austro-Hungarian, the Red Cross societies provide a considerable portion of the transport and other matériel of the regular field medical units. Although not so stated in the convention, the medical matériel of voluntary aid societies should only be requisitioned for the needs of the Army medical service and not for those of the fighting units."

Mr. Holland, in his *War on Land*, p. 34, par. 57, says: " The matériel of aid societies, when employed in mobile units, would of course be restored in pursuance of Art. XIV, G. C. The treatment which it should receive when employed in fixed military establishments is not so obvious. Should it share the fate of such establishments under Art. XV, G. C.? This might be a discouragement to voluntary aid. Or should it be exempt from confiscation? The latter

150. Convoys of Evacuation. G. C., art. 17. Convoys of evacuation shall be treated as mobile sanitary formations subject to the following special provisions:

1. A belligerent intercepting a convoy may, if required by military necessity, break up such convoy, charging himself with the care of the sick and wounded whom it contains.

2. In this case the obligation to return the sanitary personnel, as provided for in article 12, shall be extended to include the entire military personnel employed, under competent orders, in the transportation and protection of the convoy.

The obligation to return the sanitary matériel, as provided for in article 14, shall apply to railway trains and vessels intended for interior navigation which have been especially equipped for evacuation purposes, as well as to the ordinary vehicles, trains, and vessels which belong to the sanitary service.

Military vehicles, with their teams, other than those belonging to the sanitary service, may be captured.

The civil personnel and the various means of transportation obtained by requisition, including railway matériel and vessels utilized for convoys, are subject to the general rules of international law.⁴⁴

151. Power of Belligerent Over Convoy. The belligerent can not only break up the convoy but can also detain it for a definite period of time, confine it to a certain route, or designate the place where it is to report. This was not authorized under the G. C. of 1864.⁴⁵

CONVOY OF EVACUATION.

152. Means of Conveyance. Conveyance may take place by road, by railway, or by water, but to enjoy the benefit of this article must not be combined with or used for the transportation of troops, of supplies, or employed in any other connection with any military operation.

153. The Personnel. The personnel of the convoy may be—

1. Medical, such as those mentioned in articles 9, 10, and 11, which should be restored in accordance with article 12; or,

2. Railway, loaned for transport purposes, which should be restored under article 14; or,

3. Military guards, which should be restored under article 9; or,

4. Civil requisitioned, which should be released, if not again requisitioned by the captor, article 14.

154. The Matériel. The matériel may belong to—

1. The regular medical service of the enemy, or to aid societies recognized by him, in either of which cases it should be restored under article 14; or,

alternative is accepted in this article, although belligerents may thus be tempted to protect matériel properly belonging to their medical service, by assigning it over to volunteer societies."

The French, in *La Guerre sur Terre*, p. 71, says: "Nothing has been definitely decided as to the juridical situation of fixed establishments and formations of aid societies. By analogy to Arts. XV and XVI, G. C., and to Art. 56, R. G. T., it must be respected in the same manner as private property. Possession can be taken of it, but always on condition of not deflecting it from its primitive purposes as soon as it may be needed."

Vide G. C., Arts. 14, 15, and 17, pars. 144, 146, 147, and Appendix 9.

⁴⁴There is no signal, or generally recognized method, for stopping these transports, but the practice is to fire across their front as is done in stopping naval vessels. Vide ante par. 140.

⁴⁵*La Guerre sur Terre*, p. 72.

2. May consist of things requisitioned; that is, carriages, boats, etc., which must be restored in accordance with article 14; or,

3. May consist of carriages, with their teams, borrowed from military units, which are then subject to capture.²⁷

THE DISTINCTIVE EMBLEM.

155. The Red Cross. G. C., art. 18. Out of respect to Switzerland the heraldic emblem of the red cross on a white ground, formed by the reversal of the Federal colors, is continued as the emblem and distinctive sign of the sanitary service of armies.²⁸

156. Where Employed. G. C., art. 19. This emblem appears on flags and brassards as well as upon all matériel appertaining to the sanitary service, with the permission of the competent military authority.

157. The Brassard. G. C., art. 20. The personnel protected in virtue of the first paragraph of article 9, and articles 10 and 11, will wear attached to the left arm a brassard bearing a red cross on a white ground, which will be issued and stamped by competent military authority, and accompanied by a certificate of identity in the case of persons attached to the sanitary service of armies who do not have military uniform.²⁹

158. Brassard to be Fixed. The convention of 1864 with regard to the use of the brassard differs from that of 1906 in that the latter requires that it shall be fixed to the arm and shall be permanently worn.

159. Precautions in Issue of Brassards. For the protection of persons to whom brassards are issued and to prevent their improper use by spies and others, as well as to conform to the requirements of the above article, a register should be kept showing the names and description of the persons to whom brassards have been issued. The brassard should be stamped with a special mark or number by the War Department. In the case of persons not wearing a military uniform a certificate must be issued containing the name, description, and number of the person to whom issued.³⁰

The Medical Department is charged with the duty of providing, stamping, and delivering brassards to all persons entitled to neutrality (protection) by virtue of the first paragraph of article 9 and articles 10 and 11 of the Geneva Convention (1906), and of providing and delivering necessary certificates of identity to persons attached to the sanitary service who do not have a military uniform.³¹

160. The Distinctive Flag. G. C., art. 21. The distinctive flag of the convention can only be displayed over the sanitary formations and establishments which the convention provides shall be respected, and with the consent of the military authorities. It shall be accompanied by the national flag of the belligerent to whose service the formation or establishment is attached.

Sanitary formations which have fallen into the power of the enemy, however,

²⁷ Holland, War on Land, p. 35, art. 58.

²⁸ Turkey acceded to the Geneva Convention of 1906 on August 24, 1907, making the reservation, however, "that its armies will use the emblem of the red crescent for the protection of its ambulances"; adding: "It is nevertheless well understood that the Imperial Government will scrupulously respect the inviolability of the Red Cross flag."

Persia adopted in lieu of the red cross a red lion combined with a red sun. Vide Spaight, War Rights on Land, p. 456. Opp., Land Warfare, par. 210 and note. Holland, War on Land, par. 59, p. 36. Les Lois, Jacomet, art. 48.

²⁹ For dimensions of brassards, see General Orders, No. 84, War Department, May 6, 1906.

³⁰ For form of this certificate, see Appendix A, this chapter.

³¹ G. O., No. 27, W. D., 1909, par. 1.

shall fly no other flag than that of the Red Cross so long as they continue in that situation."

161. Flags Designated. "The flag of the Geneva Convention, to be used in connection with the national flag in time of war with a signatory of the convention, will be as follows:

"For general hospitals, white bunting, 9 by 5 feet, with a red cross of bunting 4 feet high and 4 feet wide in the center; arms of cross to be 16 inches wide.

"For field hospitals, white bunting, 6 by 4 feet, with a red cross of bunting 3 feet high and 3 feet wide in the center; arms of cross to be 12 inches wide.

"For ambulances and for guidons to mark the way to field hospitals, white bunting, 28 by 16 inches, with a red cross of bunting 12 inches high and 12 inches wide in the center; arms of cross to be 4 inches wide."

162. Military Hospital Ships. Convention X, Hague, 1907, Article V. Military hospital ships shall be distinguished by being painted white outside with a horizontal band of green about a meter and a half in breadth.

The ships mentioned in articles 2 and 3 (i.e., hospital ships, equipped wholly or in part at the expense of private individuals or officially recognized relief societies) shall be distinguished by being painted white outside, with a horizontal band of red about a meter and a half in breadth.

The boats of the ships above mentioned, as also small craft which may be used for hospital work, shall be distinguished by similar painting.

All hospital ships shall make themselves known by hoisting, with their national flag, the white flag with a red cross provided by the Geneva Convention, and, further, if they belong to a neutral State, by flying at the mainmast the national flag of the belligerent under whose control they are placed.

Hospital ships which, in the terms of article 4, are detained by the enemy, must haul down the national flag of the belligerent to whom they belong.

The ships and boats above mentioned which wish to insure by night the freedom from interference to which they are entitled must, subject to the assent of the belligerent they are accompanying, take the necessary measures to render their special painting sufficiently plain.

163. Sanitary Formations of Neutral Countries. G. C., art. 22. The sanitary formations of neutral countries which, under the conditions set forth in article 11, have been authorized to render their services, shall fly, with the flag of the convention, the national flag of the belligerent to which they are attached. The provisions of the second paragraph of the preceding article are applicable to them.

164. Protection and Use of the Flag. G. C., art. 23. The emblem of the red cross on a white ground and the words "Red Cross" or "Geneva Cross" may only be used, whether in time of peace or war, to protect or designate sanitary formations and establishments, the personnel and matériel protected by the convention."

"No regulation has been prescribed for flying this flag with the national flag.

"A. R., 1913, par. 225.

At night every sanitary formation, fixed or movable, is designated by means of lights (lanterns). The lights used in this country are green. F. S. R., 1914, Appendix 5.

There seems to be no fixed rule among nations in regard to this designation at night. In France they are designated by two lights—red and white—the one above the other. In Great Britain by two white lights. In some other countries by one or more red lights.

"Since the "Geneva" or "Red Cross" is the distinctive mark of the medical service of armies, some additional mark, such as the name of the society, should be added to it in order to secure proper protection for the matériel of such volunteer aid societies. The "Geneva" or "Red Cross" alone is not sufficient to distinguish such matériel from that of the regular medical service.

THE DEAD.

165. Protection of the Dead. G. C., art. 8. After each engagement the commander in possession of the field shall take measures * * * to insure protection against pillage and maltreatment * * * for the dead.

He will see that a careful examination is made of the bodies of the dead prior to their interment or incineration."

166. Disposition of Marks, Tokens, Letters of the Dead. G. C., art. 4. As soon as possible each belligerent shall forward to the authorities of their country or army the marks or military papers of identification found upon the bodies of the dead. They (the belligerents) will collect all objects of personal use, valuables, letters, etc., which are found upon the field of battle, or have been left by the sick or wounded who have died in sanitary formations or other establishments, for transmission to persons in interest through the authorities of their own country.

167. Application and Carrying Out of the Convention. G. C., art. 24. The provisions of the present convention are obligatory only on the contracting powers, in case of war between two or more of them. The said provisions shall cease to be obligatory if one of the belligerent powers should not be signatory to the convention."

168. Commanders to Carry Out Details and Provide for Unforeseen Cases. G. C., art. 25. It shall be the duty of the commanders in chief of the belligerent armies to provide for the details of execution of the foregoing articles, as well as for unforeseen cases, in accordance with the instructions of their respective Governments, and conformably to the general principles of this convention.

169. Must Instruct Troops and Notify Inhabitants. G. C., art. 26. The signatory Governments shall take the necessary steps to acquaint their troops, and particularly the protected personnel, with the provisions of this convention and to make them known to the people at large.

170. Prevention of Abuses and Infractions. G. C., art. 27. Signatory powers whose legislation may not now be adequate engage to take or recommend to their legislatures such measures as may be necessary to prevent the use, by private persons or by societies other than those upon which this convention confers the right thereto, of the emblem or name of the Red Cross or Geneva Cross, particularly for commercial purposes by means of trade-marks or commercial labels.

The prohibition of the use of the emblem or name in question shall take effect from the time set in each act of legislation, and at the latest five years after this convention goes into effect. After such going into effect, it shall be unlawful to use a trade-mark or commercial label contrary to such prohibition."

171. Repression of Acts of Pillage.—G. C., art. 28. In the event of their military penal laws being insufficient, the signatory Governments also engage to take, or to recommend to their legislatures, the necessary measures to repress, in time of war, individual acts of robbery and illtreatment of the sick and wounded of the armies, as well as to punish, as usurpations of military insignia, the wrongful use of the flag and brassard of the Red Cross by military persons or private individuals not protected by the present convention."

"The evident intent of this article is to insure that life is extinct before burial or cremation. There is no express statement in the Geneva Convention that the dead shall be buried or cremated, although this is the practice of the majority of civilized States. For rules prescribed by the U. S. for clearing the battle field see F. S. R., 1914, pars. 231, 349, 350. "Vide ante, par. 100 and note.

"The American National Red Cross was incorporated under act approved Jan. 5, 1905, and amended by Ch. 372, June 23, 1910 (36 Stat., 604).

"Aside from the legislation referred to in note, par. 133, no special legislation has been enacted by Congress. Vide ante, par. 112 and note, also post, par. 374 and note.

APPENDIX A.

Name No.

Organization

Capacity

Sex

Age

Color of eyes

Color of hair

Height

Weight

Race

Finger print, }
right index. }

Remarks: (Note scars, etc.)

.....

Place

Date

Issued by

Binding space.

Form 61.
Medical Department, U. S. Army. (Revised Apr. 14, 1915.)

Certificate of Identity, } Place
No. } Date 19..

I certify that is attached to the sanitary service of
(Given name) (Surname)

the United States Army, is authorized to accompany the
(Designate the organization to which attached.)

in the capacity of, and is entitled to the privileges and immunities provided in Chapter III of the International Red Cross Convention of 1906. A brassard, as described in Article 20 thereof, which bears the same number as this certificate, has been issued to the person named. Identification data:

(Describe function.)

(Sex) (Age) (Color of eyes) (Color of hair) { Finger print, }
(Height, approx.) (Weight, approx.) (Race) } right index. }

Remarks:
(Include here notation of scars, etc., visible when clothed, which will aid in identification.)

(Signature line)

(Title, etc., line)

To be 4 by 8 inches, perforated as indicated, bound in books to retain stubs, and printed on light-weight bond paper. Certificate to be numbered at time of issue to correspond to accompanying brassard and carried in a small metal container suspended around the neck.

CHAPTER VI, SECTION I.

THE CONDUCT OF HOSTILITIES.

172. Means of Conducting Hostilities. H. R. XXII. The right of belligerents to adopt means of injuring the enemy is not unlimited.

173. Limitations on Means of Carrying on War. On general principles it is permissible to destroy your enemy and it is immaterial how this is accomplished. But in practice the means employed are definitely restricted by international declarations and conventions, and by the laws and usages of war. Generally speaking, the means to be employed include both force and stratagem, and there is included therein the killing and disabling the enemy, forcing him by defeat and exhaustion to surrender, the investment, bombardment or siege of his fortresses and defended places, the damage, destruction, and appropriation of property, and injury to the general resources of the country.¹

174. Discharging Explosives from Balloons. H. D. XIV, 1907. The contracting powers agree to prohibit, for a period extending to the close of the third peace conference, the discharge of projectiles and explosives from balloons or by other new methods of a similar nature.

175. There were three declarations included in The Hague Conference of 1899 with reference to the improper use of projectiles, but the above is the only one of the three to which the United States was a party. This may be said to be of comparatively little value, since it has only ten signatories and the United States and Great Britain are the only two of the great powers who have ratified the same, and then, too, the same object is substantially accomplished under H. R. XXV.²

¹ Flad Oyen. (1 Rob., 134); G. O. 100, 1863, art. 17. "War is not carried on by arms alone. It is lawful to starve the hostile belligerent, armed or unarmed, so that it leads to the speedier subjection of the enemy."

² For other conventions, see declarations 2 and 3 at The Hague, of 1899, as follows: 2. "The contracting powers renounce the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases." 3. "The contracting powers renounce the use of bullets which expand in the human body, such as bullets with a hard envelope which does not entirely cover the core, or is pierced with incisions."

The United States refused to adhere to these provisions, and its representatives presented as a substitute the following:

"The use of bullets which inflict unnecessarily cruel wounds—such as explosive bullets, and, in general, every kind of bullet which exceeds the limit necessary for placing a man immediately hors de combat—should be forbidden."

The United States has, however, by convention or otherwise, adhered in its wars to the principle announced in the proposed amendment. Vide Am. Jour. Int. Law (Gen. G. B. Davis, vol. 2, pp. 74-76).

The following Declarations of the St. Petersburg Convention were never ratified by the United States, and are now considered as limiting too much the legitimate methods of making war:

"Considering that the progress of civilization should have the effect of alleviating as much as possible the calamities of war;

"That the only legitimate object which States should set before themselves during war is to weaken the military forces of the enemy;

"That for this purpose it is sufficient to disable the greatest possible number of men;

"That this object would be exceeded by the employment of arms which

176. The Use of Poison. H. R. XXIII, par. (a). In addition to the prohibitions provided by special conventions, it is especially forbidden * * * to employ poison or poisoned weapons.

177. Application of Rule. This prohibition extends to the use of means calculated to spread contagious diseases, and includes the deliberate contamination of sources of water by throwing into same dead animals and all poisonous substances of any kind, but does not prohibit measures being taken to dry up springs or to divert rivers and aqueducts from their courses.³

178. The Use of Treachery. H. R. XXIII, par. (b). It is especially forbidden * * * to kill or wound treacherously individuals belonging to the hostile nation or army.⁴

179. Assassination and Outlawry. Civilized nations look with horror upon offers of rewards for the assassination of enemies, and the perpetrator of such an act has no claim to be treated as a combatant, but should be treated as a criminal. So, too, the proclaiming of an individual belonging to the hostile army, or a citizen or subject of the hostile government, an outlaw, who may be slain without trial by a captor. The article includes not only assault upon individuals, but as well any offer for an individual "dead or alive."⁵

180. Injuring an Enemy Who Has Surrendered. H. R. XXIII, par. (c). It is especially forbidden * * * to kill or wound an enemy who, having laid down his arms, or having no longer means of defense, has surrendered at discretion.

181. Penalty for Violation. War is for the purpose of overcoming armed resistance, and no vengeance can be taken because an individual has done his duty to the last. And "whoever intentionally inflicts additional wounds on an enemy already wholly disabled, or kills such an enemy, or who orders or encourages soldiers to do so, shall suffer death, if duly convicted, whether he belongs to the Army of the United States or is an enemy captured after having committed the misdeed."⁶

182. Refusal of Quarter. H. R. XXIII, par. (d). It is especially forbidden * * * to declare that no quarter will be given.

would uselessly aggravate the sufferings of disabled men, or render their death inevitable; and

"That the employment of such arms would, therefore, be contrary to the laws of humanity."

³ The original or base of this prohibition is found in G. O. 100, of 1863, art. 70, as follows: "The use of poison in any manner, be it to poison wells, or food, or arms, is wholly excluded from modern warfare. He that uses it puts himself out of the pale of the laws and usages of war."

⁴ It would be treacherous to call out, "Do not fire; we are friends," and then fire a volley. To feign death and then fire at an enemy. Land Warfare, Opp. 37, note (b).

⁵ Vide Laws of War on Land, Holland, p. 43; Land Warfare, Opp. arts. 46 and 47; Les Lois, Jacomet, p. 58, art. 5; G. O. 100, 1863, par. 148. "The law of war does not allow proclaiming either an individual belonging to the hostile army or a citizen or a subject of the hostile Government an outlaw who may be slain without trial by any captor, any more than the modern law of peace allows such intentional outlawry; on the contrary it abhors such outrage. The sternest retaliation should follow the murder committed in consequence of such proclamation, made by whatever authority. Civilized nations look with horror upon offers of rewards for the assassination of enemies as relapses into barbarism."

⁶ G. O. 100, 1863, art. 71. Vide also G. C., arts. 3 and 28, pars. 110, 165, and 171, supra.

183. It is no longer contemplated that quarter will be refused to the garrison of a fortress carried by assault, to the defenders of an undefended place who did not surrender when threatened with bombardment, or to a weak garrison which obstinately and uselessly persevered in defending a fortified place against overwhelming odds.¹

184. **Employment of Arms, Etc., Causing Unnecessary Injury.** H. R. XXIII, par. (e). It is especially forbidden * * * to employ arms, projectiles, or material, of a nature to cause unnecessary injury.

185. **What Included in Prohibition.** The foregoing prohibition is not intended to apply to the use of explosives contained in artillery projectiles, mines, aerial torpedoes, or hand grenades, but it does include the use of lances with barbed heads, irregular-shaped bullets, projectiles filled with glass, etc., and the use of any substance on these bullets that would tend to unnecessarily inflame a wound inflicted by them, and the scoring of the surface or filing off the ends of the hard case of such bullets. It is believed that this prohibition extends to the use of soft-nosed and explosive bullets, mentioned in paragraph 175 and note.

186. **Train Wrecking, Etc.** Train wrecking and setting on fire camps or military depots are legitimate means of injuring the enemy when carried out by the members of the armed forces. Wrecking of trains should be limited strictly to cases which tend directly to weaken the enemy's military forces.²

¹ Land Warfare, Opp. p. 24, par. 49. But see G. O. 100, 1863, art. 62: "All troops of the enemy known or discovered to give no quarter in general, or to any portion of the army, receive none."

Art. 60. "It is against the usage of modern warfare to resolve, in hatred and revenge, to give no quarter. No body of troops has the right to declare that it will not give, and therefore will not expect, quarter; but a commander is permitted to direct his troops to give no quarter, in great straits, when his own salvation makes it impossible to cumber himself with prisoners."

Art. 63. "Troops who fight in the uniform of their enemies, without any plain, striking, and uniform mark of distinction of their own, can expect no quarter." See also arts. 63 and 66.

All of the foregoing rules are now superseded by The Hague rule. Vide par. 368, *infra*.

² Opp., Land Warfare, p. 24, par. 45. Mr. Spaight, War Rights on Land, on p. 127, says: "Though railway breaking is a legitimate act of warfare, designedly to wreck a hospital train, or a train which is known to be conveying peaceable inhabitants, would not be legitimate, for it would lack the essential requirement of being intended to weaken the enemy's military forces. But, generally speaking, railroads being to-day an all-important means of warfare, such design would have to be clearly proved against a belligerent to condemn him for exercising his broad war right to interrupt his enemy's communications. It is a very sad but inevitable consequence of a lawful act that it may endanger or kill persons who are strangers to hostilities. * * * A belligerent has a war right not only to stop a train, but to blow it sky high, if it carries fighting troops or war material or supplies, and this war right he will hardly forego for humanitarian reasons. The strategic use of railways is so important that they must be regarded, in a country where active hostilities are going on, as a specific means of warfare, and only secondarily as fulfilling the ordinary functions of railways in peace time. As I have said before, noncombatants must travel by train at their risk when there is war in the land, and the only practical method of insuring their safety appears to be the sending ahead of a herald engine to test the line."

187. Subjects Not to be Compelled to Take Part in Operations Against Their Own Country. H. R. XXIII, last par. A belligerent is likewise forbidden to compel the nationals of the hostile party to take part in the operations of war directed against their own country, even if they were in the belligerent's service before the commencement of the war.

188. Interpretation of This Article. This article was introduced by Germany for the purpose of extending the principle of article 44 of The Hague Conference of 1899, which it was intended to replace, to all persons over whom a State exercised jurisdiction. The Austro-Hungarian amendment to insert the words "as combatants" after the words "take part" was rejected and the article passed substantially as proposed. The language used is still ambiguous, since it is uncertain whether it is unlawful to compel inhabitants of occupied territory to work on certain works that may be urgently required, such as roads and bridges which may be of ultimate military service, or whether these inhabitants can be compelled to act as guides by the enemy. This practice is still considered as admissible by Germany.*

CHAPTER VI, SECTION II.

STRATAGEMS.

189. H. R. XXIV. Ruses of war and the employment of measures necessary for obtaining information about the enemy and the country are considered permissible.

190. Good Faith. Absolute good faith with the enemy must be observed as a rule of conduct. Without it war will degenerate into excesses and violences, ending only in the total destruction of one or both of the belligerents."

191. In general, belligerents may resort to such measures for mystifying or misleading the enemy, which the enemy ought to take measures to secure himself against, such as the employment of spies, inducing soldiers to desert, to surrender, to rebel, or to give false information to the enemy.

192. Must Not Involve Treachery or Perfidy. The ruses of war are, however, legitimate so long as they do not involve treachery or perfidy on the part of the belligerent resorting to them. They are forbidden if they contravene any generally accepted rule."

The line of demarcation, however, between legitimate ruses and forbidden acts of treachery and perfidy is sometimes rather indistinct, and with regard to same the writers of authority have disagreed. For example: It would be an improper practice to secure an advantage of the enemy by deliberate lying which involves a breach of faith, or when there is a moral obligation to speak

* Vide War on Land. Holland, p. 44, art. 77. The Hague Peace Conferences, by Higgins, pp. 265-269, for further discussion. Kriegsbrauch, p. 48. Vide post discussion of H. R. 44, pars. 321-323 and notes.

"G. O. 100, 1863, art. 16. "It (military necessity) admits of deception, but disclaims acts of perfidy; and, in general, military necessity does not include any act of hostility which makes return to peace unnecessarily difficult." Land Warfare, Opp., pars. 140, 141: "Should it be found impossible to count on the loyalty of the adversary, there is grave danger of war degenerating into excesses and violence, to avoid which has been the aim of modern wars."

"To demand a suspension of arms and break it by surprise, or to violate a safe conduct or any other agreement in order to gain an advantage is an act of perfidy." (Land Warfare, Opp., par. 148.) Vide par. 232 infra.

the truth, such as declaring that an armistice had been agreed upon when such was not the case. On the other hand, it is a perfectly proper ruse to summon a force to surrender on the ground that it is surrounded, and thereby induce such surrender with a small force."

193. Legitimate Ruses. "Among legitimate ruses may be counted surprises; ambushes; feigning attacks, retreats, or flights; simulating quiet and inactivity; giving large outposts or a strong advanced guard to a small force; constructing works, bridges, etc., which it is not intended to use; transmitting false or misleading signals and telegraph messages, and sending false dispatches and newspapers, with a view to their being intercepted by the enemy; lighting camp fires where there are no troops; making use of the enemy's signals, bugle and trumpet calls, watchwords, and words of command; pretending to communicate with troops or reinforcements which have no existence; moving landmarks; putting up dummy guns or laying dummy mines; removing badges from uniforms; clothing the men of a single unit in the uniform of several different units so that prisoners and dead may give the idea of a large force." "

194. Use of Flags, Insignia, Military Uniforms of the Enemy. H. R. XXIII, par. (f). It is especially forbidden * * * to make improper use of a flag of truce, of the national flag, or of the military insignia and uniform of the enemy, as well as of the distinctive badges of the Geneva Convention.

195. Flags of Truce. Flags of truce must not be used surreptitiously to obtain military information or merely to obtain time to effect a retreat or secure reinforcements or to feign a surrender in order to surprise an enemy. An officer receiving them is not on this account absolved from the duty of exercising proper precautions with regard to them."

196. National Flags, Insignia, and Uniforms as a Ruse. In practice it has been authorized to make use of these as a ruse. The foregoing rule does not prohibit such use, but does prohibit their improper use. It is certainly forbidden to make use of them during a combat. Before opening fire upon the enemy

"H. R. XXIII, par. (b). Ante par. 178, G. O. 100, 1863, art. 101. "While deception in war is admitted as a just and necessary means of hostility, and is consistent with honorable warfare, the common law of war allows even capital punishment for clandestine or treacherous attempts to injure an enemy, because they are so dangerous, and it is so difficult to guard against them."

Vide also Hague Conference, 1899, p. 146.

"Land Warfare, Opp., par. 144.

"Ariga, p. 255 et seq., cites an example of the use of the flag of truce combined with the Red Cross flag at Tang-tsiatoun, near Mukden, and during the battle, which he considers as legitimate. March 7, about 1 o'clock p. m., some Russians hoisted the two flags and advanced toward the Japanese First Army and asked for a suspension of arms for several hours to remove the wounded and dead. Both armies were actually engaged in this work, so that the request was assented to without any defined agreement. When the Japanese resumed fire in the evening the Russians had withdrawn.

This informal suspension of arms was taken advantage of to retire unseen by the enemy, and it was upon this ground that it is considered lawful; that is, they can be taken advantage of to effect movements unseen by the enemy.

Vide G. O. 100, 1863, art. 114. "If it be discovered and fairly proved that a flag of truce has been abused for surreptitiously obtaining military knowledge, the bearer of the flag thus abusing his sacred character is deemed a spy.

"So sacred is the character of a flag of truce, and so necessary is its sacredness, that while its abuse is an especially heinous offense, great caution is requisite, on the other hand, in convicting the bearer of a flag of truce as a spy."

they must be discarded. Whether the enemy flag can be displayed and his uniform worn to effect an advance or to withdraw is not settled."

197. Practice as to Enemy Uniform in This Country. In this country it has always been authorized to utilize uniforms captured from the enemy, provided some striking mark or sign is attached to distinguish the American soldier from the enemy. All distinctive badges or marks of the enemy should be removed before making use of them. It is believed that such uniforms should not be used except in case of absolute necessity."

198. Improper Use of Distinctive Badges of Geneva Convention. The Red Cross flag must be limited to the protection of units and material provided for in the Geneva Convention. As examples of the improper use may be cited covering wagons containing ammunition or nonmedical stores, a hospital train used to facilitate the escape of combatants, firing from a tent or building flying the Red Cross flag, using a hospital or other building accorded such protection as an observatory or military office or store, or generally for committing acts of hostility."

CHAPTER VI, SECTION III.

ESPIONAGE AND TREASON.

199. Spies. H. R. XXIX. A person can only be considered a spy when, acting clandestinely or on false pretenses, he obtains or endeavors to obtain information in the zone of operations of a belligerent, with the intention of communicating it to the hostile party."

Thus, soldiers not wearing a disguise who have penetrated into the zone of operations of the hostile army, for the purpose of obtaining information, are not considered spies; similarly, the following are not considered spies: Soldiers and civilians, carrying out their mission openly, intrusted with the delivery of dispatches intended either for their own army or for the enemy's army. To this class belong likewise persons sent in balloons for the purpose of carrying

"The Germans hold that The Hague Rules forbid absolutely the use of the enemy's flag and uniforms. (*Kriegsbrauch*, p. 24.) The French manual (*La Guerre sur Terre*) says: "In all the wars since 1866 belligerents have made many complaints upon this subject" (p. 25, note). The English rule is as stated in the text. (*Land Warfare*, Opp., par. 152.)

G. O. 100, 1863, art. 65. "The use of the enemy's national standard, flag, or other emblem of nationality, for the purpose of deceiving the enemy in battle is an act of perfidy, by which they lose all claim to protection of the laws of war."

G. O. 100, 1863, art. 63. "Troops who fight in the uniform of their enemies, without any plain, striking, and uniform mark of distinction of their own, can expect no quarter."

"G. O. 100, 1863, art. 64. "If American troops capture a train containing uniforms of the enemy, and the commander considers it advisable to distribute them for use among his men, some striking mark or sign must be adopted to distinguish the American soldier from the enemy."

"G. O. 100, 1863, art. 117. "It is justly considered an act of bad faith, of infamy, or fiendishness, to deceive the enemy by flags of protection. Such act of bad faith may be good cause for refusing to respect such flags."

"Compare this definition with G. O. 100, 1863, art. 88. "A spy is a person who secretly, in disguise or under false pretenses, seeks information with the intention of communicating it to the enemy"

dispatches and, generally, of maintaining communications between different parts of an army or a territory.¹⁹

200. Recognition of Necessity for Obtaining Information. In the foregoing rule and in H. R. XXIV is distinct recognition of the necessity for employing spies and other secret agents for obtaining information about the enemy, so that the acquirement of such information by secret methods is regulated by the laws and usages of war.

201. Who Included in Definition. The definition above comprehends all classes, whether officer, soldier, or civilian, and, like the criminal law, makes no distinction as to sex.²⁰ As to the offense, it limits the same to securing information clandestinely or on false pretences in the zone of operations. It does not include all cases in which a person makes or endeavors to make unauthorized or secret communications to the enemy. These latter cases must therefore be dealt with under the laws relating to treason and espionage.²¹

202. Treason. All unauthorized or secret communication with the enemy is considered treasonable by the law of war. Foreign residents in an invaded or occupied territory, or foreign visitors in the same, can claim no immunity from this law. They may communicate with foreign parts or with the inhabitants of the hostile country so far as military authority permits, but no further.²²

203. War Traitor. A traitor under the law, or a war traitor, is a person in a place or district under martial law (military government), who, unauthorized by the military commander, gives information of any kind to the enemy or holds intercourse with him.²³

204. Subject Giving Information to Own Government. If the citizen or subject of a country or place invaded or conquered gives information to his own Government, from which he is separated by the hostile army, or to the army of his Government, he is a war traitor.²⁴

205. Guide As. If a citizen of a hostile and invaded district voluntarily serves as a guide to the enemy, or offers to do so, he is deemed a war traitor.²⁵

¹⁹ The fact of being in the enemy's lines dressed as a civilian, or wearing the enemy's uniform, is presumed to constitute a spy, but it is possible to rebut this presumption by proof of no intention to obtain military information. On the other hand, the fact that a person charged with being a spy is in the uniform of his State does not render it impossible for him to be a spy in fact, since he may have gained admission into the enemy's lines under the privileges of the Red Cross and have taken advantage of the opportunity afforded him for obtaining information.

Likewise the article does not preclude in any sense the use of balloons for espionage and the persons so using them from being treated as spies. Disimulation of the object sought is the principal characteristic of the offense of the spy. Vide *Land Warfare, Opp.*, pars. 162-165. *War Rights on Land, Spaight*, pp. 203-215. *War on Land, Holland*, pp. 47-48. *Les Lois, Jacomet*, pp. 65-66.

²⁰ G. O. 100, 1863, art. 102: "The law of war, like the criminal law regarding other offenses, makes no difference on account of the difference of sexes concerning the spy, the war traitor, or the war rebel."

²¹ In occupied territory offenses relating to communication with the enemy will be punished as treason by the occupying forces. If committed in the home country, the laws relating to that subject or internal laws will govern. *Land Warfare, Opp.*, par. 167 and note.

²² G. O. 100, 1863, art. 98.

²³ G. O. 100, 1863, art. 90.

²⁴ G. O. 100, 1863, art. 92.

²⁵ G. O. 100, 1863, art. 95.

206. Punishment of Spies. The spy is punishable with death, whether or not he succeed in obtaining the information or in conveying it to the enemy.²⁴

207. Punishment of Treason. The war traitor is always severely punished. If his offense consists in betraying to the enemy anything concerning the condition, safety, operations, or plans of the troops holding or occupying the place or district, his punishment is death.²⁵

208. Spy Must be Tried. H. R. XXX: A spy taken in the act should not be punished without previous trial.²⁶

209. Spy Immune from Punishment After Joining His Own Army. H. R. XXXI: A spy who, after rejoining the army to which he belongs, is subsequently captured by the enemy, is treated as a prisoner of war, and incurs no responsibility for his previous acts of espionage.²⁷

210. Immunity Not Applicable to Treason. This immunity does not extend to persons guilty of treason, who may be arrested at any place or any time within the jurisdiction. And it is not necessary for traitors to be caught in the act in order that they may be punished.²⁸

211. Assisting Espionage Punishable.—Assisting or favoring espionage or treason and knowingly concealing a spy may be made the subject of charges; and such acts are by the customary laws of war equally punishable.²⁹

CHAPTER VI, SECTION IV.

BOMBARDMENTS, ASSAULTS, AND SIEGES.

212. Bombardment of Undefended Places Forbidden. H. R. XXV: The attack, or bombardment, by whatever means, of towns, villages, dwellings, or buildings which are undefended is prohibited.³⁰

²⁴ G. O. 100, 1863, art. 88, par. 2. See also Rev. Stat. U. S., 1343: "All persons who, in times of war or rebellion against the supreme authority of the United States, shall be found lurking or acting as spies in or about any of the fortifications, posts, quarters, or encampments of any of the armies of the United States, or elsewhere, shall be triable by a general court-martial or by a military commission, and shall on conviction thereof suffer death."

²⁵ G. O. 100, 1863, art. 91.

²⁶ No one else should be punished for this offense of espionage or treason without previous trial. (Vide Hague Conference, 1899, p. 146.)

²⁷ This immunity extends only to previous acts of espionage, but does not extend to other offenses he may have committed, such as murder, etc. Hague Conference, 1899, p. 146.

²⁸ For practice of the Japanese Army, which is in accord with the text, see Ariga, pp. 395-397.

²⁹ Ariga, pp. 396-397, and Land Warfare, Opp., par. 172.

³⁰ Compare this article with the following from Convention IX of The Hague, 1907, "Bombardment by naval forces in time of war:

"Art. I. The bombardment by naval forces of undefended ports, towns, villages, dwellings, or buildings is forbidden.

"A place can not be bombarded solely because automatic submarine contact mines are anchored off the harbor.

"Art. II. Military works, military or naval establishments, depots of arms or war matériel, workshops or plants which could be utilized for the needs of the hostile fleet or army, and the ships of war in the harbor, are not, however, included in this prohibition. The commander of a naval force may destroy them with artillery, after a summons followed by a reasonable time, if all other means

213. The Use of Balloons. The addition of the words "by whatever means" was for the purpose of making it clear that the bombardment of these undefended localities from balloons or aeroplanes is prohibited.²³

214. Defended Place Defined. Investment, bombardment, assault and siege have always been recognized as legitimate means of warfare, but under the foregoing rule their use is limited to defended places, which certainly will include the following:

(a) A fort or fortified place.

(b) A town surrounded by detached forts is considered jointly with such forts as an indivisible whole, as a defended place.

(c) A place that is occupied by a military force or through which such force is passing is a defended place. The occupation of such place by sanitary troops alone is not sufficient to consider it a defended place.

215. Throwing Projectiles from Balloons on Forts and Fortified Places. There is no prohibition in The Hague Rules or in other conventions against throwing authorized projectiles from balloons or aeroplanes into forts and fortified places.²⁴

216. Notice of Bombardment. H. R. XXVI. The officer in command of an attacking force must, before commencing a bombardment, except in case of assault, do all in his power to warn the authorities.

are impossible, and when the local authorities have not themselves destroyed them within the time fixed.

"He incurs no responsibility for any unavoidable damage which may be caused by a bombardment under such circumstances.

"If for military reasons immediate action is necessary, and no delay can be allowed the enemy, it is understood that the prohibition to bombard the undefended town holds good, as in the case given in paragraph 1, and that the commander shall take all due measures in order that the town may suffer as little harm as possible.

"Art. III. After due notice has been given, the bombardment of undefended ports, towns, villages, dwellings, or buildings may be commenced, if the local authorities, after a formal summons has been made to them, decline to comply with requisitions for provisions or supplies necessary for the immediate use of the naval force before the place in question.

"These requisitions shall be in proportion to the resources of the place. They shall only be demanded in the name of the commander of the said naval force, and they shall, as far as possible, be paid for in cash; if not, they shall be evidenced by receipts.

"Art. IV. The bombardment of undefended ports, towns, villages, dwellings, or buildings for the nonpayment of money contributions is forbidden."

Holland, War on Land, says: "A place, although not fortified, may be bombarded if it is defended. This article is not to be taken to prohibit the use of any means for the destruction of buildings for military reasons. A place must not be bombarded with a view merely to the exaction from it of a ransom." (Art. 80, note.) Mr. Oppenheim, Land Warfare, art. 118, says: "It is not sufficient reason for bombardment that a town contains supplies of value to the enemy, or railway establishments, telegraphs, or bridges. They must, if it is necessary to do so, be destroyed by other means."

"The French Manual, by Lieut. Jacomet, art. 63, says: "It is forbidden therefore to throw projectiles from a balloon or aeroplane upon towns, villages, dwellings, or buildings which are undefended, unless it is a question of immovable property of immediate use to the enemy's army."

"Les Lois, Jacomet, art. 59. But see ante, pars. 174-175, and note; also H. D. I. 1907, appendix 7, p. 181.

217. The American Rule. Commanders, whenever admissible, inform the enemy of their intention to bombard a place, so that the noncombatants, and especially the women and children, may be removed before the bombardment commences. But it is no infraction of the common law of war to omit thus to inform the enemy. Surprise may be a necessity.*

218. No Rule Compelling Belligerent to Authorize Population to Leave Besieged Place. There is no rule of law which compels the commander of an investing force to authorize the population, including women, children, aged, sick, wounded, subjects of neutral powers, or temporary residents, to leave the besieged locality, even when a bombardment is about to commence. It is entirely within the discretion of the besieging commander whether he will permit them to leave or not and under what conditions.**

* G. O. 100, 1863, art. 19.

Mr. Oppenheim (Land Warfare, par. 124 and note) thus states the rule in Great Britain: "If military exigencies permit, the commander of an attacking force must do all in his power to warn the authorities before commencing a bombardment, unless surprise is considered an essential element of success. There is, however, no obligation to give notice of an intended assault." No notice was given of the bombardment of Paris in 1870.

** For action of Gen. Scott in refusing truce to consuls at Vera Cruz, see Dig. Int. Law, Moore, sec. 1112. Scott Autobiography, II, pp. 426-428.

The following are the conditions proposed by the Japanese at Port Arthur:

August 16, 1914.

From General Headquarters of the Japanese Army investing Port Arthur.

To the General and Admiral highest in rank, commanding the Imperial Russian Army and Navy at Port Arthur.

Your Excellencies: We have the honor to inform you herewith that it is the humane and magnanimous intention of H. M. the Emperor of Japan, to save from danger and accord protection to the women, children, priests, diplomats, military and naval attachés of neutral powers who are in Port Arthur and wish to avoid the dangers of the bombardment and assault.

In order to carry out the kind solicitation of H. M. the Emperor of Japan, we propose the following:

1. In case you should have the intention of taking advantage of the well-meaning offer of H. M. the Emperor of Japan, you will inform us as to the approximate number of persons who among the above mentioned ought to benefit thereby, and after having divided them into classes; youths of sixteen years or above are excluded from this privilege.

2. Your bearer of the flag of truce bringing the reply must arrive at the first line of the Japanese army, north of Chouet-si-ying, on the main route leading from Port Arthur to Kin-tcheou, to-morrow, August 17, 1904, before one minute after 6 a. m.

3. The persons specified above will, under the protection of a white flag, repair to the same place where they must arrive on August 17, 1904, before one minute after two o'clock in the afternoon.

4. A troop of our infantry will also go with a white flag and at the time stated to the same place to await the arrival of the persons already mentioned.

5. The persons so stated will each have the right to carry away a single pack of ordinary size, the contents of which can be examined if it is thought necessary.

6. These packs must not contain letters, documents or other written or printed matter relating directly to the war, under pain of confiscation.

7. The persons before specified will be protected and escorted by our troops

219. Diplomatic Agents of Neutrals. Diplomatic agents of a neutral power should not be prevented from leaving a besieged place before hostilities commence. This privilege can not be claimed while hostilities are in progress. The same privileges should properly be accorded to a consular officer of a neutral power. Should they voluntarily decide to remain, they must undergo the same treatment as other inhabitants."

220. Persons in Zone Between Troops. Persons dwelling in the zone between the opposing forces in the first stages of a siege are treated as inhabitants of the invaded locality.

221. Individuals Leaving Without Permission. Individuals who attempt to leave or enter a besieged place without obtaining the necessary permission are liable to be fired on and may be sent back into the besieged place or detained and put on trial as suspects.

222. Persons Expelled May be Sent Back. When a commander of a besieged place expels the noncombatants, in order to lessen the number of those who consume his stock of provisions, it is lawful, though an extreme measure, to drive them back, so as to hasten the surrender."

223. Not Compelled to Cease Fire When Expelled. It is not necessary to cease or relax fire because the enemy sends women and children out of his lines in order to get them to a place of safety, or to employ compassion, but fire must not be intentionally opened in their direction.

224. Can Forbid Communication with Besieged Place. The commander of the investing force has the absolute right to forbid all communication between the besieged place and the outside. The application of this rule to diplomatic envoys of neutral powers is unsettled."

stated in article 4, as far as Dalny, where arrangements will be made for their departure.

You are requested to accept or refuse the above propositions in a lump; no modifications can be brought about. If the bearer of the flag of truce referred to in article 2, does not arrive at the specified time, we shall consider our proposals rejected.

We avail ourselves of the opportunity to express to you the assurance of our respectful sentiments.

(S.) GENERAL BARON NOGHI,
Commanding the Japanese Army Investing Port Arthur.
(S.) ADMIRAL TOGO,

Commanding the Japanese Fleet Blockading the Liao-tong Peninsula.

" See G. O. 100, 1863, art. 87, post art. 233.

" G. O. 100, 1863, art. 18.

" On the 28th Sept., 1870, Count Bismarck, in reply to a request of diplomatic representatives of neutral States, shut up in Paris, to send out a courier once a week, said:

" The authorization of exchange of correspondence with a besieged fortress is not, in general, in accordance with the customs of war; although we willingly authorize the transmission of open letters of diplomatic agents, provided their contents are unobjectionable from a military viewpoint, I can not admit that the opinion of those who consider the interior of the fortifications of Paris as a suitable center for diplomatic relations has a good foundation."

Mr. Fish, in dispatch to Baron Gerolt, Nov. 21, 1870, said:

" Paris, however, is the capital of France. There the diplomatic representatives of neutral States had their residence prior to the investment. If they think proper to stay here while it lasts, they must expect to put up with the inconveniences necessarily incident to their choice. Among these, however, the stopping of communication with their Governments can not be recognized.

225. Buildings Dedicated to Religious Works, Etc., to be Spared. H. R. XXVII. In sieges and bombardments all necessary steps must be taken to spare, as far as possible, buildings dedicated to religion, art, science, or charitable purposes, historic monuments, hospitals, and places where the sick and wounded are collected, provided that they are not being used at the time for military purposes.

It is the duty of the besieged to indicate the presence of such buildings or places by distinctive and visible signs, which shall be notified to the enemy beforehand.

226. Use of Geneva Flag Limited to Hospitals, Etc. Only hospitals and places where the sick and wounded are located can be indicated by means of the red cross on a white ground. It is certainly desirable, in order to avoid injury from actual or erratic shots, that the sick and wounded in besieged places should be concentrated in some safe place, preferably in neutral territory, if possible to arrange.

227. Hague Convention IX, Art. V, par. 2, 1907. It is the duty of the inhabitants to indicate such monuments, edifices, or places by visible signs, which shall consist of large stiff rectangular panels divided diagonally into two colored triangular portions, the upper portion black, the lower portion white.⁴

228. Buildings Protected Can Not be Used for Military Purposes. The besieging forces are not required to observe the signs indicating inviolability of buildings that are known to be used for military purposes, such as quarters for officers and men, as observatories, or signaling stations.

229. Pillage Forbidden. H. R. XXVIII. The pillage of a town or place, even when taken by assault, is prohibited.⁴

CHAPTER VII, SECTION I.

INTERCOURSE BETWEEN BELLIGERENTS.

230. Nonintercourse the Rule. All intercourse between the territories occupied by belligerent armies, whether by traffic, by letter, by travel, or in any other way, ceases. This is the general rule, to be observed without special proclamation.¹

231. Exceptions to Rule. Exceptions to this rule, whether by safe-conduct, or permission to trade on a small or large scale, or by exchanging mails, or by travel from one territory into the other, can take place only according to agreement approved by the Government or by the highest military authority. Contraventions of this rule are highly punishable.²

232. Good Faith Essential. It is absolutely essential in all non-hostile relations that the most scrupulous good faith shall be observed by both parties,

* * * The undersigned is consequently directed to claim that the right of correspondence between the representatives of neutral powers at Paris and their Governments is a right sanctioned by public law." See Moore's Dig. Int. Law, sec. 675.

* The foregoing rule adopted in this convention for naval warfare should be adopted for protecting buildings under bombardment in land warfare.

⁴ Vide *infra*, par. 339 and note.

¹ G. O. 100, 1863, art. 86, par. 1. See also the following cases: *The Rapid* (8 Cranch, 155); *The Julia* (8 Cranch, 181); *Montgomery v. U. S.* (8 Wall., 185); *McKee v. U. S.* (8 Wall., 163); *Hamilton v. Dillin* (21 Wall., 73); *Griggs* (22 Op. Att. Gen., 268).

² G. O. 100, 1863, art. 86, par. 2. *Hamilton v. Dillin* (21 Wall., 73).

and that no advantage not intended to be given by the adversary shall be taken.*

233. Ambassadors and Diplomatic Agents. Ambassadors and other diplomatic agents of neutral powers, accredited to the enemy, may receive safe-conducts through the territories occupied by the belligerents, unless there are military reasons to the contrary, and unless they may reach the place of their destination conveniently by another route. It implies no international affront if the safe-conduct is declined. Such passes are usually given by the supreme authority of the State, and not by the subordinates.⁴

234. Rules, Where Found. These non-hostile relations are usually comprised under the headings of parlementaires, and flags of truce, armistices, capitulations, passports, and safe-conducts, safeguards, and cartels.⁵

PARLEMENTAIRES AND FLAGS OF TRUCE.

235. Parlementaires. Parlementaires are ordinarily agents in the non-hostile intercourse of belligerent armies.⁶ Their duties include every form of communication with the enemy in the field.

236. H. R. XXXII. A person is regarded as a parlementaire (bearing a flag of truce) who has been authorized by one of the belligerents to enter into communication with the other, and who advances bearing a white flag. He has a right to inviolability, as well as the trumpeter, bugler or drummer, the flag bearer, and interpreter who may accompany him.

237. Soldiers Acquainted With Privileges of, Etc. All soldiers, of whatever grade, should be thoroughly acquainted with the qualifications and privileges accorded parlementaires and with the proper method of receiving them when they present themselves.⁷

238. Signification of White Flag. The white flag, when used by troops, indicates a desire to communicate with the enemy. The hoisting of a white flag has no other signification in international law. It may indicate that the party hoisting it desires to open communication with a view to an armistice or a surrender. If hoisted in action by individual soldiers or a small party, it has come to signify surrender. It is essential, therefore, to determine whether the flag was actually hoisted by authority of the commander.

239. Fire Need Not Cease When White Flag Is Hoisted. The enemy is not required to cease firing when a white flag is raised. To indicate that the hoist-

* Vide, ante, par. 190.

⁴ G. O. 100, 1863, art. 87. Vide par. 219, supra.

⁵ Vide pars. 83-85a and 166, ante, for intercourse in re prisoners of war, sick, and wounded.

⁶ The adoption of the word "parlementaire" to designate and distinguish the agent or envoy seems absolutely essential in order to avoid confusion and because all other nations, including Great Britain, utilize the word. In the past this word has been translated at times to mean the agent or envoy only, at other times the agent and emblem, or both. To call the parlementaire "the bearer of a flag of truce" is not in reality correct, because he seldom, if ever, actually carries it.

⁷ Vide F. S. R., 1914, par. 48.

Bearers of flags of truce and their escorts are halted and required to face outwards; they are then blindfolded and disposed of in accordance with instructions from the support commander; if they fail to obey, they are fired upon. No conversation with them is permitted.

Deserters are required to lay down their arms, and a patrol is sent out to bring them in. Deserters pursued by the enemy are ordered to drop their arms and an alarm is given; if they fail to obey they are fired upon.

ing is authorized, the belligerent should cease firing. He should also send a parlementaire.*

240. Fire Not to Be Directed on the Parlementaire. The fire should not be intentionally directed on the person carrying the flag or upon those with him; if, however, the parlementaire or those near him present themselves during an engagement and are killed or wounded, it furnishes no ground for complaint. It is the duty of the parlementaire to select a propitious moment for displaying his flag, such as during the intervals of active operations, and to avoid the dangerous zone by making a detour.†

241. Must Be Duly Authorized. The parlementaire, in addition to presenting himself under cover of a white flag, must be duly authorized in a written instrument signed by the commander of the forces.‡

242. No Communication at Night. No provision is made for opening communication with an enemy during the hours of darkness, when a white flag can not be seen. An attempt to send a parlementaire at night is very dangerous, and at best uncertain.

243. H. R. XXXIII. The commander to whom a parlementaire is sent is not obliged to receive him under all circumstances. He may take all the necessary steps to prevent the parlementaire from taking advantage of his mission to obtain information. In case of abuse, he has the right to detain the envoy temporarily.

244. May Prescribe Formalities. The commander may declare the formalities and conditions upon which he will receive a parlementaire and fix the hour and place at which he must appear.‡ The present rule is that a belligerent may not declare beforehand, even for a specified period—except in case of reprisal

* G. O. 100, 1863. "Firing is not required to cease on the appearance of a flag of truce in battle."

Ariga, p. 274. "There are several hypotheses in which an enemy may hoist the white flag and the conduct to be pursued in each case.

"1. If a soldier hoists a white flag (he can use a handkerchief, etc.), indicating that he surrenders, make him a prisoner of war.

"2. During the bombardment of a fortress, although a particular fort hoist the white flag, there is no necessity to cease firing on that fort. Bombardment must be continued until an agreement is come to by the arrival of a parlementaire. Special order to cease fire will then be given by the commander of the army.

"3. The same course will be pursued if all the forts hoist a white flag; but in this case a report will be made as soon as possible to headquarters. Whilst awaiting orders fire will continue.

"4. If during a bombardment a parlementaire is seen leaving the enemy's lines, fire must not on any account be stopped or relaxed in the direction from which he comes, but he must not be fired on intentionally."

Vide also Land Warfare, Opp., p. 52 and note 2.

* "If the bearer of a flag of truce, presenting himself during an engagement, is killed or wounded, it furnishes no ground of complaint whatever." G. O. 100, 1863, art. 113.

† Ariga, pp. 302-304, gives the correspondence covering the capitulation of Port Arthur, including the terms of the capitulation. The usual form of authorization was "I authorize by these presents ——— to negotiate, etc.," which was signed by the commander-in-chief.

‡ Ariga, pp. 277 and 303, gives two instances in which Gen. Baron Nogi fixed definitely the hour and place for the parlementaire to report.

for abuses of the flag of truce—that he will not receive parlementaires.¹³ An unnecessary repetition of visits need not be allowed.¹⁴

245. Who May Accompany the Parlementaire. Only three persons are authorized to accompany the parlementaire. These, under the rule, are entitled to the same immunity. In case he is to have more than these, authority for the same should be previously obtained.¹⁵ He may be accompanied by a less number, and may even go alone with the flag of truce. It is advisable to have at least a trumpeter, bugler, or drummer with him in order to more readily and surely make known his status, thereby avoiding danger as much as possible.¹⁶

246. Formalities in the Reception of Parlementaires. 1. The parlementaire, with necessary authorization and with his duly authorized attendants, should approach the enemy's outpost or lines at a slow pace. When he arrives near enough to be recognized—that is, seen and heard—he causes his trumpet or bugle to be sounded or drum to be beaten and his flag to be waved.

2. He then advances at a slow pace toward the line, carefully obeying all instructions signaled or given him by any party of the enemy sent out to meet or conduct him.

3. He will then proceed to the point and by the route designated for receiving him. He may be furnished an escort for this by the enemy.

4. On arriving at the post of admittance the bearer and his escort dismount, and, leaving the escort at a convenient distance in rear, he proceeds on foot to the commander or senior officer of the post and states his mission.

5. The escort should not attempt to enter the lines with the parlementaire, and must obey all instructions or signals given them.

6. Marked courtesy must be observed on both sides. Conversation should be prudent and not touch upon the military operations. Great care will be exercised not to ask for nor to impart information.

7. The parlementaire will be treated with all the honors due to his rank and station and furnished an escort or guard in case of necessity.

8. A parlementaire can not of strict right claim to pass the outposts, nor can he demand to be conducted into the presence of the commanding officer. His message, if written, may be transmitted to the commanding officer; if verbal,

¹³ The old rule, announced at the Brussels conference of 1874, was as follows: "He (the commander) may equally declare beforehand that he will not receive bearers of flags of truce during a certain period. Envoys presenting themselves after such notification from the side to which it has been given forfeit their inviolability." This rule is still adhered to by Germany and some others, but was rejected by The Hague Convention of 1899, and again in 1907. Vide Higgins, *The Hague Peace Conferences*, p. 279, and Holls, *The Peace Conferences at The Hague*, p. 154. Mr. Oppenheim, *Land Warfare*, p. 53, art. 234, considers that this action may be taken as matter of reprisal for abuses of flags of truce. Vide par. 249 and note.

¹⁴ G. O. 100, 1863, art. 111. "The bearer of a flag of truce can not insist upon being admitted. He must always be admitted with great caution. Unnecessary frequency is carefully to be avoided." Vide also *Land Warfare*, Opp., par. 236.

¹⁵ The Germans add horseholders to these three authorized attendants, but there is no authority for adding any one, or to expect immunity to be granted to any others. *Kriegsbrauch*, p. 26.

¹⁶ Hague conference, 1899, p. 147, clearly authorizes a parlementaire to proceed alone. *Kriegsbrauch*, p. 26, "The bearer of a flag ought to be externally recognizable as such, and especially by signs which catch the sight and hearing from a distance and which are used and which are well known everywhere, the flag of truce (in case of necessity, a white handkerchief, etc.), calls on the bugle or trumpet, roll of the drum."

he may be required to reduce it to writing or deliver it orally to such person as may be designated to receive it. If he is sent to the rear for any reason whatever, he should be blindfolded and sent by a circuitous route.

9. In cases where resort is had to a decision from higher authority, the parlementaire must wait until same is returned.

10. The parlementaire will be permitted to retire and return with the same formalities and precautions as upon arrival."

247. Detention of Parlementaire. In addition to right of detention for abuse of his position, a parlementaire may be detained in case he has seen anything, or obtained knowledge which may be detrimental to the enemy, or if his departure should reveal information of the movement of troops. He should be detained only so long as circumstances imperatively demand, and information should be sent at once to his commander as to such detention, as well as of any other action taken against him or against his party.

248. Inviolability, Loss of. H. R. XXXIV. The parlementaire loses his right of inviolability if it is proved in a clear and incontestable manner that he has taken advantage of his privileged position to provoke or commit an act of treachery."

249. Abuse of Flag of Truce. It constitutes an abuse of the flag of truce, forbidden as an improper use under Hague Rule XXIII (f), for an enemy not to halt and cease firing while the parlementaire sent by him is advancing and being received by the other party. Likewise, if the flag of truce is made use of for the purpose of inducing the enemy to believe that a parlementaire is going to be sent when no such intention exists. It is also an abuse of a flag of truce to carry out operations under the protection granted by the enemy to the pretended flag of truce. An abuse of a flag of truce may authorize a resort to reprisals."

CHAPTER VII, SECTION II.

CAPITULATIONS.

250. Military Honor in. H. R. Art. XXXV. Capitulations agreed upon between the contracting powers must take into account the rules of military honor.

Once settled, they must be scrupulously observed by both parties."

251. Definition. A capitulation is an agreement entered into between commanders of belligerent forces for the surrender of a body of troops, a fortress, or other defended locality, or of a district of the theater of operations.

Capitulations are essentially military agreements, which involve the cessation of further resistance by the force of the enemy which capitulates. The surrender of a territory is frequently spoken of as an evacuation.

"Vide par. 236 and note 7, par. 237. Also F. S. R., 1914, par. 83. See Land Warfare, Opp., pp. 52-55. Kriegsbrauch, pp. 25 et seq.

"The original French word used is "trahisen," in The Hague rule. It was translated "treachery," probably because a parlementaire can not, strictly speaking, be guilty of treason.

"See infra as to reprisals, pars. 379 et seq. Land Warfare, Opp., par. 255. "Every abuse of the flag of truce entitles the injured party to reprisals."

"The foregoing is the only article on the subject of capitulations in The Hague Rules. It will be observed that it refers solely to the question of military honor in such conventions. The rules concerning such capitulations must therefore be sought for outside of The Hague Conventions. For forms of capitulation see Appendices A, B, C, D, this chapter.

252. Powers of Commanders. The commander of a fort or place and the commander-in-chief of an army are presumed to be duly authorized to enter into capitulations, being responsible to their respective Governments for any excess of power in stipulations entered into by them.²⁰ His powers do not extend beyond what is necessary for the exercise of his command.²¹ He does not possess power to treat for a permanent cession of the place under his command, for the surrender of a territory, for the cessation of hostilities in a district beyond his command,²² or generally to make or agree to terms of a political nature or such as will take effect after the termination of hostilities.²³

253. Forms of Capitulations. There is no specified form for capitulations. They may be concluded either orally or in writing, but in order to avoid disputes which may arise as to the terms thereof it is best, whenever possible, that they be reduced to writing. The convention should contain in precise terms every condition to be imposed; the time, manner, and execution should be laid down in the most precise and unequivocal terms. In case of an unconditional surrender following an assault, the terms might be oral, but should be reduced to writing if practicable.

254. Subjects Usually Regulated. In the terms of capitulation the following subjects are usually determined:

(a) The fate of the garrison, including those persons who may have assisted them:

These are usually declared to be prisoners of war, but it frequently occurs

²⁰ Marshal Blanco and the Spanish Government both disputed the right of Gen. Toral to capitulate at Santiago in 1898, "But the Spanish Government was forced to recognize the validity of the capitulation, for a governor of a fortress may capitulate under his personal responsibility, without any authorization from his Government." War Rights on Land, Spaight, p. 249.

For abuse of powers such as surrendering upon too lenient terms or when he should not do so, he is subject to trial under the laws or articles of war of his own country. Vide A. W., art. 42.

²¹ Vide Hague Convention, 1907, Actes, p. 25. "The competence of a commander to accept conditions of capitulation is limited to the troops immediately under his command, and does not necessarily extend to detached forts or to all the forts of a fortress." Land Warfare, Opp., par. 306.

The surrender of Gen. Lee did not include the other Confederate armies, although subsequent surrenders were made in accordance with its terms.

²² The capitulation of Verdun Nov. 8, 1870, stipulated that the surrender was made on the express condition of the retrocession of the fortress and town to France on the conclusion of peace. This exceeded the powers of the contracting commanders and created no obligation for their Governments. Land Warfare, p. 67, par. 304 and notes.

²³ In reply to a letter from Gen. Lee to Gen. Grant, 1865, proposing to "submit the subjects of controversy between the belligerents to a military convention," President Lincoln, to whom the letter had been referred by Gen. Grant, replied:

"The President directs me to say to you that he wishes you to have no conference with Gen. Lee, unless it be for the capitulation of Lee's army, or on solely minor or purely military matters. He instructs me to say that you are not to decide, discuss, or confer upon any political question. Such questions the President holds in his own hands and will submit them to no military conferences or conventions. Meantime you are to press to the utmost your military advantage." Draper, Am. Civil War, Vol. III, p. 561, cited by Spaight, p. 250.

that on account of their valorous resistance they are authorized to march out from the garrison with the "honors of war."²²

(b) The disarming of the place and of the defenders:

It frequently occurs that the officers are allowed to retain their arms, equipment, and certain specified articles of personal property.²³

(c) The turning over of the arms and matériel, and, in a proper case, the locating of the mine defenses, etc.:

The French, Russian, and other Governments require that in every case the commander of the place must not surrender until he has destroyed all flags, but this should be done before signing the capitulation.²⁴

(d) Provisions relative to private property of prisoners, including personal belongings and valuables:

Usually prisoners retain the ownership of their effects, personal belongings and valuables. However, they can be deprived temporarily of the possession of them as a measure of safety.²⁵

(e) The evacuation of and taking possession of the surrendered place.

The provisions relative to the withdrawal of the defenders and the entering into possession by the besiegers are fixed in advance with absolute precision, according to the circumstances of each case.

Commissions are named for the delivery and taking possession, respectively.²⁶

(f) Provisions relative to the medical personnel, sick, and wounded.²⁷

²² For examples see *Surrender of Belfort*, in 1871; *Bellair's Transvaal War*, 1880-81, p. 272. At *Potchefstroom*, in 1881, the troops were allowed the honors of war. In 1855 the garrison at *Kars* marched out with the honors of war, but became prisoners.

²³ The officers are not usually allowed to take their horses, although sometimes permitted to retain private mounts.

Mr. Spaight, in his *Laws of War on Land*, pp. 258-259, gives a table showing the disposition of certain property at *Kars* (1855), *Vicksburg* (1863), *Appomattox* (1865), *Sedan* (1870), *Strasburg* (1870), *Metz* (1870), *Belfort* (1871), *Bitsche* (1871), *Avliar* (1877), *Wei-hai-wei* (1895), *Santiago* (1898), *Manila* (1898), *Verliesfontein* (1900), and *Port Arthur* (1905), as follows: War matériel, etc., surrendered entirely in every case but two, when only partially; arms and troops, surrendered in all cases except three; officers' swords, retained in all cases except at *Wei-hai-wei*; officers' private property, retained (at *Sedan* by paroled officers only); troops' private property, retained (at *Appomattox* clothing only retained); officers' horses, surrendered in 8 cases, retained in 4 cases, private owned in 1 case, and 1 horse each in 1 case; troops' horses, surrendered in 10 cases, retained in 3 cases.

²⁴ Gen. Stoessel destroyed all Russian flags at *Port Arthur*. (Ariga, 309-310.)

²⁵ Gen. Grant declined to permit Confederate officers at *Vicksburg* to take their servants (slaves) as private property. (Draper, Vol. III, p. 52.) The Japanese permitted the men to take with them their tents and necessary personal belongings, the officers to take baggage within the limits of weights fixed for corresponding ranks in the Japanese Army, though reasonable excesses were not objected to. (Ariga, p. 312.) The Japanese declined to assume any responsibility for the private property of Russian officers. (Ariga, p. 325.) Vide ante as to prisoners, pars. 52-55.

²⁶ The details for the evacuation and taking possession of *Port Arthur* were incorporated in an annex to the convention. For latter see Appendix D, this chapter.

²⁷ The provision with regard to the medical personnel, sick, and wounded is contained in Art. IX of the treaty of *Port Arthur*. Appendix D, this chapter, and conforms to the provisions of *The Hague and Geneva Conventions*.

(g) Provisions for taking over the civil government and property of the place, with regard to the peaceable population.

These, together with the preparation of the lists of prisoners, repatriation of prisoners, etc., may be arranged in what is known as the appendix to the original terms of the convention.²⁰

(h) Stipulations with regard to the immediate handing over to the besiegers of certain forts or places, or other similar provisions, as a pledge for the fulfillment of the capitulation.²¹

255. Damage or Destruction of Property Prohibited After Capitulation. So soon as a capitulation is signed, the capitulator has no right to demolish, destroy, or injure the works, arms, stores, or ammunition in his possession during the time which elapses between the signing and the execution of the capitulation, unless otherwise stipulated in same.²²

256. Denunciation of Capitulation. A capitulation can be denounced and hostilities immediately resumed for failure to execute any clause which has been agreed upon, or in case it was obtained through a breach of faith.²³

²⁰ The civil and military archives may be left in the hands of the officials of the vanquished party. *Land Warfare, Opp.*, par. 319.

²¹ This was done at Paris and likewise at Port Arthur. See treaties, Appendix D, this chapter.

²² "Nothing, however, prevents a commander who intends to surrender from destroying fortifications, war material, and stores, the possession of which might assist the enemy, providing he does so before signing the capitulation."

Marshal Bazaine was tried for surrendering Metz and was sentenced to death and military degradation for treating with the enemy "without having previously done all that duty and honor required." He was charged, among other things, with failing to destroy his arms and ammunition before surrendering. *Cassell's History*, Vol. I, p. 296. *Hozier, Franco-Prussian War*, Vol. II, p. 121. Cited in *Spaight, War on Land*, p. 252.

²³ *Land Warfare, Opp.*, p. 324. "It may not, however, be annulled, because one of the parties has been induced to agree to it by ruse, or from motives for which there is no justification, or by his own incapacity or feebleness."

In 1898 the Spanish Government contended that the capitulation of Manila, which occurred on the 14th, was null and void, because the protocol which was signed two days before, on August 12, stipulated that the hostilities should cease. The United States claimed that by the terms of the protocol it was to take effect upon receipt of notice of same; that notice had been immediately dispatched, but was not received in Manila before the capitulation, and added further that "as to the nature of the right by which the United States holds the city, bay, and harbor of Manila, it is the opinion of this Government that it is immaterial whether the occupation is to be considered as existing by virtue of the capitulation or by virtue of the protocol, since in either case the powers of the military occupant are the same." *Vide Dig. Int. Law, Moore*, sec. 1160. Mr. Oppenheim says in this connection: "A capitulation which took place after a general armistice has been agreed upon, and of which the parties to the capitulation had had no knowledge, is null and void, unless the armistice stipulated cessation of hostilities from the time when notification reaches the different forces concerned, and not from the date of signature." *Land Warfare*, par. 325.

APPENDIX A.

CAPITULATION AT METZ, 1870.

PROTOCOL.

Between the undersigned, the chief of the staff of the Prussian Army before Metz, and the chief of the staff of the French Army in Metz, both being delegated with full powers by H. R. H. General of Cavalry Prince Frederick Charles of Prussia, and by H. E. the Commander in Chief, Marshal Bazaine, the following agreement has been ratified:

Article I. The French Army under the orders of Marshal Bazaine are prisoners of war.

Art. II. The fortress and the town of Metz, with all the forts, matériel of war, stores of all kinds, and all public property, will be handed over to the Prussian Army in the same condition in which it stands at the time of signing this agreement. Forts St. Quentin, Plappeville, St. Julien, Queuleu, and St. Privat, as well as the Mazelle Gate (Strassburg Road) will be handed over on Saturday, the 29th of October, at noon, to the Prussian troops. At 10 a.m. that day artillery and engineer officers, with some noncommissioned officers, will be admitted into the above-mentioned forts for the purpose of taking over the powder magazines and rendering harmless any mines that might exist.

Art. III. The arms, as well as the whole of the war matériel of the army, consisting of the colors, eagles, cannon, mitrailleuses, horses, money chests, military wagons, ammunition, etc., will be handed over, in Metz and in the forts, to a commission appointed by Marshal Bazaine, for the purpose of being transferred immediately after to Prussian commissaries.

The troops, disarmed, will be drawn up by regiment or by corps, and will be brought in parade order to the places which shall be indicated for each corps.

The officers will then return to the lines of the intrenched camp or to Metz, but on the condition that they are hereby bound on their word of honor not to quit Metz without orders from the Prussian commandant.

The troops will then be conducted by their noncommissioned officers to their places of bivouac.

The soldiers will retain their knapsacks, effects, and camp equipment (tents, blankets, cooking utensils, etc.).

Art. IV. All generals and other officers, in addition to those military officials holding the relative rank of officers, who give their word of honor in writing not to serve against Germany during the present war, nor to act against its interests in any other manner, will cease to be prisoners of war.

The officers and officials who accept this condition will retain their arms and personal property.

In consideration of the valor displayed by both the army and the garrison during the campaign, those officers who elect to be prisoners of war will be permitted, in addition, to take with them their swords and their personal property.

Art. V. All army doctors will remain at Metz in order to look after the wounded; they will receive the privileges in conformity with the Geneva Convention. The same is to apply to the personnel of the hospitals.

Art. VI. Explanations with regard to certain points, more particularly with regard to local interests, are treated in an appendix hereto annexed, which has the same authority as the present protocol.

Art. VII. Any article which might admit of doubt will always be interpreted in favor of the French Army.

Done at Château Frescaty, 27th October, 1870.

(Signed) V. STIEHLE.
(Signed) JARRAS.

[APPENDIX.]

Article 1. The civil officials, superior and inferior, belonging to the army or the fortress, now present at Metz, may proceed whither they desire and take all their property with them.

Art. 2. No one, whether he belong to the national guard or be he an inhabitant of the town, or a fugitive therein, shall be liable to punishment, either on account of political or religious views, or for any share that he may have taken in the defense, or on account of any assistance he may have rendered to the army or to the garrison.

Art. 3. Sick and wounded left in the town shall receive every care which their condition may require.

Art. 4. Families which may be left in Metz by the garrison shall not be molested, and, like the civil officials, may likewise depart without let or hindrance with all that belongs to them.

The furniture and effects which the members of the garrison are compelled to leave in Metz shall neither be plundered nor confiscated, but shall remain their property. It will be optional with them to cause this property to be fetched away within a period of six months from the conclusion of peace or their release from captivity.

Art. 5. The commander-in-chief of the Prussian Army undertakes the duty of preventing any damage being done either to the persons or goods of the inhabitants.

In the same manner the property of the Department, of the parishes, of trade or other unions, of civil or spiritual or other corporations, of work-houses or charitable institutions, shall remain uninjured.

The privileges which on the day of the capitulation the corporations and societies, as also private persons, may mutually exercise, according to French law, shall in no wise be interfered with.

Art. 6. To this end it is especially arranged that all local administrations, as also the above-mentioned societies or corporations, shall retain those archives, books, papers, collections, and documents of every kind which may be in their possession.

The notaries, advocates, and other judicial officials shall retain their archives and deeds or deposits.

Art. 7. The archives, books, and papers belonging to the state shall remain generally in the fortress, and at the conclusion of peace all such documents as refer to those districts reverting to France shall be returned to France.

The outstanding amounts which are necessary for the adjustment of the accounts, or which might give rise to lawsuits, to reclamations on the part of third persons, shall remain in the hands of those officials or agents to whom they are at present intrusted; the provisions of the preceding paragraph in this respect undergo amendment.

Art. 8. With regard to the movement of the French troops from their bivouacs as prescribed by Article III of the protocol, the following course will be adopted: The officers will lead their troops to the points and in the directions as below prescribed. On arrival at their destinations they will deliver to the Prussian commander of troops a statement of the effective of the troops under their orders, after which they will hand over the command to the noncommissioned officers and withdraw.

The Sixth Corps and Forton's Cavalry Division will follow the road from Thionville to Ladonchamps.

The Fourth Corps, moving between Forts St. Quentin and Plappeville along the Amanvillers Road, will be led as far as the Prussian lines.

The guard, the general artillery reserve, the engineers, and equipage train of the headquarters, passing along the railway embankment, will take the road to Nancy as far as Tournebride.

The Second Corps, with Laveaucoupet's Division and Lapasset's Brigade, which belong to it, will move along the road to Magny-sur-Seille, and will halt at St. Thiebault farm.

The Gardes Mobiles of Metz and other troops of the garrison, except Laveaucoupet's Division, will move along the Strassburg Road as far as Grigy.

Lastly, the Third Corps will move along the Saarbrücken Road as far as Bellecroix farm.

Done at Château Frescaty, 27th October, 1870.

(Signed) V. STIEHLE.
(Signed) JARRAS.

APPENDIX B.

CAPITULATION OF SANTIAGO, 1898.

Terms of the military convention for the capitulation of the Spanish forces occupying the territory which constitutes the division of Santiago de Cuba, and described as follows: All that portion of the island of Cuba east of a line passing through Aserradero, Dos Palmas, Cauto Abajo, Escondida, Tanamo, and Aguidora, said troops being in command of Gen. José Toral, agreed upon by the undersigned commissioners: Brig. Gen. Don Federico Escario, Lieut. Col. of Staff Don Ventura Fontan, and, as interpreter, Mr. Robert Mason, of the city of Santiago de Cuba, appointed by Gen. Toral, commanding the Spanish forces, on behalf of the Kingdom of Spain, and Maj. Gen. Joseph Wheeler, United States Volunteers; Maj. Gen. H. W. Lawton, United States Volunteers; and First Lieut. J. D. Miley, Second Artillery, aid-de-camp, appointed by Gen. Shafter, commanding the American forces, on behalf of the United States:

1. That all hostilities between American and Spanish forces in this district absolutely and unequivocally cease.

2. That this capitulation includes all the forces and war material in said territory.

3. That the United States agrees with as little delay as possible to transport all the Spanish troops in said district to the Kingdom of Spain, the troops being embarked, as far as possible, at the port nearest the garrisons they now occupy.

4. That the officers of the Spanish Army be permitted to retain their side arms and both officers and private soldiers their personal property.

5. That the Spanish authorities agree to remove, or assist the American Navy in removing, all mines or other obstructions to navigation now in the harbor of Santiago and its mouth.

6. That the commander of the Spanish forces deliver, without delay, a complete inventory of all arms and munitions of war of the Spanish forces in above-described district to the commander of the American forces; also a roster of said forces now in said district.

7. That the commander of the Spanish forces, in leaving said district, is authorized to carry with him all military archives and records pertaining to the Spanish Army now in said district.

8. That all that portion of the Spanish forces known as volunteers, mobilizados, and guerrillas who wish to remain in the island of Cuba are permitted to do so upon condition of delivering up their arms and taking a parole not

to bear arms against the United States during the continuance of the present war between Spain and the United States.

9. That the Spanish forces will march out of Santiago de Cuba with honors of war, depositing their arms thereafter at a point mutually agreed upon, to await their disposition by the United States Government, it being understood that the United States commissioners will recommend that the Spanish soldier return to Spain with the arms he so bravely defended.

10. That the provisions of the foregoing instrument become operative immediately upon its being signed.

Entered into this 16th day of July, 1898, by the undersigned commissioners, acting under instructions from their respective commanding generals and with the approbation of their respective governments.

JOSEPH WHEELER,

Major General, United States Volunteers.

H. W. LAWTON,

Major General, United States Volunteers.

J. D. MILEY,

First Lieutenant, Second Artillery,

Aid-de-Camp to General Shafter.

FEDERICO ESCARIO.

VENTURA FONTAN.

ROBT. MASON.

APPENDIX C.

CAPITULATION OF MANILA.

Manila, August 14, 1898.

The undersigned having been appointed a commission to determine the details of the capitulation of the city and defenses of Manila and its suburbs, and the Spanish forces stationed therein, in accordance with the agreement entered into the previous day by Maj. Gen. Wesley Merritt, United States Army, American commander-in-chief in the Philippines, and his excellency Don Fermin Jaudenes, acting general in chief of the Spanish Army in the Philippines, have agreed upon the following:

1. The Spanish troops, European and native, capitulate with the city and its defenses, with all the honors of war, depositing their arms in the places designated by the authorities of the United States, and remaining in the quarters designated and under the orders of their officers and subject to control of the aforesaid United States authorities, until the conclusion of a treaty of peace between the two belligerent nations.

All persons included in the capitulation remain at liberty, the officers remaining in their respective homes, which shall be respected as long as they observe the regulations prescribed for their Government and the laws in force.

2. Officers shall retain their side arms, horses, and private property.

3. All public horses and public property of all kinds shall be turned over to staff officers designated by the United States.

4. Complete returns in duplicate of men by organizations, and full lists of public property and stores, shall be rendered to the United States within 10 days from this date.

5. All questions relating to the repatriation of officers and men of the Spanish forces and of their families and of the expenses which said repatriation may occasion, shall be referred to the Government of the United States at Washington.

Spanish families may leave Manila at any time convenient to them.

The return of the arms surrendered by the Spanish forces shall take place when they evacuate the city or when the American Army evacuates.

6. Officers and men included in the capitulation shall be supplied by the United States, according to their rank, with rations and necessary aid as though they were prisoners of war, until the conclusion of a treaty of peace between the United States and Spain.

All the funds in the Spanish treasury, and all other public funds, shall be turned over to the authorities of the United States.

7. This city, its inhabitants, its churches and religious worship, its educational establishments, and its private property of all descriptions are placed under the special safeguard of the faith and honor of the American Army.

F. V. GREENE,

Brigadier General of Volunteers, United States Army.

P. B. LAMBERTON,

Captain, United States Navy.

CHAS. A. WHITTIER,

Lieutenant Colonel and Inspector General.

E. H. CROWDER,

Lieutenant Colonel and Judge Advocate.

NICHOLAS DE LA PENA,

Auditor General, Excmo.

CARLOS REGES,

Coronel de Ingenieros.

JOSÉ M^a. DE OLAGURO FELIN,

Coronel de Estado Mayor.

APPENDIX D.

THE TERMS OF THE CAPITULATION OF PORT ARTHUR, 1904.

Article I. The military and naval forces of Russia in the fortress and harbor of Port Arthur, as well as the volunteers and the officials, shall all become prisoners.

Art. II. The forts and fortifications of Port Arthur, the warships and other craft, including torpedo craft, the arms, the ammunition, the horses, all and every material for warlike use, shall be handed over as they are to the Japanese Army.

Art. III. When the above two articles are agreed to, the following steps shall be taken by way of guaranty, namely, by noon on the 3d instant all garrisons shall be withdrawn from fortifications and forts at I-zu-shan, Hsiao-an-tzu-shan, Ta-an-tzu-shan, and all the highlands on the southeast of these, and the said fortifications and forts shall be handed over to the Japanese Army.

Art. IV. Should it be recognized that the Russian military or naval forces destroy or take any other steps to alter the condition of the things enumerated in Article II and actually existing at the time of the signature of this agreement, these negotiations shall be broken off and the Japanese Army will break off negotiation and resume freedom of action.

Art. V. The officers of the Russian military and naval forces of Port Arthur shall compile and hand to the Japanese Army maps showing the arrangement of the defenses, the positions of mines and torpedoes or other dangerous objects, as well as lists of the organization of the naval and military forces in Port Arthur, nominal rolls of the military and naval officers, their ranks

or grades, similar rolls relating to the warships, lists of the ships of all descriptions and their crews, and tables of the noncombatants, male and female, their nationalities and their occupations.

Art. VI. The arms (including those in the hands of the forces), the ammunition, and all material for war uses (except private property) shall be all left in their present positions. Rules relating to the handing over and receipt of these objects shall be arranged by commissioners from the Russian and Japanese Armies.

Art. VII. The Japanese Army, as an honor to the brave defense made by the Russian Army, will allow the officers of the Russian military and naval forces and the officials attached to the said forces to retain their swords, together with all privately owned articles directly necessary for daily existence. Further, with regard to the said officers, officials, and volunteers, such of them as solemnly pledge themselves in writing not to bear arms again until the close of the present war, and not to perform any act of whatsoever kind detrimental to the interests of Japan, shall be permitted to return to their country, and one soldier shall be allowed to accompany each officer of the army or navy. These soldiers shall be required to give a similar pledge.

Art. VIII. The disarmed noncommissioned officers and men of the army and navy, as well as of the volunteers, wearing their uniforms, carrying their tents and all privately owned necessities of daily life, shall under the command of their respective officers assemble at places indicated by the Japanese Army. The details of this arrangement will be shown by the commissioners of the Japanese Army.

Art. IX. The officials of the sanitary and paymaster's departments of the Russian military and naval forces in Port Arthur shall remain and continue to discharge their duties under the control of the Japanese sanitary and paymaster's departments so long as the Japanese Army deems it necessary for ministering and affording sustenance to the sick, the wounded, and the prisoners.

Art. X. Detailed regulations with reference to the management of the noncombatants, the administration of the town, the performance of financial duties, the transfer of documents relating to these matters, and with reference to the carrying out of the agreement in other respects shall be entered in an appendix to this agreement. Such appendix shall have the force of the agreement itself.

Art. XI. Each of the contracting parties shall receive one copy of this agreement, and it shall become operative from the time of its signature.

CHAPTER VII, SECTION III.

ARMISTICES.

256a. Armistice Defined. An armistice is the cessation of active hostilities for a period agreed on between belligerents. It must be agreed upon in writing and duly ratified by the highest authorities of the contending parties."

257. Effect of Armistice. H. R. Art. XXXVI. An armistice suspends military operations by mutual agreement between the belligerent parties. If its duration is not defined, the belligerent parties may resume operations at any time, provided always that the enemy is warned within the time agreed upon, in accordance with the terms of the armistice.

258. Nature of. An armistice is not a partial or a temporary peace; it is

"G. O. 100, 1863, art. 135.

only the suspension of military operations to the extent agreed upon by the parties."

259. When Binding. An armistice is binding upon the belligerents from the day of the agreed commencement, but the officers of the armies are responsible from the day only when they receive official information of its existence."

260. Importance of Fixing Time of. In all armistices it is of the utmost importance that the exact moment for the commencement and for the termination of same shall be fixed in the terms thereof beyond any possibility of mistake or misconception."

261. What May Be Done During an Armistice. An armistice need not in terms prohibit actual hostilities." Anything else may be done during an armistice that is not in express terms prohibited by the agreement."

262. Form of Armistice. No special form for an armistice is prescribed. It should, whenever practicable, be reduced to writing, in order to avoid misunderstandings and for purposes of reference should differences of opinion arise. It should be drafted with the greatest precision and with absolute clearness as to statements."

263. Kinds of Armistice. H. R. Art. XXXVII. An armistice may be general or local. The first suspends the military operations of the belligerent States

"G. O. 100, 1863, art. 142. A treaty of peace, after signature, but before ratification, operates as a general armistice. It acts as an armistice if no separate armistice is concluded. Hall, Int. Law, 5th ed., 559.

"G. O. 100, 1863, art. 139.

"Hostile relations are too far-reaching in their results not to furnish cause for complaints, recriminations, and even reprisals in case of violations, or supposed violations, of the time for passing from the actual hostilities to peaceable relations or the reverse. In case of a short armistice, as for a few hours, no difficulty appears. If the term be for a designated number of days, questions arise as to whether the first or last day is inclusive or exclusive. In case an armistice is for an indefinite period, good faith requires that notice must be given of intention to resume hostilities.

A good example of an indefinite period in an armistice which was to terminate upon reasonable notice given by either party is that between Gen. Sherman and Gen. J. E. Johnston near Durham, N. C., in April, 1865. The armistice agreed upon was disapproved at Washington as containing political stipulations, whereupon Gen. Sherman was instructed to notify Gen. Johnston of the termination of the armistice and to resume hostilities "at the earliest moment, acting in good faith." Whereupon Sherman sent the following notice to Johnston:

"You will take notice that the truce or suspension of hostilities agreed to between us will cease in 48 hours after this is received in your lines, under the first of the articles of agreement." (Sherman's memoirs, pp. 346, 358, 367.)

"Actual hostilities will provide, of course, that firing shall cease; that the belligerents must not gain ground to the front; and, during siege operations, "that the besieger must cease all extension, perfection, or advance of his attacking works, as much so as from attacks by main force." (G. O. 100, 1863, art. 142.)

"In modern practice the principle has been followed that what is not expressly prohibited is allowed. The principle "that a belligerent must abstain from everything which the other could have prevented had there been no armistice," is rejected by continental armies. (See Spaight, War Rights on Land, pp. 235-238; Ariga, p. 560; Les Lois, Jacomet, p. 90.)

"For forms of armistice, see appendices, this section.

everywhere; the second only between certain fractions of the belligerent armies and within a fixed radius."

264. General Armistice. General armistices are of a combined political and military character. They usually precede the negotiations for peace, but may be concluded for other purposes." Due to its political importance, a general armistice is concluded by the Governments concerned or by their commanders-in-chief, and are ratified in all cases. General armistices are frequently arranged by diplomatic representatives."

265. Local Armistice. A local armistice suspends operations between certain portions of the belligerent forces, or within a designated district of the theater of operations. A local armistice may be concluded by the military forces only, or by the naval forces only, or between a less number than all of the belligerents at war."

266. Suspension of Arms. A suspension of arms is a form of armistice concluded between commanders of armies, or even of detachments, for some local military purpose: such as to bury the dead, to collect the wounded, to arrange for exchange of prisoners, to enable a commander to communicate with his Government or superior officer."

267. Notification of Armistice. H. R. Art. XXXVIII. An armistice must be notified officially and in good time to the competent authorities and to the troops. Hostilities are suspended immediately after notification, or on the date fixed."

268. Intercourse in Theater of Operations. H. R. Art. XXXIX. It rests with the contracting parties to settle, in the terms of the armistice, what intercourse may be held in the theater of war with and between the populations."

"The following names have been applied to armistices, viz.: general and local as in the text (the term special is used in G. O. 100, 1863, art. 137), truce, local truce, cessation of hostilities, cessation of arms, and suspension of arms. The continental writers still make use of the terms armistice and suspension of arms. As a matter of fact, there is no essential difference between truces, suspensions of arms, and armistices.

"A general armistice may not apply to all of the forces in the field. The armistice executed in Paris on the 28th of January, 1871, which preceded the peace, was called a "general armistice," and yet it excluded the Departments of Doubs, Jura, and Cote d'Or and the town of Belfort.

"The armistice at the close of the Franco-German War in 1870 was concluded between Count von Bismarck and Jules Favre, and the armistice which closed the Russo-Japanese War was concluded at Portsmouth, N. H., by diplomatic representatives. In the latter case the detailed conditions were settled by the military authorities in Manchuria.

"G. O. 100, 1863, art. 137, par. 1: "An armistice may be general and valid for all points and lines of the belligerents; or special, that is, referring to certain troops or certain localities only."

"The above distinction as stated is not absolutely essential, although Mr. Oppenheim still draws the distinction between the three forms mentioned in the above text (Land Warfare, pp. 56-57). But see Westlake, War, part 2, p. 92, and Spaight, War on Land, pp. 233-234. A suspension of arms was asked for by the governor of Manila of Admiral Dewey on Aug. 9, 1898, which would allow him to communicate with his Government and receive instructions.

"Vide par. 259.

"This translation of the text is copied from that of Messrs. Westlake and Spaight, and is believed to more accurately express the intent of the framers. The original from which this article was probably taken is in G. O. 100 of

269. Rule in Absence of Stipulation. If nothing is stipulated, the intercourse remains suspended, as during actual hostilities.⁴

270. What Stipulations Armistice Should Contain. The following stipulations should be incorporated in an armistice:

(a) The precise date, day, and hour of the commencement of the armistice. The date of commencement of an armistice may be different for different parts of an army.⁵

(b) The Duration of the Armistice. The duration may be for a definite or indefinite period, and may terminate with or without notice of expiration. In case it is indefinite, a belligerent may resume operations at any time, with due notice given. If the term is fixed and no agreement has been made for prolonging same, hostilities may be resumed without notice in the absence of positive terms to the contrary. An armistice commences, in the absence of express mention to the contrary, at the moment it is signed.⁶

(c) The principal lines and all other marks or signs necessary to determine the locations of the belligerent troops should be fixed. Belligerents frequently make use of maps with the lines indicated shown thereon, which maps are made part of the convention. A neutral zone is frequently determined upon between the two armies. These lines are not to be crossed or the

1863, art. 141: "It is incumbent upon the contracting parties of an armistice to stipulate what intercourse of persons or traffic between the inhabitants of the territories occupied by the hostile armies shall be allowed, if any. If nothing is stipulated the intercourse remains suspended, as during actual hostilities."

Our own official translation is as follows:

"It rests with the contracting parties to settle, in the terms of the armistice, what communications may be held in the theater of war with the inhabitants and between the inhabitants of one belligerent State and those of the other."

The British official translation is as follows:

"It is for the contracting parties to settle, in the terms of the armistice, what communications may be held, on the theater of war, with the populations and with each other."

Of course, what is intended to be regulated is the intercourse of the population of the occupied territory with the population of the country still held by the enemy (in both cases nationals of the enemy State), and also between each belligerent force and the inhabitants of the localities held by the other.

⁴ G. O. 100, 1863, art. 141, par. 2. The French manual, p. 61, states: "If the contracting parties have omitted to arrange as to the mutual relations of the population during the armistice, each belligerent preserves the absolute right to settle the question as he chooses on the territory held by him. An armistice is not a temporary peace; it leaves the state of war in existence; consequently the comings and goings of the inhabitants about the respective positions or within the neutral zone may offer inconveniences and facilitate spying."

⁵ Vide par. 260, *supra*.

⁶ In 1898 Spain protested against hostilities being continued during the negotiations for an armistice in Washington. The United States replied that it was a belligerent's strict right to continue operations so long as an armistice had not been concluded.

In 1865 Gen. Wilson captured Macon, Ga., during an armistice between Gens. Sherman and Johnston, of which Gen. Wilson had been informed by Gen. Cobb, but not by his own commander. Gen. Sherman directed him to release the captured Confederate generals (Cobb, G. W. Smith, and McCall) and to occupy ground outside of Macon.

zone entered except by parlementaires or other parties by special agreement for specified purposes, such as to bury the dead and collect the wounded.²⁷¹

(d) The relation of the armies with the people. In the absence of stipulations to the contrary, each belligerent will exercise toward the inhabitants the rights of belligerents over occupied territory, such as billeting troops, requisitioning supplies, etc., as well as all intercourse between them.²⁷²

(e) What acts are prohibited during the armistice. In the absence of stipulations to the contrary, each belligerent is authorized to make movements of troops within his own lines, to receive and instruct recruits, to construct intrenchments, to repair bridges, to establish new batteries, and, in general, to take advantage of the time and means at his disposal to prepare for resuming hostilities. This includes the right to continue espionage, but does not include the right to introduce supplies into a fortress unless especially stipulated in the agreement.²⁷³

271. Denunciation of Armistice. H. R. Art. XL. Any serious violation of the armistice by one of the parties gives the other party the right of denouncing it, and even, in cases of urgency, of recommencing hostilities immediately.

272. Must Not Constitute Perfidy. To denounce an armistice without some very serious breach, and to surprise the enemy before he can have time to put himself on guard, would constitute an act of perfidy. In the absence of extreme urgency, some delay should be given between the denunciation and resumption of hostilities.²⁷⁴

273. Armistice No Excuse for Lack of Vigilance. The existence of an armistice does not warrant relaxation of vigilance in the service of security and protection, or in the preparedness of troops for action, or exposing positions to the enemy.²⁷⁵

274. Violations by Individuals. H. R. Art. XLI. A violation of the terms of the armistice by individuals acting on their own initiative only entitles the injured party to demand punishment of the offenders or, if necessary, compensation for the losses sustained.

²⁷¹ It is customary to designate the roads that are to be used by all parties entering or passing through a neutral zone. Vide general form armistice, Appendix A, this section.

²⁷² Vide Spaight, War Rights on Land, p. 247.

²⁷³ Les Lois, Jacomet, art. 133. Vide note 39, par. 261, supra.

In the Brussels Conference it was proposed to make the matter clear as to what a belligerent may or may not do after an armistice is concluded, by specifying that "on the conclusion of an armistice, what each of the parties may do and what he may not do shall be precisely stated."

This was not passed because of the belief that this was implied in Art. XXXVI of the present rules. See the French rule in note 48, par. 269, supra. For practice during modern wars which conform to the foregoing principle, see Spaight, War Rights on Land, pp. 233 et seq.

²⁷⁴ Land Warfare, Opp., pars. 296-297.

²⁷⁵ At the second battle of Fredericksburg, May 5, 1863, the Federals discovered the weakness of Gen. Barksdale's force during a suspension of hostilities to collect the wounded after the second repulse. *Memoirs, Alexander*, p. 351. In the suspension of arms at Wynnes Hill, during the relief of Ladysmith, many of the burghers stood up and disclosed the position of their trenches, which until then had not been located by the enemy. *South African War, Vol. II*, p. 602.

275. Soldiers Captured Violating Armistice Are Prisoners of War. Soldiers captured in the act of breaking an armistice must be treated as prisoners of war. Such acts do not justify denunciation of the armistice.⁶⁶

APPENDIX A.

FORM OF ARMISTICE.

ARMISTICE BETWEEN TWO OPPOSING FORCES.

A B, authorized by C D, commander in chief of the United States forces in, and E F, authorized by G H, commander in chief of the troops in, agree to the following articles:

Art. 1. On the publication of this armistice, hostilities shall cease between the United States and forces at all points along the frontier of between and

Art. 2. The armistice shall continue until noon on the day of, and until such further time as is hereinafter mentioned.

Art. 3. Either side may at any time on or after the said day of, give days' notice of its intention to determine the armistice, and the armistice shall be determined at the expiration of such days. Notice shall be given by writing, stating the intention to determine the armistice, and sent from the headquarters of one army to the headquarters of the other army. In reckoning time for the purpose of the said days' notice, the day on which the notice is given, at whatever hour the same may be given, shall be reckoned as an entire day, and the armistice shall expire at midnight on the day succeeding the day on which the notice is given.

Art. 4. The lines of demarcation shown on the attached map shall be strictly adhered to during the armistice. The territory lying between the two lines of demarcation shall be strictly neutral, and any advance into it by any member of either army is prohibited except for the purposes of communication between the two armies. Neither army shall extend its line in a or direction beyond the points shown as the extremities of their respective lines.

Art. 5. Subject to the restrictions mentioned in the fourth article, as respects making an advance into the neutral territory, either army may take measures to strengthen its position, and may receive reinforcements and stores of warlike and other material, and may do any other act not being an act of direct hostility.

Art. 6. During the two days following the day on which this armistice is ratified, burial parties from both armies shall be permitted to visit the field of battle of the instant, for the purpose of burying the dead.

Art. 7. The main road from A to B via C will be used for communication between the commanders in chief of the two armies.

⁶⁶ Mr. Oppenheim says: "There is no justification in such circumstances for a renewal of hostilities, unless the behavior of these individuals is approved of or sanctioned by their superiors. If, however, the violation of the armistice by individuals acting on their own initiative be repeated, and if it become evident that the adversary is unable to repress such abuses, there might be no other way, after proper protest, to obtain redress except by denouncing the armistice." Land Warfare, art. 299; Ariga, p. 555, states that "during the armistice frequent reports were received that Russian soldiers entered the neutral zone in violation of the third article of the protocol. We have never believed, however, that we should make any complaint with regard to this, because it was a question in reality only of small individual infractions which should have no influence upon the general effect of the armistice."

Art. 8. During the continuance of the armistice the peaceful inhabitants of the country shall be allowed to pursue their occupations, and to buy from or sell to either army provisions or goods, but any measures consistent with the observance of the articles of the armistice in relation to the neutral territory may be taken by either army to prevent inhabitants, after entering the lines of or obtaining information respecting one army, from passing or carrying information to the other army.

Art. 9. This armistice shall come into force immediately on its ratification by the commanders in chief of the two armies, and officers shall be dispatched with all speed, from the headquarters of each army, to give notice of the armistice at all points along the line.

APPENDIX B.

FORM OF ARMISTICE.

BETWEEN BESIEGING FORCE AND GARRISON.

A B, general, commander in chief of the United States forces now in, and C D, general, commander in chief of the garrison of, agree to the following articles:

Article 1. An armistice between the United States troops investing and the troops forming the garrison of shall begin at noon on the instant and shall end at noon on the instant.

Art. 2. White flags shall be hoisted simultaneously at the beginning of the armistice, the one at, within the United States lines, and the other at Fort

The flags shall be kept flying during the continuance of the armistice and shall be lowered simultaneously at its conclusion.

Art. 3. Provisions to the extent of rations shall be supplied daily for the use of the garrison by the besiegers on payment of such sums as may be agreed upon as the value thereof by commissioners to be appointed by the above-named commanders in chief, respectively. The provisions shall be delivered to persons authorized to demand the same by the general commanding the garrison, at such times, and in such places in front of the United States lines, as may be agreed upon by the above-named commanders in chief, and shall be conveyed to the garrison by the persons authorized as above stated.

Art. 4. Save in so far as is provided by article 3, or as may be agreed upon between the above-named commanders in chief, it is agreed that the garrison shall not attempt to obtain succor, and that no communication whatever shall, during the armistice, take place between the garrison, whether friend or enemy, and a space of around the fortification shall be considered neutral ground, and no person whatever, whether he be a stranger or belonging to the garrison or to the besieging army, shall be allowed to enter on such space without the permission of the above-named commanders in chief.

Art. 5. General, commanding the garrison, engages on behalf of the garrison not to repair the fortifications or to undertake any new siege works, or do any act or thing whatsoever calculated to place the garrison in a better position in regard to its defense; and General, on behalf of the United States troops, engages not to undertake any siege works, or to make any hostile move against the garrison, but it is understood that he is at liberty to obtain fresh supplies of provisions or reinforcements of troops.

APPENDIX C.

FORM OF SUSPENSION OF ARMS FOR THE BURIAL OF THE DEAD, ETC.

General A B, commanding the United States forces at, and General C D, commanding the forces at, agree as follows:

Article 1. A suspension of arms for the space of three hours, beginning at 10 o'clock and ending at 1 o'clock on this day of is agreed to for the purpose of burying the dead and withdrawing the wounded.

Art. 2. The beginning of the suspension of arms shall be notified by two white flags hoisted simultaneously, the one within the United States lines, and the other within the lines. The white flags shall continue flying during the suspension of arms, and such flags shall be lowered simultaneously as a signal of the conclusion of the suspension of arms.

Art. 3. All firing shall cease during the suspension of arms.

Art. 4. The United States troops shall not, during the suspension of arms, advance beyond the line, and the troops shall not advance beyond the line. The space between the two lines shall be open to all persons engaged in burying the dead, or in attending to the wounded, or in carrying away the dead or wounded, but to no other persons.

APPENDIX D.

ARMISTICE AGREED ON BY JAPAN AND RUSSIA AT PORTSMOUTH (U. S. A.) OF 5TH SEPTEMBER, 1905.

The undersigned plenipotentiaries of Japan and Russia, duly authorized to that effect by their respective Governments, have agreed on the following terms of the armistice, which will remain in force until the execution of the treaty of peace:

(1) A certain distance (zone of demarcation) shall be fixed to separate the front of the armies of the two powers in Manchuria, and also in the Tumen region.

(2) The naval force of one of the belligerents may not bombard the territory occupied or belonging to the other.

(3) The taking of maritime prizes will not be interrupted by the armistice.

(4) During the armistice no reinforcements may be sent to the theater of war. Those who are on the way from Japan may not be sent north of Mukden, and those on the way from Russia may not be sent south of Harbin.

(5) The commanders of the military and naval forces will arrange the details of the armistice in accordance with principles above enunciated.

(6) The two Governments will issue the order to put this protocol into execution directly after the signature of the treaty of peace.

(Signed) WITTE.
ROSEN.

(Signed) KOMOURA.
TAKAHURA.

APPENDIX E.

PROTOCOL OF THE CONDITIONS OF THE ARMISTICE CONCLUDED IN MANCHURIA ON 13TH SEPTEMBER, 1905.

Article. 1. Fighting is suspended throughout the extent of Manchuria.

Art. 2. The space between the front lines of the Japanese and Russian Armies, which are indicated on the maps exchanged with the present protocol, constitutes the neutral zone.

Art. 3. Every person having the least connection with either of the armies is forbidden to enter the neutral zone on any pretext whatsoever.

Art. 4. The road leading from Shuang-miao-tzu to Sha-ho-tzu is to be employed for communication between the two armies.

Art. 5. The present protocol will come into force on the 16th (Russian style 3d) September, 1905, at midday, and will remain in force until the execution of the treaty of peace signed at Portsmouth by the plenipotentiaries of the two powers.

The present protocol is signed by the representatives of the commanders in chief of the Japanese and Russian Armies in Manchuria, in virtue of the full powers which have been given to them by the said commanders in chief.

Done on the road situated close to Sha-ho-tzu the 13th September, 1905, in two texts, Japanese and Russian, each party keeping a Japanese and a Russian text.

(Signed)

FUKUSHIMA,
Major General, etc.
ORANOUSKI,
Major General, etc.

APPENDIX F.

JAPANESE PROJECT FOR THE ARMISTICE IN THE TUMEN REGION.

Article 1. The Japanese and Russian Armies in the Tumen region will execute the armistice according to the stipulations of the present convention.

Art. 2. The Japanese Army will canton south of the line The positions of the Russian Army will be limited to the north of the line The region between these two lines will form the neutral zone.

Art. 3. No troops, patrols, or men sent on reconnaissance nor any individual belonging or attached to the army will be permitted to enter the neutral zone.

Art. 4. No preparations for attack or defense will be made near the line limiting the neutral zone. The necessary preparations for cantoning the troops will not be considered as preparations for attack or defense.

Art. 5. No requisitions of coolies, horses, or any other objects will be made in the neutral zone.

Art. 6. The Japanese and Russian Armies in the Tumen region will both commence to evacuate their troops beyond the lines indicated in article 2 on the third day, and must have completed the evacuation behind the lines by the seventh day from the signing of the present convention.

Art. 7. Once the convention is drawn up, the commanders of the Japanese and Russian Armies will order the troops and the officials under their command to execute the armistice, in such a manner that the order may reach them as soon as possible. They will at the same time notify the commanders of the land and sea forces.

Art. 8. This convention will come in force immediately it has been signed by the plenipotentiaries of the Japanese and Russian Armies; it will lapse on the execution of the treaty of peace.

Art. 9. The present convention will be drawn up in two Japanese and two Russian texts, each army keeping a text in each language.

(This project was not agreeable to the Russians and an armistice had not been concluded when the treaty of peace was ratified.)

APPENDIX G.

SUSPENSION OF ARMS AT THE SIEGE OF BELFORT, 13TH FEBRUARY, 1871.

It has been agreed by the undersigned, Capt. Krafft, of the auxiliary engineers, and Capt. von Schultzen-dorf, general staff, of the besieging army, both furnished with full powers by Col. Denfert-Rochereau, commandant of Belfort, and by Lieut. Gen. von Treskow, commandant of the besieging corps—

As follows:

(1) Lieut. Gen. von Treskow will send a telegram to Versailles to acquaint the Imperial Chancellor Count Bismarck that Col. Denfert-Rochereau requires direct instructions from his Government as regards the surrender of the fortress.

(2) Col. Denfert-Rochereau will send an officer to Bale to await the telegraphic instructions from the French Government.

(3) Until the return of this officer there will be a suspension of arms between the besieged and besiegers, beginning the 13th February at 11 p.m. Nevertheless, the suspension of arms may be denounced at any moment 12 hours before the time intended for the resumption of hostilities.

(4) During the suspension of arms the two parties shall remain in their present positions. The limits thus traced shall not be crossed, and, moreover, there shall be no communication on the part of civilians between the fortress and the outside.

(5) Col. Denfert-Rochereau engages to inform Lieut. Gen. von Treskow with the least possible delay of the decision he makes after receiving the instructions of the French Government.

The present convention has been made in duplicate original, one text in German and the other in French.

(Signed)

KRAFFT.
VON SCHULTZEN-DORF.
13th February, 1871.

CHAPTER VII, SECTION IV.

PASSPORTS, SAFE-CONDUCTS, SAFEGUARDS, AND CARTELS.

276. Passport Defined. A passport is a written document given to a person or persons by a commander of belligerent forces authorizing him or them to travel unmolested within the district occupied by his troops."

277. Safe-Conduct as to Persons. A safe-conduct is a document given to an enemy, alien, or other, person or persons by a commander of belligerent forces

"Mr. Spaight says: "The terms (passport and safe-conduct) appear to be convertible, though some would make the 'passport' confer a more extended liberty of movement than the 'safe-conduct' which they would confine to an authority to come to a specified place for a specified object" (War Rights on Land, p. 230).

Passports are issued by the State Department, or similar office in other countries, to diplomatic agents and others entering or traveling in foreign countries, which are of the same general character as those issued during war. The latter should, when practicable, have the photograph of the bearer attached. For form see appendix, this section.

authorizing him or them to go into places which they could not reach without coming into collision with armed forces actively operating against the enemy."²⁷⁸

278. Safe-Conduct as to Goods. A safe-conduct is a written authority or license to carry goods to or out of, or to trade in, a certain place or places otherwise forbidden by the laws of war, given by a commander of belligerent forces to an enemy, alien, or other person."²⁷⁹

279. Character of These Instruments. Both passports and safe-conducts fall within the scope of international law when granted by arrangement with the enemy or with a neutral power. The passports and safe-conducts as to persons are individual and nontransferable. A safe-conduct for goods, while restricted to the articles named in it, may be transferred from one person to another, provided it does not designate who is to carry the goods or to trade. They may be transferred when the licensee is designated; if the transferee is approved by the authorizing belligerent. The term "pass" is now frequently used instead of the older term "passport," and likewise the word "permit"; the word "pass" being used for a general permission to do certain things, the word "permit" being used like the word "safe-conduct," to signify permission to do a particular thing.

280. May Be Revoked. Passports and safe-conducts may be revoked by the commander issuing them or by his superiors for reasons of military expediency, but, until revoked, they are binding upon grantors and their successors. When a time is specified in the document it is valid only during such time. These documents should not be revoked for the purpose of securing the persons of the holders who should be given time to withdraw in safety; in case of violation of their terms the privilege will be withdrawn and the case investigated."²⁸¹ They are valid in the district of the commander who grants them only.

281. Licenses to Trade. Licenses to trade are general and special. A general license relaxes the exercise of the rights of war, generally or partially, in relation to any community or individuals liable to be affected by their operation. A special license is one given to individuals for a particular voyage or journey for the importation or exportation of particular goods."²⁸²

282. Safeguard. A safeguard is a detachment of soldiers posted or detailed by a commander of troops for the purpose of protecting some person or persons, or a particular village, building, or other property. The term "safe-

²⁷⁸ Safe-conducts are more frequently issued to enemy subjects. Safe-conducts were issued to the Boer leaders in April and May, 1902, to permit them to confer about the terms of surrender. (Spaight, p. 230.) Gen. Scott issued a safe-conduct to several members of the new Federal Congress to permit them to pass through the City of Mexico and a passport to Gen. Santa Anna's wife to permit her to join her husband. (Moore's Int. Law. Dig., sec. 1158.) For form see appendix, this section.

²⁷⁹ For form of safe-conduct see appendix, this section.

²⁸⁰ See Land Warfare, Opp., art. 334; Spaight, War Rights on Land, p. 230.

²⁸¹ Licenses to trade must, as a general rule, emanate from the supreme authority of the State. In certain exceptional cases the governor of a province, the general of an army, or the admiral of a fleet, may grant licenses to trade within the limits of their commands.

As to licenses to trade see the following cases:

The Sea Lion, 5 Wall., 630.

Coppell v. Hall, 7 Wall., 542.

Hamilton v. Dillin, 21 Wall., 73.

U. S. v. One hundred barrels of cement, 27 Fed. Cases, 292.

Dig. Int. Law, Moore, sec. 1141.

guard" is also used to designate a written order by a commander of belligerent forces for the protection of an enemy subject or enemy property. It is usually directed to the succeeding commander requesting the grant of protection to such individuals or property."

283. Inviolability of Soldiers as Safeguards. Soldiers on duty as safeguards are guaranteed against the application of the laws of war, and it is customary to send them back to their army when the locality is occupied by the enemy, together with their baggage and arms, as soon as military exigencies permit."

284. Cartels. In the customary military sense a cartel is an agreement entered into by belligerents for the exchange of prisoners of war. In its broader sense it is a convention concluded between belligerents for the purpose of arranging or regulating certain kinds of non-hostile intercourse otherwise prohibited by the existence of the war." A cartel is voidable as soon as either party has violated it."

APPENDIX.

Form of Passport.

(Place and date of issue.)

Authority is hereby granted to Mr. (or other title) living at (if on a mission, state the same), to pass out of the lines for the purpose of (state object of journey)

He will cross the lines by the road from A to B (or at a designated point) during the (forenoon, afternoon, or day) of (date).

He is authorized to take with him (persons, articles, carriages, etc.).

He will proceed to (name of destination) by the route C. D. E.

.....
(Signature of officer.)

.....
(Rank, etc.)

Photograph or
finger print
or signature.

Note. This passport is strictly personal and will be void unless used on the date stated.

Note. Blank forms for these should be issued at the commencement of hostilities. A photograph should be attached where the pass is for an extended period. A finger print or signature can be substituted if desired.

"The object of a safeguard is usually to protect museums, historic monuments, etc. A case of this which caused much discussion was the action of Gen. McClellan in placing a safeguard over the residence of Mrs. R. E. Lee in 1862. McClellan's Own Story, p. 360; Spaight, War Rights on Land, p. 231.

The French call the first kind vive and the second mort. "It is called dead (mort) or alive (vive) according to whether it consists in the simple posting of a notice showing the protection given to the establishment or, when, in order to insure the efficacy of the exemption accorded, there is placed over it a body of troops charged with enforcing the order." Les Lois, Jacomet, art. 139.

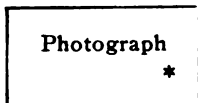
"Enemy safeguards which have been posted without previous arrangement ought, nevertheless, to be treated in the same way, provided that the circumstances of the case prove that their posting was bona fide." Land Warfare, Opp., par. 336.

"A cartel ship is a vessel engaged in the exchange of prisoners or in carrying official communications to the enemy. Such a ship is considered inviolable, but must not engage in hostilities or carry any implements of war except a signal gun." Land Warfare, Opp., par. 239.

United States v. Wright, 28 Fed. Cas., 796. Both belligerents are bound to observe the terms of the cartel, and they "are of such force under the law of nations that even the sovereign can not annul them."

"Vide G. O 100, 1863, art. 109.

In making application for a passport from the State Department, the applicant must make affidavit containing statement of his citizenship, residence, occupation, destination, and object of journey, and to which an oath of allegiance is attached. Attached is a description of the applicant and identification with address of witness testifying to applicant's identity. (This is or has been waived in certain cases.)

**SAFE CONDUCT.**

(Place and date of issue.)

.....residing at.....
(or if on a mission, the mission to be stated) is authorized
to proceed to for the purpose of

He will follow the route A. B. C.

He is authorized to take with him (persons, articles, vehicles).

This safe conduct is good until.....

All military authorities are directed to protect the bearer of this safe conduct and in nowise to molest him.

.....
(Signature of officer.)

.....
(Rank, etc.)

Note. This safe conduct is strictly personal and shall be void unless used within the time fixed.

FORMS OF SAFEGUARD.^a

(Date and place of issue.)

All officers and enlisted men belonging to the.....
(Name the army or subdivision thereof.)
.....are directed to respect the premises of.....
situated at.....

No requisitions thereon, nor damage thereto, will be permitted, and protection will be afforded by all officers and enlisted men against any person who shall attempt to act in violation of this order.

.....
(Signature of officer.)

.....
(Rank, etc.)

The following form was prescribed by Gen. Scott in Mexico:

SAFEGUARD.

By authority of Major Gen..... (or Brigadier Gen.....).

The person, the property, and the family of..... (or such a college, and the persons and things belonging to it; such mill, etc.), are placed under the safeguard of the United States. To offer any violence or injury to them is expressly forbidden; on the contrary, it is ordered that safety and protection be given to him or them in case of need.

Done at the headquarters ofthis.....day of....., 18...

^aForms for safeguards ought to be printed in blank, headed by the article of war relative thereto, and held ready to be filled up, as occasions may offer. A duplicate, etc., in each case might be affixed to the houses or edifices to which they relate.

57th Article of War: Whosoever, belonging to the armies of the United States in foreign parts, or at any place within the United States or their Territories, during rebellion against the supreme authority of the United States, forces a safeguard shall suffer death.

63rd Article of War: All retainers to the camp, and all persons serving with the armies of the United States in the field, though not enlisted soldiers, are to be subject to orders according to the rules and discipline of war.

CHAPTER VIII.

MILITARY AUTHORITY OVER THE TERRITORY OF THE HOSTILE STATE.

285. Military Occupation. H. R. Art. XLII. Territory is considered occupied when it is actually placed under the authority of the hostile army.

The occupation extends only to the territory where such authority has been established and can be exercised.

286. Occupation Question of Fact. Military occupation is a question of fact. It presupposes a hostile invasion as a result of which the invader has rendered the invaded Government incapable of publicly exercising its authority, and that the invader is in position to substitute and has substituted his own authority for that of the legitimate Government in the territory invaded.¹

287. Does Not Transfer Sovereignty. Being an incident of war, military occupation confers upon the invading force the right to exercise control for the period of occupation. It does not transfer the sovereignty to the occupant, but simply the authority or power to exercise some of the rights of sovereignty.² The exercise of these rights results from the established power of the occupant and is considered legitimate by reason of the necessity for maintaining law and order, indispensable for both the inhabitants and for the occupying force.³

288. Distinguished From Invasion. The state of invasion corresponds with the period of resistance. Invasion is not necessarily occupation, although it

¹ *Thirty Hogshead of Sugar v. Boyle*, 9 Cranch, 191: "Some doubt has been suggested whether Santa Cruz, while in the possession of Great Britain, could properly be considered as a British island. But for this doubt there can be no foundation. Although acquisitions made during war are not considered as permanent until confirmed by treaty, yet to every commercial and belligerent purpose, they are considered as part of the domain of the conqueror, so long as he retains the possession and government of them."

² "The territory of Castine, by the conquest and occupation by Great Britain, passed under the temporary allegiance and sovereignty of the British sovereign. The sovereignty of the United States over the territory was suspended during such occupation, so that the laws of the United States could not be rightfully enforced there, or be obligatory upon the inhabitants who remained and submitted to the conquerors." *United States v. Rice*, 4 Wheat., 246; *United States v. Hayward*, 2 Gallison, 485.

³ In the case of *Dooley v. United States*, 182 U. S., 222, 231, the court said: "In *New Orleans v. Steamship Co.*, 20 Wall., 393, it was said, with respect to the powers of the military government over the city of New Orleans after its conquest, that it had the same power and rights in territory held by conquest, as if the territory had belonged to a foreign country and had been subjugated in a foreign war. In such cases the conquering power has the right to displace the pre-existing authority, and to assume to such extent as it may deem proper the exercise by itself of all the powers and functions of government. It may appoint all the necessary officers and clothe them with designated powers, larger or smaller, according to its pleasure. It may prescribe the revenues to be paid, and apply them to its own use or otherwise. It may do anything necessary to strengthen itself and weaken the enemy. There is no limit to the powers that may be exerted in such cases, save those which are found in the laws and usages of war. These principles have the sanction of all publicists who have considered the subject." See also *Fleming v. Page*, 9 How., 603; *Am. Ins. Co. v. Canter*, 1 Pet., 511.

precedes it and may frequently coincide with it. An invader may push rapidly through a large portion of enemy country without establishing that effective control which is essential to the status of occupation. He may send small raiding parties or flying columns, reconnoitering detachments, etc., into or through a district where they may be temporarily located and exercise control, yet when they pass on it can not be said that such district is under his military occupation.⁴

289. Distinguished From Subjugation or Conquest. Subjugation and conquest imply the annexation of the property or territory by the conqueror through the treaty of peace, and with it the sovereignty. Military occupation is based upon the fact of possession and is essentially provisional until the conclusion of peace or the annihilation of the adversary, when sovereignty passes and military occupation technically ceases.⁵

290. Occupation Must Be Effective. It follows from the definition that military occupation must be both actual and effective; that is, the organized resistance must be overcome and the forces in possession have taken measures to establish law and order. It is sufficient that the occupying army can, within a reasonable time, send detachments of troops to make its authority felt within the occupied district. It is immaterial by what methods the authority is exercised, whether by fixed garrisons or flying columns, small or large forces.⁶

291. Presence of Invested Fort Immaterial. The existence of a fort or defended area within the occupied district, provided such place is invested, does not render the occupation of the remainder of the district ineffective, nor is the consent of the inhabitants in any manner essential.⁷

292. Proclamation of Occupation. In a strict legal sense no proclamation of military occupation is necessary. On account of the special relations established between the inhabitants of the occupied territory and the occupant, by virtue of the presence of the invading force, the fact of military occupation, with the extent of territory affected by the same, should be made known by proclamation.⁸

⁴ Early invaded Maryland in July, 1864, but the country was not occupied.

⁵ G. O. No. 11, H. Q. Army of Virginia, Wash., July 26, 1862, by Gen. Pope, furnishes an example of improper conception of allegiance and military occupation. His last paragraph, concerning communications, is strictly in accord with the laws and usages of war. The German conception of her rights of sovereignty over Alsace and Lorraine, in that she made no pretension to absolute sovereignty until after their cession by France, is strictly in accord with the rights of military occupation. Vide Spaight, *War Rights on Land*, pp. 329-333.

⁶ Land Warfare, Opp., par. 344. "Practically, all enemy territory will be considered effectively occupied by a French army, over which a service of supply shall have been established in rear of the army of invasion." Lieut. Jacomet, *Les Lois*, p. 69.

⁷ Land Warfare, Opp., par. 345. Citing "That when Alsace was declared occupied on 14th August, 1870, the fortresses in that Province were still uncaptured, but for the sieges in progress it had ceased to be the theater of active operations."

⁸ The French rule is given by Lieut. Jacomet as follows: "Occupation should be preceded by a notification which should take the form of proclamations posted in the community, of circulars addressed to the local authorities, notices inserted in the local papers. These publications should enumerate the acts from which the inhabitants have to abstain, and the penalties imposed for corresponding infractions." *Les Lois*, p. 69. The Germans in 1870, usually issued a proclamation in accordance with that of August, 1870, which stated that:

293. Commencement of Occupation. In the absence of a proclamation or similar notice the exact time of commencement of occupation may be difficult to fix. The presence of a sufficient force to disarm the inhabitants or enforce submission and the cessation of local resistance due to the defeat of the enemy's forces determine the commencement of occupation.⁹

294. Cessation of Occupation. Occupation once acquired must be maintained. In case the occupant evacuates the district or is driven out of the same by the enemy, or by a levee en masse, and the legitimate government actually resumes its functions, the occupation ceases. It does not cease, however, if the occupant, after establishing his authority, moves forward against the enemy, leaving a smaller force to administer the affairs of the district. Nor does the existence of a rebellion or the operations of guerrilla bands cause it to cease unless the legitimate government is reestablished and the occupant fails to promptly suppress such rebellion or guerrilla operations. Hostile military occupation ceases on the conclusion of peace.

295. Administration of Occupied Territory. Military government is the organization through which a belligerent exercises authority over the territory of the enemy invaded and occupied by him.¹⁰ The necessity for such government arises from the failure or inability of the legitimate government to exercise its functions on account of the military operations or occupation.¹¹

ADMINISTRATION OF OCCUPIED TERRITORY.

296. Duty to Restore Law and Order. H. R. Art. XLIII. The authority of the legitimate power having in fact passed into the hands of the occupant, the latter shall take all the measures in his power to restore, and insure, as far as possible, public order and safety, while respecting, unless absolutely prevented, the laws in force in the country.

297. Functions of Government. All the functions of the hostile government—legislative, executive or administrative—whether of a general, provincial, or local

"The military jurisdiction will be considered in force and proclaimed for the whole area of a 'canton' immediately a proclamation has been posted up in one of the localities of the same."

In Great Britain proclamations were issued by Wellington simply warning the inhabitants to behave peaceably and not to communicate with the enemy. The same rule was followed by the Japanese in the war with China, and again in Manchuria. (Ariga, p. 443.) For practice in this country vide the proclamations by Gen. Kearney on Aug. 22, 1846; Gen. Taylor in Mexico, H. R. Executive Doc. N. 119, pp. 13-17; Gen. Scott in Mexico at Vera Cruz, Apr. 11, 1847; at Tampico, Feb. 19, 1847; G. O. No. 20, Feb. 19, 1847; and G. O. 287, Army Mex., Sept. 17, 1847; G. O. 101, W. D., July 18, 1898; Proc. Gen. Miles, July 28, 1898, as to Porto Rico; Proc. Gen. Merritt, Aug. 14, 1898, in Philippines.

⁹"The presence of a hostile army proclaims its martial law." G. O. 100, 1863, art. 1, par. 2.

¹⁰"The organization through which the authority is exercised in a region under military occupation constitutes the military government." Wilson on Int. Law, H. S., par. 143, p. 331.

¹¹In *Dooley v. U. S.*, 182 U. S., 222, 230, the court said: "Upon the occupation of the country (Porto Rico) by the military forces of the United States the authority of the Spanish Government was superseded, but the necessity for a revenue did not cease. The government must be carried on, and there was no one left to administer its functions but the military forces of the United States." Cited in Dig. Int. Law, Moore, sec. 1145, p. 270, with other cases.

character, cease under military occupation, or continue only with the sanction, or, if deemed necessary, the participation of the occupier or invader."¹²

298. Nature of Government. It is immaterial whether the government established over an enemy's territory be called a military or civil government. Its character is the same and the source of its authority is the same. It is a government imposed by force, and the legality of its acts are determined by the laws of war. During military occupation it may exercise all the powers given by the laws of war."¹³

299. The Laws in Force. The principal object of the occupant is to provide for the security of the invading army and to contribute to its support and efficiency and the success of its operations. In restoring public order and safety he will continue in force the ordinary civil and criminal laws of the occupied territory which do not conflict with this object. These laws will be administered by the local officials as far as practicable. All crimes not of a military nature and which do not affect the safety of the invading army are left to the jurisdiction of the local courts."¹⁴

300. Power to Suspend and Promulgate Laws. The military occupant may suspend existing laws and promulgate new ones when the exigencies of the military service demand such action.

¹² G. O. 100, 1863, art. 6.

¹³ See Halleck Int. Law (4th ed.), 2 p. 466. "While a military government continues as an instrument of warfare, used to promote the objects of invasion by weakening the enemy or strengthening the invader, its powers are practically boundless." Magoon, Law of Civ. Gov. under Mil. Occupation, p. 14. United States v. Dieckmann, 92 U. S., 520. But note the language of the Sup. Court in the case of Dooley v. U. S., 222, 234-5; in speaking of the powers of the military commander the court said: "While his power is necessarily despotic, this must be understood rather in an administrative than in a legislative sense. * * * His power to administer would be absolute, but his power to legislate would not be without certain restrictions; in other words, they would not extend beyond the necessities of the case."

See also the Admittance, Jecker v. Montgomery, 13 How., 498, in which it was held that the executive power could not establish a prize court in Mexico. Also The Grapeshot, 9 Wall., 129, 133; Mitchell v. Harmony, 13 How., 115; Raymond v. Thomas, 91 U. S. 712.

¹⁴ The jurisdiction of these local courts is never extended to members of the invading Army.

"All civil and penal law shall continue to take its usual course in the enemy's places and territories under martial law, unless interrupted or stopped by order of the occupying military power." G. O. 100, 1863, art. 6.

Dow v. Johnson, 100 U. S., 158: "An officer of the Army of the United States, whilst serving in the enemy's country during the rebellion, was not liable to an action in the courts of the country for injuries resulting from his military orders or acts; nor could he be required by a civil tribunal to justify or explain them upon any allegation of the injured party that they were not justified by military necessity. He was subject to the laws of war and amenable only to his own Government.

"When any portion of the insurgent States was in the occupation of the United States during rebellion, the municipal laws, if not suspended or superseded, were generally administered there by the ordinary tribunals for the benefit and protection of persons not in the military service. Their continued enforcement was not for the protection or control of officers or soldiers of the Army."

301. Nature of Laws Suspended. The occupant will naturally alter or suspend all laws of a political nature as well as political privileges and all laws which affect the welfare and safety of his command. Of this class are those relating to recruitment in occupied territory, the right of assembly, the right to bear arms, the right of suffrage, the freedom of the press, the right to quit or travel freely in occupied territory. Such suspensions should be made known to the inhabitants.³⁵

302. Nature of Laws Promulgated. An occupant may create new laws for the government of a country where none exist.³⁶ He will promulgate such new laws and regulations as military necessity demands. In this class will be included those laws which come into being as a result of military rule; that is; those which establish new crimes and offenses incident to a state of war and are necessary for the control of the country and the protection of the army.³⁷

³⁵ See Wilson on Int. Law, H. S., p. 335; Land Warfare, Opp., p. 80. See Dow v. Johnson above and cases cited.

³⁶ Mr. Spaight cites as perhaps the only modern case that of Bulgaria in 1877-8, and quotes Prof. De Martens that "The Russians were quite unable to comply with the Brussels rule which enjoined respect for local laws and institutions, for local laws and institutions there were none." War Rights on Land, p. 357. De Martens, *La Paix et la Guerre*, p. 243.

³⁷ The following is extracted from various martial-law regulations of the Japanese in Manchuria.

All laws and regulations relating to the punishments for acts detrimental to the Japanese Army in Korea and Manchuria can not be given here. All that can be done is to indicate the principal acts for which punishment can be awarded.

1. To oppose our land and sea forces, military authorities, or persons attached to our army or navy.

2. To be attached to the enemy and act hostilely against our army without being clothed in a regular uniform.

3. To act as a spy, to conceal a spy, or assist his flight.

4. To guide our army badly.

5. To communicate to the enemy the movement of our land or sea forces.

6. To spread false news.

7. To make a noise or utter outcries of a nature to disturb our land and sea forces.

8. To publish placards detrimental to our army.

9. To disturb public order by meetings, assemblies, publication of newspapers, and reviews, posting up placards, and other means.

10. To aid or facilitate the movements of the enemy.

11. To guide the enemy.

12. To guide or assist knowingly the flight of the enemy.

13. To deliver up prisoners of war, hide them, and assist their escape.

14. To destroy, burn, or steal military stores, military buildings, such as depots, barracks, military stores, etc.

15. To destroy or spoil military stores, arms, and other articles left on the field of battle by our army or the enemy.

16. To destroy or burn the various means of military communication, such as telegraph wires, railways, bridges and highways, canals etc., and to cause inconvenience to the military postal service.

17. To destroy, steal, damage, or change the position of signals, indicating posts, placards, etc., rendered necessary by military operations.

18. To prejudice the needs of our army by rendering water not drinkable or by hiding vehicles, commodities, supplies, and fuel.

303. Prohibition as to Rights and Rights of Action. H. R. Art. XXIII, last par. It is especially forbidden * * * to declare abolished, suspended, or inadmissible in a court of law the rights and rights of action of the nationals of the hostile party.¹⁸

304. General Restrictions Imposed—Commercial Relations. The occupant has the unquestioned right to regulate commercial intercourse in occupied territory; i.e., he may prohibit entirely or place such restrictions and limitations upon such intercourse as he considers desirable for military purposes.¹⁹

305. Censorship of Press and Correspondence. The military occupant may establish censorship of the press and of telegraphic and postal correspondence. He may prohibit entirely the publication of newspapers, prescribe regulations for their publication and circulation and especially in unoccupied portions of the territory and in neutral countries. He is not required to furnish facilities for postal service, but may take charge of them himself, especially if the officials of the occupied district fail to act or to obey his orders.²⁰

306. Means of Transportation. The military occupant exercises authority over all means of transportation, both public and private within the occupied district, and may seize and utilize the same and regulate their operation.²¹

19. To destroy or prevent the working of aqueducts, or to suppress the electric light.

20. To coin or alter money, notes, and Japanese military assignats and to make use of them whilst being aware of their fraudulent character.

21. To oppose requisitions in general, such as the lodgment or hiring of coolies, or to fail to comply with any requisitions.

22. To prevent by trickery or threat any duty imposed on individuals serving in our army.

23. To be in possession of arms and military stores without authority.

24. To enter ports, batteries, or other prohibited places without permission.

25. To infringe the prohibition against entering or remaining in forbidden radii.

26. To make trenches in the mountains and hills without authority.

27. To inspect, sketch, photograph, or make descriptions of views on land and sea without authority.

28. To plunder articles belonging to the wounded or dead on the field of battle.

29. To exhume or destroy dead bodies on the field of battle or to steal articles from them.

30. To put to death Japanese or allied soldiers.

31. To assassinate or steal with violence.

32. To provide opium, to procure the instruments for smoking it, and a favorable place to enable our soldiers, allies, and other persons attached to the army to make use of it.

33. To commit any other acts detrimental to the Japanese army.

34. To disobey orders given by our army.

35. Acts detrimental to our army of which mention is not made above will be punished according to the military, naval, and penal law, or according to the ordinary penal code of Japan.

¹⁸ For rule that debts due from citizens of one belligerent to those of another are not extinguished but suspended during war, see *State of Georgia v. Brailsford* (3 Dall., 1), *Ware v. Hylton* (3 Dall., 199, 281), *Williams v. Bruffy*, (96 U. S. 176, 186-188), *Dig. Int. Law Moore*, sec. 1155.

¹⁹ *Mil. Gov. and Martial Law*, Birkhimer (2d ed.), par. 272 et seq.; *Fleming v. Page* (9 How., 615); *Land Warfare*, Opp., par. 373.

²⁰ *Vide F. S. R.*, 1914, pars. 419-432.

²¹ *Vide infra* pars. 341-343.

307. Regulation as to Taxes. H. R. Art. XLVIII. If, in the territory occupied, the occupant collects the taxes, dues, and tolls imposed for the benefit of the State, he shall do so, as far as is possible, in accordance with the rules of assessment and incidence in force, and shall in consequence be bound to defray the expenses of the administration of the occupied territory to the same extent as the legitimate Government was so bound.

308. New Taxes Not to Be Levied. The imposition of taxes being an attribute of sovereignty, no new taxes should be imposed by the occupant. The occupant may, however, levy contributions and requisitions.²²

309. When Existing Rules May Be Disregarded. If due to the flight or unwillingness of the local officials, it is impracticable to follow the rules of incidence and assessment in force, then the total amount of the taxes to be paid may be allotted among the districts, towns, etc., and the local authorities be required to collect it as a capitation tax or otherwise.²³

310. Surplus May Be Used. The first charge upon the State taxes is for the cost of local maintenance. The balance may be used for the purposes of the occupant.²⁴

311. What Included in Taxes, Tolls, Etc. The words "for the benefit of the State" were inserted in the article to exclude local dues collected by local authorities. The occupant will supervise the expenditure of such revenue and prevent its hostile use.²⁵

EFFECTS OF OCCUPATION ON THE POPULATION.

312. Right to Enforce Obedience. The occupant can demand and enforce from the inhabitants of occupied territory such obedience as may be necessary for the security of his forces, for the maintenance of law and order, and the proper administration of the country.

313. Oath of Allegiance Forbidden. H. R. Art. XLV. It is forbidden to compel the inhabitants of occupied territory to swear allegiance to the hostile power.²⁶

314. Must Respect Persons, Religious Convictions, Etc. H. R. Art. XLVI. Family honor and rights, the lives of persons, * * * as well as religious convictions and practice, must be respected.²⁷

²² As to requisitions vide infra pars. 345 et seq. As to contributions vide pars. 351 et seq.

²³ G. O. 101, W. D. 1898. "As the result of military occupation the taxes and duties payable by the inhabitants to the former Government become payable to the military occupant; unless he sees fit to substitute for them other rates or modes of contribution to the expenses of the Government. The moneys so collected are to be used for the purpose of paying the expenses of government under the military occupation, such as the salaries of the judges and the police, and for the payment of the expenses of the army."

²⁴ See note to preceding paragraph.

²⁵ Holland, *Laws of War on Land*, par. 108. Spaight, *War Rights on Land*, p. 378.

²⁶ Both the British and Boers required an oath of neutrality. They also punished those who violated such oaths with terms of imprisonment. The necessity for such oath is not readily apparent, except, perhaps, as a reminder of his obligations, since the inhabitant owes the obligations imposed and can be punished for violations of such obligations under the laws and rules of war. For form of oath required by Great Britain, vide Spaight, *War Rights on Land*, p. 372.

²⁷ Mr. Spaight, after pronouncing this article the "magna charta of war law," says: "One is disheartened when one thinks of requisitions, of contributions, of fines, of reprisals, of houses leveled as a measure of tactics, of a whole

315. United States Rule. The United States acknowledge and protect, in hostile countries occupied by them, religion and morality; the persons of inhabitants, especially those of women; and the sacredness of domestic relations. Offenses to the contrary shall be rigorously punished.²³

316. Reciprocal Obligations of Inhabitants. In return for such considerate treatment, it is the duty of the inhabitants to carry on their ordinary peaceful pursuits, to behave in an absolutely peaceful manner, to take no part whatever in the hostilities carried on, to refrain from all injurious acts toward the troops or in respect to their operations, and to render strict obedience to the officials of the occupant.²⁴

317. Limitation as to Services of Inhabitants. H. R. Art. LII. Services shall not be demanded from inhabitants except for the needs of the army of occupation. They shall be of such a nature as not to involve the inhabitants in the obligation of taking part in military operations against their own country.

Such services shall only be demanded on the authority of the commander in the locality occupied.

town emptied as a military precaution (as Sherman emptied Atlanta and Burrows's brigade emptied Kandahar in 1880), of wide provinces cleared of their habitations and crops, of a thousand instances in which the provisions of Article XLVI have conspicuously not been adhered to, in later-day wars. If an invader had to comply strictly with its terms, that of itself would bring his invasion to an end. An invader must and does interfere with the lives and property of citizens in many ways; even their religious worship and the sanctity of their churches or chapels are not secure from the encroachments of the greedy mawed aggressor, the necessity of war. * * * The fact is that this Article XLVI must be read subject to military necessities. One might add such a proviso as to nearly every article, as Baron Jomini pointed out at the conference of 1874, but after none is the proviso so necessary as after this. So read, the article forbids certain violent acts unless they are demanded by the necessity of overcoming the armed forces of the enemy. Such acts must not be done as a substantive measure of war—they must not be made an end in themselves, but only as a means to the legitimate end of war; that is, the destruction of the other belligerent's fighting force." War Rights on Land, p. 374-375. Vide pars. 333 and 336 *infra*.

²³ "It will therefore be the duty of the commander of the expedition, immediately on his arrival in the islands, to publish a proclamation, declaring that we come not to make war upon the people of the Philippines, nor upon any party or faction among them, but to protect them in their homes, in their employments, and in their personal and religious rights." (Instructions to Gen. Merritt, May 28, 1898.) G. O. 100, 1863, art. 37, par. 1.

²⁴ "The freedom of the people to pursue their accustomed occupations will be abridged only when it becomes necessary to do so.

"While the rule of conduct of the American commander in chief will be such as has just been defined, it will be his duty to adopt measures of a different kind if, unfortunately, the course of the people should render such measures indispensable to the maintenance of law and order. He will then possess the power to replace or expel the native officials in part or altogether, to substitute new courts of his own constitution for those that now exist, or to create such new or supplementary tribunals as may be necessary. In the exercise of these high powers the commander must be guided by his judgment and his experience, and a high sense of justice." Ins. to Gen. Merritt, May 28, 1898. See also to same effect, G. O. 101, A. G. O., 1898. G. O. 100, 1863, art. 22. "The principle has been more and more acknowledged that the unarmed citizen is to be spared in person, property and honor as much as the exigencies of war will admit."

318. General Right to Requisition Services. Services of the inhabitants of occupied territory may be requisitioned for the needs of the Army. These will include the services of professional men and tradesmen, such as surgeons, carpenters, butchers, bakers, etc., employees of gas, electric light, and water works, and of other public utilities, and of sanitary boards in connection with their ordinary vocations. The officials and employees of railways, canals, river or coastwise steamship companies, telegraph, telephone, postal, and similar services, and drivers of transport, whether employed by the State or private companies, may be requisitioned to perform their professional duties so long as the duties required do not directly concern the operations of war against their own country.³⁰

319. Can Restore General Conditions. The occupant can requisition labor to restore the general condition of the public works of the country to that of peace; that is, to repair roads, bridges, railways, and as well to bury the dead and collect the wounded. In short, under the rules of obedience, they may be called upon to perform such work as may be necessary for the ordinary purposes of government, including police and sanitary work.

320. Can Not Be Forced to Construct Forts, Etc. The prohibition against forcing the inhabitants to take part in the operations of war against their own country precludes requisitioning their services upon works directly promoting the ends of the war, such as construction of forts, fortifications, and entrenchments; but there is no objection to their being employed voluntarily, for pay, on this class of work, except the military reason of preventing information concerning such work from falling into the hands of the enemy.³¹

321. Can Not Force Furnishing Information About Enemy. H. R. Art. XLIV. A belligerent is forbidden to force the inhabitants of territory occupied by it to furnish information about the army of the other belligerent, or about its means of defense.

322. Interpretation of Rule. This article was reserved by Austria-Hungary, Bulgaria, Montenegro, Russia, Japan, and Roumania, because it was believed that the prohibition was contrary to the general rule and practice of nations as expressed in G. O. 100, 1863, art. 93, that "All armies in the field stand in need of guides, and impress them if they can not obtain them otherwise." That the impressment of guides was intended to be forbidden by this rule seems evident from the action of the above nations who reserved it, and as well from the discussions at The Hague.³²

323. The Practice as to Guides. As to the countries making reservations, the old practice will prevail. Officers of all armies with experience in the field know that guides are absolutely essential to success in practically all military operations in the field in unknown enemy country. Whenever, therefore, guides are in fact essential to success, and, for that reason, a military necessity, the foregoing rule must give way to and be interpreted as subordinate to such military necessity.³³

³⁰ Land Warfare, Opp., par. 388.

³¹ The better rule is to pay for all services rendered whenever practicable to do so, since it avoids antagonizing the people against the occupant and forcing stronger adherence to his own Government. Vide *Les Lois*, Jacomet, par. 93; Land Warfare, Opp., par. 392.

³² Spaight, *War Rights on Land*, pp. 368-371. *Les Lois*, Jacomet, art. 95. Land Warfare, Opp., par. 382 and note (h). Hague Conference, 1907, Actes, Vol. III, pp. 136-141. Mr. Holland places the above rule (H. R. XLIV) in square brackets, to indicate that it possesses but little value. *War on Land*, art. 104.

³³ No invader can be expected to forego the chances of success or imperil seriously his operations against the enemy by foregoing a well-understood and

OFFICIALS IN OCCUPIED TERRITORY.

324. Oath of Officials. The occupant may require such officials as are continued in their offices to take an oath to perform their duties conscientiously and not to act to his prejudice. Every such official who declines to take such oath may be expelled; but, whether they do so or not, they owe strict obedience to the occupant.²⁴

325. Retention of Officials. It is to the best interests of the occupant, and more especially to that of the population, that at least some of the civil officials should remain in their offices in order to assist in the maintenance of order, as well as for the safety of the inhabitants themselves and of their property.²⁵

326. Municipal Officials Should Remain. Municipal officials, including the judges and magistrates, sanitary and police authorities, as well as the staffs of museums, libraries, and all establishments entitled to special protection during hostilities, should remain and be retained in office if consistent with the safety of the Army. The political officials, as well as railway, postal, telegraph, and telephone officials, will probably cease work.²⁶

327. Salaries of Officials. The salaries of civil officials of the hostile government who remain in the invaded territory, and continue the work of their offices, especially those who can properly continue it under the circumstances arising out of the war—such as judges, administrative or police officers, officers of city or communal governments—are paid from the public revenues of the invaded territory, until the military government has reason wholly or partially to dispense with their services. Salaries or incomes connected with purely honorary titles are always suspended.²⁷

328. Resignation of Officials. An official of the hostile government who has accepted service under the occupant should be permitted to resign and should not be punished for exercising such privilege. Such official should not be forced to exercise his functions against his will.²⁸

329. Removal of Civil Officials. By virtue of his powers of control the occupant is duly empowered to remove officials of every character. He will on principle remove political officials. Any official considered dangerous to the occupant may be removed, made a prisoner of war, or expelled from the occupied territory.

330. Punishment of Civil Officials. Acts of civil officers that are harmful or injurious to the occupant will be dealt with under the laws of war. Other wrongs or crimes committed by them will be punished according to the law of the land.

well-established practice of armies in the field as to the employment of a few individuals of his enemy as guides. Moreover, he must be protected in the use of such guides, because the success of his operations and the safety of his army are and must be his first consideration before which everything else must give way and be subordinated; and, as said by Mr. Lieber, "Military government—martial law—affects chiefly the police, etc. * * * and refers mainly to the support and efficiency of the army, its safety, and the safety of its operations." G. O. 100, 1863, art. 10.

²⁴ G. O. 100, 1863, art. 26, states: "Commanding generals may cause the magistrates and civil officers of the hostile country to take the oath of temporary allegiance or an oath of fidelity to their own victorious Government or rulers, and they may expel any one who declines to do so." Such oath is not essential, and should not be insisted upon, especially when the form of the oath implies allegiance which pertains to sovereignty.

²⁵ Hague Conference, Actes, 1899, p. 148. .

²⁶ Land Warfare, Opp., par. 395.

²⁷ G. O. 100, 1863, art. 39.

²⁸ Brussels Conference, p. 243; Spaight, War Rights on Land, p. 365.

CHAPTER IX.

TREATMENT OF ENEMY PROPERTY.

331. Destruction and Seizure of. H. R. Art. XXIII, par. (g). It is especially forbidden * * * to destroy or seize the enemy's property, unless such destruction or seizure be imperatively demanded by the necessities of war.

332. General Rule as to War Right to Seize and Destroy Property. The rule is that in war a belligerent can destroy or seize all property of whatever nature, public or private, hostile or neutral, unless such property is specifically protected by some definite law of war, provided such destruction or seizure is imperatively demanded by the necessities of war.¹

PRIVATE PROPERTY.

333. Must Be Respected. H. R. XLVI, par. 1. Private property * * * must be respected.

334. Devastation. The measure of permissible devastation is found in the strict necessities of war. As an end in itself, as a separate measure of war, devastation is not sanctioned by the law of war. There must be some reasonably close connection between the destruction of property and the overcoming of the enemy's army. Thus the rule requiring respect for private property is not violated through damage resulting from operations, movements, or combats of the army; that is, real estate may be utilized for marches, camp sites, construction of trenches, etc. Buildings may be used for shelter for troops, the sick and wounded, for animals, for reconnaissance, cover, defense, etc. Fences, woods, crops, buildings, etc., may be demolished, cut down, and removed to clear a field of fire, to construct bridges, to furnish fuel if imperatively needed for the army.²

335. American Rule. This rule (respect for private property, etc.) does not interfere with the right of the victorious invader to tax the people or their property, to levy forced loans, to billet soldiers, or to appropriate property, especially houses, boats or ships, lands, and churches, for temporary and military use.³

336. Confiscation. H. R. Art. XLVI, par. 2. Private property can not be confiscated.⁴

¹ This right is recognized by comparison of H. R. XXIII and XLVI. The only property safeguarded is the matériel of the mobile sanitary formations under the Geneva Convention.

For the American rule, see G. O. 100, 1863, art. 15, ante par. 12. The British rule is given as follows: "The 'necessities of war' may obviously justify not only the seizure of private property but even the destruction of such property and the devastation of whole districts." Spaight, War Rights on Land, p. 116.

The German rule is as follows: "No damage must be done, not even the most trivial, which is not necessitated by military reasons. Every damage—the very greatest—is justifiable if war demands it or if it is a consequence of the proper carrying on of war." Kriegsbrauch, p. 54.

² Vide Hall, Int. Law (5th ed.), p. 535; Spaight, War Rights on Land, p. 112 et seq.; Dig. Int. Law, Moore, sec. 1113.

³ G. O. 100, 1863, art. 37, par. 2.

⁴ The seizure of enemy property by the United States as prize of war on land, *jure belli*, is not authorized by the law of nations, and can be upheld only by an act of Congress. *United States v. 1,756 Shares Capital Stock* (5 Blatchf., 231).

"It is no bar to the recovery of a claim that it was confiscated during the rebellion by a Confederate court, because due to a loyal citizen." (*Stevens v. Griffith*, 111 U. S., 48.)

337. Booty. All captures and booty belong, according to the modern law of war, primarily to the Government of the captor.

Prize money whether on land or sea can now only be claimed under local law.*

338. Private Gain by Officers and Soldiers Prohibited. Neither officers nor soldiers are allowed to make use of their position or power in the hostile country for private gain, not even for commercial transactions otherwise legitimate. Offenses to the contrary committed by commissioned officers will be punished with cashiering or such other punishment as the nature of the offense may require; if by soldiers, they shall be punished according to the nature of the offense.*

339. Pillage. H. R. Art. XLVII. Pillage is formally forbidden.*

340. Private property can be seized only by way of military necessity for the support or other benefit of the Army or of the occupant. All destruction of property not commanded by the authorized officer, all pillage or sacking, even after taking a town or place by assault, are prohibited under the penalty of death, or such other severe punishment as may seem adequate to the gravity of the offense. A soldier, officer, or private, in the act of committing such violence, and disobeying a superior ordering him to abstain from it, may be lawfully killed on the spot by such superior.*

341. Private Property Susceptible of Direct Military Use. H. R. Art. LIII, par. 2. All appliances, whether on land, at sea, or in the air, adapted for the

"The Government recognized to the fullest extent the humane maxims of the modern law of nations, which exempt private property of noncombatant enemies from capture as booty of war." (U. S. v. Klein, 13 Wall., 128, 137; Lamar v. Browne, 92 U. S., 194.)

"If property be such that it ministers directly to the strength of the enemy and its possession alone enables him to supply himself with the munitions of war and to continue the struggle, then it may be confiscated." (Prize cases, 2 Black, 687.)

"The rightful capture of movable property on land transfers the title to the Government of the captor as soon as the capture is completed." Young v. U. S., 97 U. S., 39, 60.

"This rule as to property on land has received very important qualifications from usage, from the reasoning of enlightened publicists, and from judicial decisions. It may now be regarded as substantially restricted 'to special cases dictated by the necessary operation of the war,' and as excluding in general the seizure of the private property of pacific persons for the sake of gain." Mrs. Alexander's Cotton, 2 Wall., 404, 419. Briggs v. U. S., 143 U. S., 346, 355-358.

As to abandoned and captured property act, see Dig. Int. Law, Moore, sec. 1152.

*G. O. 100, 1863, art. 46.

"Pillage was defined by Prof. Holland as 'Booty which is not permitted.' He refers to the following offenses for which the death penalty or any less punishment may be inflicted when committed by a soldier on active service: (1) Leaving his commanding officer to go in search of plunder; (2) committing any offense against the property or person of any inhabitant of or resident in the country in which he is serving; (3) breaking into any house or other place in search of plunder." Vide Spaight, War Rights on Land, p. 188.

Baron Jomini remarked in the Brussels Conference, "There is a kind of booty which is allowed on the field of battle, for instance, that which consists of horses, munitions, cannon, etc.—it is the booty gained at the cost of private property which the committee wish to forbid."

*G. O. 100, 1863, arts. 38 and 44.

transmission of news, or for the transport of persons or things, exclusive of cases governed by naval law, depots of arms, and, generally, all kinds of ammunition of war, may be seized, even if they belong to private individuals, but must be restored and compensation fixed when peace is declared.

342. What Included in Rule. The foregoing rule includes everything susceptible of direct military use, such as cables, telephone and telegraph plants, horses, and other draft and riding animals, motors, bicycles, motorcycles, carts, wagons, carriages, railways, railway plants, tramways, ships in port, all manner of craft in canals and rivers, balloons, airships, aeroplanes, depots of arms, whether military or sporting, and in general all kinds of war material.*

343. Destruction of Such Property. The destruction of the foregoing property and all damage to the same are justifiable if it is required by the exigencies of the war.¹⁰

344. Submarine Cables. H. R. Art. LIV. Submarine cables connecting an occupied territory with a neutral territory shall not be seized or destroyed except in the case of absolute necessity. They must likewise be restored and compensation fixed when peace is made.¹¹

REQUISITIONS.

345. Requisitions. H. R. Art. LII. Requisitions in kind shall not be demanded from municipalities or inhabitants except for the needs of the army of occupation. They shall be in proportion to the resources of the country, and of such a nature as not to involve the inhabitants in the obligation of taking part in military operations against their own country.

Such requisitions shall only be demanded on the authority of the commander in the locality occupied.

Contributions in kind shall as far as possible be paid for in cash; if not, a receipt shall be given and the payment of the amount due shall be made as soon as possible.¹²

346. What May Be Requisitioned. Practically everything may be requisitioned under this article that is necessary for the maintenance of the Army and not of direct military use, such as fuel and food supplies, clothing, wine, tobacco,

* Land Warfare, Opp., par. 415.

¹⁰ Spaight, War Rights on Land, pp. 117 et seq., 410.

¹¹ The Institute of Int. Law in 1902 agreed to the following rules:

1. A submarine cable uniting two neutral territories is inviolable.
2. A cable uniting the territories of two belligerents or of two parts of the territory of one of the belligerents may be cut anywhere, except in the territorial waters or the neutralized waters of a neutral State.
3. A cable uniting a neutral territory to the territory of one of the belligerents may not under any circumstances be cut in the territorial or neutralized waters of a neutral State. In the high sea this class of cable can be cut only if an effective blockade exists and within the limits of the line of the blockade, and the cable must be restored with the least practicable delay; it may always be cut on the territory or in the territorial waters of an enemy's territory up to a distance of 3 marine miles from low-water mark.

4. The liberty a neutral State has of transmitting messages does not imply the right to use the cable, or allow it to be used, clearly to assist one of the belligerents.

5. In the application of these rules no difference is to be made between cables belonging to the State and those belonging to individuals, or between cables belonging to the enemy and to neutrals.

¹² For form of requisition receipt see Appendix, this chapter.

printing presses, type, etc., leather, cloth, etc."¹³ Billeting of troops for quarters and subsistence is also authorized.¹⁴

347. Method of Requisitioning. Requisitions must be made under the authority of the commander in the locality.¹⁵ No prescribed method is fixed, but if practicable requisitions should be accomplished through the local authorities by systematic collection in bulk. They may be made direct by detachments if local authorities fail for any reason.¹⁶ Billeting may be resorted to if deemed advisable.¹⁷

¹³ Mr. Spaight says that "practically everything under the sun" may be requisitioned, and cites a case of a bootjack being requisitioned, and also that the Fifth Army Corps staff requisitioned six eggs. War Rights on Land, p. 402. Vide F. S. R., 1914, arts. 290-293. Marshal Oyama's instructions in the Chino-Japanese War were that "Requisitions are to be limited to objects essential for the subsistence or lodgment of troops, or discharge of fatigue duties, works of transport and organization of services for the transmission of messages. If it is necessary to requisition anything not here enumerated, the sanction of the commander in chief must be obtained." Takahashi, pp. 155-160. For articles and services that may be requisitioned under French law, see Bonfils, p. 702, par. 1211: "Subject to the right of requisition are all objects and everything the providing of which is necessitated by the military interest of the occupant, when even the local legislation would not permit requisition to the national government. Such is the principle. (Compare art. 52, Hague Rules.) Here are the cases of application. Purveyance can be demanded for the following: Lodging in the house of the inhabitant and cantonment for the men and horses, mules, and cattle, in available places, as also necessary buildings for the personnel and matériel of service of any kind and belonging to the army. Subsistence for officers and men lodged with the inhabitant, according to the custom of the country. Provisions and fuel for the army, forage for horses, mules, and cattle, and bed straw for troops encamped or lodged in huts. Teams and means of transportation of every kind, including the personnel. Boats or small craft found on streams, rivers, lakes, or canals. Mills and bakeries. Materials, tools, machinery, and equipments necessary for the construction and repair of roads. Treatment of the sick and wounded in the house of the resident. Clothing, articles of equipment, camping equipage, horse furniture, bedding. Drugs, medicines, and first-aid articles. See French laws and decrees on military requisitions."

¹⁴ As to billeting of troops, see III amendment to the Const. U. S., and F. S. R., 1914, par. 241.

¹⁵ Note that it differs from the rule as to contributions, which require the order of the commander in chief. It is not necessary to actually show the order of the commander. Vide par. 352, par. 1, *infra*.

¹⁶ It is generally recognized by all States that the assistance of local authorities is advisable, since in addition to the avoidance of contact with troops and inhabitants, the more even distribution of supplies furnished by the inhabitants is secured. The direct method was resorted to in the Civil War, and especially by Gen. Sherman, because "the country was sparsely settled, with no magistrates or civil authorities, who could respond to requisitions, as is done in all wars in Europe; so that this system of foraging was indispensable to our success." *Memoirs*, Vol. II, p. 183.

In case the direct method (foraging) is resorted to, it is the practice of all countries to send a commissioned officer in charge of the detachment. F. S. R., 1914, par. 290.

¹⁷ Subsisting troops by billeting can generally be resorted to only in case of small commands or when troops are scattered. F. S. R., 1914, par. 241.

348. The Amount Taken. The expression "needs of the army" was adopted rather than "necessities of the war" as more favorable to the inhabitants, but the commander is not thereby limited to the absolute needs of the troops actually present.¹⁹ The object was to avoid reducing the population to starvation.²⁰

349. Fixing Prices. The prices of articles requisitioned to be paid for, can and should be fixed by the commander. The prices of commodities on sale may also be regulated and limits placed on the hours and places of trading. All authorities agree that it is good policy to pay cash if possible and to take up receipts as soon as possible.²¹

350. Method of Enforcing. If cash is paid, coercion will seldom be necessary. The coercive measures adopted will be limited to the amount and kind necessary to secure the articles requisitioned.²²

CONTRIBUTIONS.

351. Contributions. H. R. Art. XLIX. If, in addition to the taxes mentioned in the above article (XLVIII), the occupant levies other money contributions in the occupied territory, this shall only be for the needs of the army or of the administration of the territory in question.

352. Method of Levying Contributions. H. R. Art. LI. No contribution shall be collected except under a written order, and on the responsibility of a commander in chief.

The collection of the said contribution shall only be effected as far as possible in accordance with the rules of assessment and incidence of the taxes in force.²³

For every contribution a receipt shall be given to the contributor.

353. Penalty for Individual Acts of Inhabitants. H. R. Art. L. No general

¹⁹ It was stated in The Hague Convention that "occupied territory is not to be systematically exhausted." Actes, Vol. III, p. 149.

²⁰ The practice in the British Army is to leave three days' supplies with residents of municipalities and one week's supply with the inhabitants of farms and outlying district. F. S. R., Part II, p. 63. The Japanese were instructed to "take into account the competence of the inhabitants to supply what was demanded." Takahashi, p. 159.

²¹ F. S. R., 1914, par. 290. See also Land Warfare, Opp., art. 421; Spaight, War Rights on Land, p. 407. The Japanese in 1904 prescribed: "5th. The price of each commodity should be strictly reasonable, and whoever demands intentionally an exorbitant price or commits an act of fraud shall be punished." Ariga, p. 457. In the Chinese War the rule was that requisitions shall be paid for "at a rate deemed appropriate, though not necessarily so large as to obtain the consent of the owners of the requisitioned articles." Takahashi, p. 159. The British in South Africa stopped cash payments and made receipts non-negotiable, but payable at the end of the war.

²² The practice of the Germans in the War of 1870-1 was "to increase the amount demanded if it were not immediately forthcoming, and then, if the inhabitants still proved recalcitrant, to bombard and burn the village. Often hostages were taken to secure levies in money or kind. At Nancy a threat to shoot certain workmen was made, but not executed." Mr. Spaight says: "It is the experience of history that an occupant can usually seize, in land war, what he wants; and if he can not, the threat of either carrying off the prominent citizens as prisoners of war (hostages) or of burning down a few houses usually suffices to bring the people to terms." War Rights on Land, p. 407. Vide, as to bombardment of undefended towns, etc., in naval warfare, Hague Con., IX, Art. III, 1907.

²³ Vide par. 309, *supra*.

penalty, pecuniary or otherwise, shall be inflicted upon the population on account of acts of individuals for which they can not be regarded as jointly and severally responsible.

354. Collective Punishments Authorized. Collective punishments may be inflicted for such offenses as the community has committed or permitted to be committed. Such offenses are not necessarily limited to violations of the laws of war. Any breach of the occupant's proclamations or martial-law regulations may be punished collectively. For instance, a town or village may be held collectively responsible for damage done to railways, telegraphs, roads, and bridges in the vicinity.²⁶ The most frequent form of collective punishment consists in fines.²⁶

REAL PROPERTY OF A STATE.

355. Occupant the Administrator and Usufructuary of. H. R. Art. I.V. The occupying State shall be regarded as administrator and usufructuary of public buildings, real estate, forests, and agricultural estates belonging to the hostile State, and situated in the occupied territory. It must safeguard the capital of these properties, and administer them in accordance with the rules of usufruct.²⁷

²⁶ This rule does not prejudice the question of reprisals, as to which see *infra*, pars. 379 et seq.

²⁷ The Germans in 1870-71 imposed collective responsibility, which made not only the commune from which the delinquent came but also that in which the offense was committed liable for the offense. Vide Spaight, *War Rights on Land*, pp. 408-409.

²⁸ The following table is taken from Spaight, *War Rights on Land*, p. 418: "Tabular statement showing the treatment of property in an occupied country. Property may be either:

I. Confiscable, when it becomes the property of the occupant outright, no indemnity or compensation being due (C).

II. Not confiscable, but subject to sequestration by the occupant, who must, however, return the property at the peace or pay compensation (S).

III. Neither confiscable nor sequestrable, but subject to be requisitioned (for barracks or billets, e.g., services or supplies) (R).

IV. Subject to usufruct, i.e., it may be exploited by the occupant, who must not, however, alienate, damage, or destroy the substance (U).

CLASSIFICATION OF PROPERTY UNDER THE ABOVE HEADINGS.

| Nature of the property. | Public property. | Private property |
|---|------------------|------------------|
| Movables: | | |
| (1) Money, notes, realizable securities..... | C | R |
| (2) War material—depots of arms, uniforms, army stores, and, generally speaking, property directly adaptable to war.. | C | S |
| (3) Railway material, telegraphs, shore ends of cables, wagons, horses, motorcars, airships, boats, and other means of transit and communication..... | C ²⁸ | S |
| (4) Movable property not directly adaptable to warlike purposes..... | R | R |
| Immovables: | | |
| (1) Institutions devoted to religion, ²⁹ charity, education, arts, and sciences..... | R | R |
| (2) Other buildings, lands, forests, and agricultural undertakings. | U | R |
| The property of communes—e. g., "town halls, waterworks, gas works, police stations" (Holland, <i>Laws and Customs of War</i> , p. 40)..... | R | R |
| Shore ends of submarine cables connected with a neutral country.. | S | S |

356. What Occupant May Do with Such Property. The occupant does not have the absolute right of disposal or sale of enemy's real property. As administrator or usufructuary he should not exercise his rights in such wasteful and negligent manner as to seriously impair its value. He may, however, lease or utilize public lands or buildings, sell the crops, cut and sell timber, and work the mines. A lease or contract should not extend beyond the conclusion of the war.²³

357. State Real Property Susceptible of Direct Military Use. Real property of a State which is of direct military use, such as forts, arsenals, dockyards, magazines, barracks, railways, canals, bridges, piers, wharves, remain in the hands of the occupant until the close of the war, and may be destroyed or damaged, if deemed necessary, in military operations.²⁴

²³ Whether State-owned railway rolling stock is to be retained by captor or restored should be specially settled in the treaty of peace.

²⁴ Includes churches, temples, mosques, synagogues, etc., without any distinction as to the nature of the religious cult (Hague I. B. B., p. 152).

As to neutral property in an occupied country, see chapter XV.

N. B.: Imperative military necessity may justify the destruction of any of the above kinds of property."

²⁵ Land Warfare, Opp., par. 427. Spaight, War Rights on Land, p. 416. The rules of usufruct of the invaded territory should be applied especially as to forests, which should not be treated in a barbarous manner.

²⁶ Rules adopted by the Japanese upon the occupation of Dalny. Ariga, pp. 354-355.

I. PUBLIC PROPERTY OF THE ENEMY.

A. Landed Properties.

(a) The buildings, grounds, and other real estate belonging to the Government will be utilized by our army or will be a source of revenue to it. The army will destroy them only in extreme necessity of war. Outside of this case, it must manage them as a usufruct and never claim the property for itself. However, the ordnance depots, telegraph, and telephone establishments will be seized.

(b) The landed estates of the city of Dalny, and the establishments devoted to public worship, charity, fine arts, and sciences will be protected and considered as private properties.

B. Personal Properties.

(a) All moneys, securities, arms, munitions, railroad material, wagons, horses, vessels, provisions, clothing, and all objects fit for use in war, will be seized.

(b) The properties belonging to the city of Dalny and institutions of public worship, charity, education, fine arts and sciences, will be treated as private properties.

II. PRIVATE PROPERTY.

A. Real Property.

(a) Only grounds, buildings, or real properties, the owners of which have left without intrusting them to administrators, can be temporarily occupied by our army.

(b) Common landed property will be placed for our use by way of request only.

358. Property of Municipalities, Etc. H. R. Art. LVI. The property of municipalities, that of institutions dedicated to religion, charity and education, the arts and sciences, even when State property, shall be treated as private property.

All seizure of, destruction or willful damage done to institutions of this character, historic monuments, works of art, science, is forbidden, and should be made the subject of legal proceedings.

359. Authorized Treatment of. The property included in the foregoing rule may be utilized in case of necessity for quartering the troops, the sick and wounded, horses, stores, etc., and generally as prescribed for private property.²⁰ Such property must, however, be secured against all avoidable injury, even when located in fortified places which are subject to seizure or bombardment.²¹

360. Public Movable Property. H. R. Art. LIII, par. 1. An army of occupation can only take possession of cash, funds, and realizable securities which are strictly the property of the State, depots of arms, means of transport, stores

B. Personal Property.

(a) Only railroad material, vessels, arms, munitions, horses, stores, clothing, and all articles that can be used directly in war will be appropriated.

(b) Other private properties shall be turned to account of our army by right of taxation, contribution, or requisition only.

III. PROPERTY OF UNKNOWN ORIGIN.

When it is not clear whether property is public or private, it will be temporarily regarded as public property upon condition that the principle of private property is applied to it if, subsequently, the private ownership is clearly proved.

REMARKS.

1. As the administration of the Railway Co. of Eastern China may be considered as a State undertaking, everything owned by it or connected with its working will be considered and treated as property of the State.

2. As the greater part of the property of the town of Dalny is so situated that it is impossible to ascertain definitely the ownership, especially after the destructive acts of the Russians, the pillage and devastation of marauding bands and of the Chinese inhabitants themselves, no provisions can be made with respect thereto. That to which the owners can prove their right by incontestable evidence will be treated according to the principles of international law.

3. Private property seized will be restored and the question of indemnity settled when peace is reestablished. For every article of private property seized by the army, a certificate will, as soon as possible, be furnished.

4. When our army makes use of property the ownership of which is not certain, the designation of these articles, their number, and any information as to the place where they were found, etc., will, as far as possible, be recorded.

²⁰ Vide ante pars. 333-335.

²¹ Vide ante pars. 225-228. Sieges and bombardments.

G. O. 100, 1863, art. 35: "Classical works of art, libraries, scientific collections, or precious instruments, such as astronomical telescopes, as well as hospitals, must be secured against all avoidable injury, even when they are contained in fortified places whilst besieged or bombarded."

and supplies, and, generally, all movable property belonging to the State which may be used for military operations."²²

361. Two Classes of Movable Property of Enemy. All movable property belonging to the State directly susceptible of military use may be taken possession of as booty and utilized for the benefit of the invader's Government. Other movable property, not directly susceptible of military use, must be respected and can not be appropriated."²³

362. Property of Unknown Ownership. Where the ownership of property is unknown—that is, where there is any doubt as to whether it is public or private, as frequently happens—it should be treated as public property until ownership is definitely settled."²⁴

APPENDIX.

The following blanks were prepared in the office of the Quartermaster's Corps for use of officers in making requisitions. They are issued in triplicating books so arranged that one copy can be sent to proper headquarters, one copy given to the party from whom articles are requisitioned, and one copy retained.

[Field Form No. —.]

Not negotiable.

Receipt for supplies in enemy's country.

Received from
 P. O. Address
 Date, 19....

| Quantity. | Unit. | Article. | Condition. |
|-----------|-------|----------|------------|
| | | | |
| | | | |

I certify that I have received the above stores. That I have (have not) paid for same and that they will be taken up and accounted for on my
 for 19....

, Quartermaster.

²² On January 23, 1898, the firm of Smith, Bell & Co., of Manila (bankers), were required to pay to the military authorities \$100,000 for a draft for that amount drawn in favor of one Mariano Trias, who was the custodian of the funds, or treasurer, of the Philippine Insurgents. The original draft, which was not in the possession of the United States authorities, passed through several hands and was finally located in the possession of a certain Filipino, who was warned that if he attempted to collect the amount, or to let same out of his possession, his house and lands would be confiscated to the United States.

The action of the military authorities was sustained. Vide Magoon's reports, p. 261.

²³ It is usual to accord protection to Crown pictures, jewels, collections of art, and archives, but papers connected with the war may be secured, even if they pertain to archives. Land Warfare, Opp., par. 431.

²⁴ The application of this rule will avoid fraudulent transfer of title of public property to private individuals. Land Warfare, Opp., par. 432.

Station:

 (Signature of person furnishing supplies.)

Authority
 Under Art. 52, Hague Convention October 18, 1907, respecting laws and customs of war on land. 32 Stats., Part 2, Page 1823.

Instructions to holder.

This receipt should be delivered to

.....
 (Name of disbursing officer.)

at
 (Address of disbursing officer.)

.....
 within 30 days of its date.

The holder will request a certificate of acknowledgment at the time of turning in this receipt, which is intended to safeguard his interests in case of loss of this receipt while in transit or during adjustment.

The holder is informed that this receipt will be examined and inquired into and that he may be required to present satisfactory evidence as to his title, etc., to the property taken before payment is made.

No payment can be made under any circumstances whatever until this receipt has been turned in.

CHAPTER X.

PENALTIES FOR VIOLATIONS OF THE LAWS OF WAR.

363. Violations by Belligerent Party. H. Con. IV, Art. III. A belligerent party which violates the provisions of the said regulations shall, if the case demands, be liable to pay compensation. It shall be responsible for all acts committed by persons forming part of its armed forces.¹

364. Penalties for States. From the inherent nature of war as a last remedy of States, and from the nature of governments themselves, no penalties can be directed against the State itself, although certain practical measures are recognized in international law for securing the legitimate conduct of war by belligerents which will be considered under the following heads: (a) Public complaints; (b) punishment of individuals; (c) reprisals or retaliation; and (d) taking hostages.

(A) COMPLAINTS.

365. Complaints. (1) Complaints through the public, and especially foreign, press have force solely through the formation of adverse public opinion, which no nation at war can afford to disregard.

(2) Complaints sent through neutral States—the only channel of diplomatic intercourse—may result in mediation or good offices, or intervention.²

(3) Complaints sent direct by parlementaires made use of between commanders of belligerent forces produce results in the future avoidance of acts complained of or in the punishment of offenders for violations of the laws of war.³

¹ See also Hague Con., IV, Art. I; H. R., Art. LVI, par. 2; and Gen. Con., art. 28.

² Ariga, p. 253.

³ Ariga, p. 286.

(B) PUNISHMENT OF INDIVIDUALS.

WAR CRIMES.

366. Offenses Committed by Armed Forces. The principal offenses of this class are: Making use of poisoned and otherwise forbidden arms and ammunition; killing of the wounded; refusal of quarter; treacherous request for quarter; maltreatment of dead bodies on the battle field; ill treatment of prisoners of war; breach of parole by prisoners of war; firing on undefended localities; abuse of the flag of truce; firing on the flag of truce; abuse of the Red Cross flag and emblem; and other violations of the Geneva Convention; use of civilian clothing by troops to conceal their military character during battle; bombardment of hospitals and other privileged buildings, improper use of privileged buildings for military purposes; poisoning of wells and streams; pillage and purposeless destruction; ill-treatment of inhabitants in occupied territory.* Individuals of the armed forces will not be punished for these offenses in case they are committed under the orders or sanction of their government or commanders. The commanders ordering the commission of such acts, or under whose authority they are committed by their troops, may be punished by the belligerent into whose hands they may fall.

367. Effect of Disregard of War Law by Entire Corps. When an entire corps, or body of troops, systematically disregards the laws of war, e.g., by refusal of quarter, any individuals belonging to it who are taken prisoners may be treated as implicated in the offense.[†]

368. Refusal of Quarter. All troops of the enemy known or discovered to give no quarter in general, or to any portion of the army, receive none.[‡]

369. Hostilities Committed by Individuals Not of Armed Forces. Persons who take up arms and commit hostilities without having complied with the conditions prescribed for securing the privileges of belligerents, are, when captured by the enemy, liable to punishment for such hostile acts as war criminals.

370. War Rebels. War rebels are persons within an occupied territory who rise in arms against the occupying or conquering army, or against the authorities established by the same. If captured, they may suffer death, whether they rise singly, in small or large bands, and whether called upon to do so by their own, but expelled government or not. They are not prisoners of war; nor are they, if discovered and secured before their conspiracy has matured to an actual rising or armed violence.[§]

371. Highway Robbers and Pirates of War. Men, or squads of men, who commit hostilities, whether by fighting, or by inroads for destruction or plunder, or by raids of any kind, without commission, without being part and portion of the organized hostile army, and without sharing continuously in the war, but who do so with intermitting returns to their homes and avocations, or with the occasional assumption of the semblance of peaceful pursuits, divesting themselves of the character or appearance of soldiers—such men, or squads of men, are not public enemies, and, therefore, if captured, are not entitled to

* Land Warfare, Opp., par. 118.

† Laws of War on Land. Holland, par. 118.

‡ G. O. 100, 1863, art. 62: "Quarter having been given to an enemy by American troops, under a misapprehension of his true character, he may, nevertheless, be ordered to suffer death if, within three days after the battle, it be discovered that he belongs to a corps which gives no quarter." G. O. 100, 1863, art. 66. Vide par. 183, supra.

§ G. O. 100, 1863, art. 65.

the privileges of prisoners of war, but shall be treated summarily as highway robbers and pirates."

372. Acts Punished as War Treason. Some of the principal acts punished as treasonable by belligerents in invaded territory, when committed by the inhabitants, are espionage, supplying information to the enemy, damage to railways, war material, telegraphs, or other means of communication; aiding prisoners of war to escape; conspiracy against the armed forces of the enemy or members thereof; intentional misleading of troops while acting as guides; voluntary assistance to the enemy by giving money or serving as guides; inducing soldiers to serve as spies, to desert, or to surrender; bribing soldiers in the interest of the enemy; damage or alteration to military notices and signposts in the interests of the enemy; fouling sources of water supply and concealing animals, vehicles, supplies, and fuel in the interest of the enemy; knowingly aiding the advance or retirement of the enemy; circulating proclamations in the interests of the enemy."

373. Armed Prowlers. Armed prowlers, by whatever names they may be called, or persons of the enemy's territory, who steal within the lines of the hostile army for the purpose of robbing, killing, or of destroying bridges, roads, or canals, or of robbing or destroying the mail, or of cutting the telegraph wires, are not entitled to the privileges of the prisoner of war."

374. Marauders. Marauders are individuals, either civilians or soldiers, who have left their corps, and who follow armies on the march or appear on battlefields, either singly or in bands, in quest of booty, and rob, maltreat, or murder stragglers and wounded, and pillage the dead. Their acts are considered acts of illegitimate warfare, and the punishment is imposed in the interest of either belligerent."

375. Other Crimes. There are many other crimes or offenses which are the result of war and which a belligerent may forbid and punish in the maintenance of order and the safety of his army, such as evasion of censorship regulations; making false claims for damage; making false accusations against the troops; furnishing liquor to soldiers; being in possession of animals, stores, or supplies pertaining to the army, and, generally, neglect and disobedience of orders of the Government, including police and sanitary regulations. All such crimes should be defined and the liability to punishment therefor made known to the inhabitants."

376. Trials. In every case trial of individuals before military or other courts designated by the belligerent should precede punishment."

377. Punishments. All war crimes are subject to the death penalty, although the fact of trial indicates that a lesser penalty may be pronounced. The

⁸ G. O. 100, 1863, art. 82.

⁹ Land Warfare, Opp., par. 445.

¹⁰ G. O. 100, 1863, art. 84.

¹¹ The foregoing definition is taken from Land Warfare, Opp., par. 488. See also *Curry v. Collins*, 37 Mo., 324, 328, where the court says: "A marauder is one who while employed in the army as a soldier commits larceny or robbery in the neighborhood of the camp or while wandering away from the army (2 Bouv. Law Dict., 133). But in the modern and metaphysical sense of the word, as now sometimes used in common speech, the word seems to be applied to a class of persons who are not a part of any regular army, and are not answerable to any military discipline, but who are mere lawless banditti, engaged in robbery, murder, and all conceivable crimes." See pars. 112 and 171.

¹² Land Warfare, Opp., par. 446. See also note 17 to par. 302, supra.

¹³ Hague Conference, 1899, p. 146.

punishment should be deterrent, and in imposing a sentence of imprisonment it is not necessary to take into consideration the end of the war, which fact does not necessarily limit the imprisonment imposed. Any other construction of this would result in belligerents imposing the extreme penalty of death in all cases.¹⁴

378. Crimes punishable by all penal codes, such as arson, murder, maiming, assaults, highway robbery, theft, burglary, fraud, forgery, and rape, if committed by an American soldier in a hostile country against its inhabitants, are not only punishable as at home, but in all cases in which death is not inflicted, the severer punishment shall be preferred.¹⁵

(C) REPRISALS.

379. **Reprisals.** Reprisals are acts of retaliation, resorted to by one belligerent against the enemy individuals or property for illegal acts of warfare committed by the other belligerent, for the purpose of enforcing future compliance with the recognized rules of civilized warfare.¹⁶

380. **Retaliation Indispensable.** The law of war can no more wholly dispense with retaliation than can the law of nations, of which it is a branch. Yet civilized nations acknowledge retaliation as the sternest feature of war. A reckless enemy often leaves to his opponent no other means of securing himself against the repetition of barbarous outrage.¹⁷

381. **Retaliation Not Resorted to for Revenge.** Retaliation will, therefore, never be resorted to as a measure of mere revenge, but only as a means of protective retribution, and, moreover, cautiously and unavoidably; that is to say, retaliation shall only be resorted to after careful inquiry into the real occurrence, and the character of the misdeeds that may demand retribution. Unjust or inconsiderate retaliation removes the belligerents farther and farther from the mitigating rules of regular war, and by rapid steps leads them nearer to the internecine wars of savages.¹⁸

382. **Who May Commit the Illegal Acts Causing Reprisals.** The illegal acts of warfare may be committed by a government, by its military commanders, or by a community, or individuals thereof whom it is impossible to apprehend, try, and punish.

383. **Subjects of Retaliation.** All prisoners of war are liable to the infliction of retaliatory measures.¹⁹ Persons guilty of no offense whatever may be punished as retaliation for the guilty acts of others.

¹⁴ Land Warfare, Opp., pars. 450-451.

¹⁵ G. O. 100, 1863, art. 47. See also A. W. 58.

¹⁶ The following rules were adopted at the Inst. of Int. Law at Oxford, arts. 85 and 86:

"Reprisals are formally forbidden in all cases in which the wrong complained of has been redressed.

"In the grave cases in which reprisals appear to be an imperious necessity, the manner of inflicting them, and their extent, must not be disproportioned to the infraction committed by the enemy.

"They can only be inflicted under the authority of the commander-in-chief.

"They must in all cases take account of the laws of humanity and morality."

¹⁷ G. O. 100, 1863, art. 27.

¹⁸ G. O. 100, 1863, art. 28.

¹⁹ G. O. 100, 1863, art. 59, par. 2.

384. Who May Resort to Retaliation. Reprisals should never be resorted to by individual soldiers but solely under the direct orders of a commander.²²

385. Procedure. The rule requiring careful inquiry into the real occurrence will always be followed unless the safety of the troops requires immediate drastic action and the persons who actually committed the offense can not be ascertained.²³

386. Form of Reprisal. The acts resorted to as reprisal need not conform to those complained of by the injured party, but should not be excessive or exceed the degree of violence committed by the enemy. Villages or houses, etc., may be burned for acts of hostility committed from them where the guilty individuals can not be identified, tried, and punished. Collective punishments may be inflicted either in form of fine or otherwise.²⁴

(D) HOSTAGES.

387. Hostages. Hostages have been taken in recent wars for the following purposes: (1) To insure proper treatment of wounded and sick when left behind in hostile localities; (2) to protect the lives of prisoners of war and railroad officials who have fallen into the hands of irregular troops or whose lives have been threatened; (3) to protect lines of communication by placing them on engines of trains in occupied territory; (4) to insure compliance with requisitions, contributions, etc. When a hostage is accepted he is treated as a prisoner of war.²⁵

²² Land Warfare, Opp., par. 455.

²³ See par. 381, ante. Spaight, War Rights on Land, p. 469; Opp., Land Warfare, par. 456.

²⁴ See note 24, par. 354, supra. Also Spaight, War Rights on Land, pp. 464-465; Land Warfare, Opp., par. 459. The Germans in 1870-1 by way of reprisals for hostile acts committed by inhabitants on troops, convoys, etc., exacted fines or burned buildings. At Chammes the Casino was burned. The village of Fontenay was burned and a fine of 10,000,000 francs levied on account of the destruction of the railroad bridge near the village with the connivance of the inhabitants.

²⁵ German practice: F. S. R., p. 143. "It is a good plan to make each locality in the neighborhood of a telegraph or telephone line responsible, under heavy penalties, for the preservation of a particular section."

In 1870 in France the Germans directed that all trains in Alsace and other occupied districts "be accompanied by inhabitants who are well known and generally respected, and who shall be placed upon the locomotive, so that it may be made known that every accident caused by the hostility of the inhabitants will, in the first place, injure their countrymen."

The same practice prevailed in South Africa under proclamation of Lord Roberts of June 16, 1900, although this proclamation was subsequently repealed. In the war of 1861-1865, Gen. Sherman caused a suspected place to be tested by drawing a carload of prisoners, or of citizens implicated, over it by a long rope. See McClellan's Own Story, pp. 326-327. Sheridan Memoirs, Vol. I, pp. 380-381. Grant's Memoirs, p. 558.

The Germans in 1870-1 took hostages at Chatillon for the safety of 200 prisoners in the hands of Garibaldi, who had threatened to kill them, and at Remiremont for some railway officials who had been carried off. Spaight, War Rights on Land, pp. 466, et seq.

Vide requisitions, supra, par. 350, and note.

CHAPTER XI.

NEUTRALITY.

388. Definition. Neutrality on the part of a State not a party to the war, consists in refraining from all participation in the war, and in exercising absolute impartiality in preventing, tolerating, and regulating certain acts on its own part, by its subjects and by the belligerents. It is the duty of belligerents to respect the territory and rights of the neutral States.¹

389. Notification of State of War and Effect Upon Neutrals. H. Con. III, Art. II. The existence of a state of war must be notified to the neutral powers without delay, and shall not take effect with regard to them until after the receipt of a notification, which may, however, be given by telegraph. Neutral powers, nevertheless, can not rely on the absence of notification if it is clearly established that they were in fact aware of the existence of a state of war.²

NEUTRAL RIGHTS AND DUTIES.

390. Inviolability of Territory. H. C. V, Art. I. The territory of neutral powers is inviolable.³

391. Movements of Troops and Convoys of Supplies. H. C. V, Art. II. Belligerents are forbidden to move troops or convoys of either munitions of war or supplies across the territory of a neutral power.

392. Neutral Can Resist Violations of Neutrality by Force. H. C. V, Art. X. The fact of a neutral power resisting, even by force, attempts to violate its neutrality can not be regarded as a hostile act.

393. Patrolling the Frontier. It is quite usual, frequently necessary, and therefore the duty of a neutral power whose territory is adjacent to a theater of war, to mobilize a portion of its forces to enforce its neutrality along the frontier. That is to prevent troops of either belligerent to enter its territory, to intern such as may be permitted to enter, and generally to enforce its neutrality duties.⁴

¹ The written law on the subject of neutrality in regard to land warfare is found in conventions III and V of The Hague of 1907.

The purpose and effect of the rules laid down at The Hague in convention V were (1) to define more clearly the rights and duties of neutral powers in war on land and defining their positions with regard to the belligerents; and (2) defining the term neutral and the position of neutral individuals in their relations with the belligerents.

² Vide par. 21, *supra*.

³ It is a principle of the law of nations that no belligerent can rightfully make use of the territory of a neutral State for belligerent purposes without the consent of the neutral Government: 7 Opp. Att. Gen. 367, Cushing.

⁴ In 1806 the Danes formed a cordon of troops along the frontier near Lubeck, with arms in their hands to make their neutrality respected. They fired on French troops who were pursuing the Prussians. Letters and documents, Murat, Vol. IV, Despatch 2639. In 1870-71 both Belgium and Switzerland mobilized troops on their frontiers to prevent violations of their neutrality by the belligerents. Germany complained that no measures were taken by the Grand Duchy of Luxemburg to prevent French troops from crossing their territory and violating their territory. There have been frequent mobilizations of United States troops on the Mexican frontier for the enforcement of our neutrality laws during rebellions in Mexico. For the past three years the entire frontier has been patrolled along the Mexican border and we now have a large number of Federal troops interned at El Paso. They crossed the border at or near Ojinaga.

394. Effect of Failure in Preventing Belligerent Troops Violating Neutrality. Should the neutral State be unable, or fail for any reasons, to prevent violations of its neutrality by the troops of one belligerent entering or passing through its territory, the other belligerent may be justified in attacking the enemy forces on this territory.^a

395. Convoys of Munitions and Supplies. A distinction must be drawn between the official acts of the belligerent State in conveying or shipping munitions and supplies through neutral territory as part of an expedition and the shipment of such supplies commercially. The former is forbidden while the latter is not.^a

RECRUITING.

396. Forming Corps of Combatants and Recruiting Forbidden. H. C. V., Art. IV. Corps of combatants can not be formed nor recruiting agencies opened on the territory of a neutral power to assist the belligerents.

397. What is Prohibited. The establishment of recruiting agencies, the actual recruiting of men, the formation and organization of hostile expeditions on neutral territory, and the passage across its frontiers of organized bodies of men intending to enlist are prohibited.^a

398. Personnel of Voluntary Aid Society. This prohibition does not extend to the medical personnel and units of a recognized voluntary aid society duly authorized to join one of the belligerents.^a

^a In August, 1870, Von Moltke issued orders to the Third, and Meuse armies, directing that: "Should the enemy pass over into Belgium without being at once disarmed, he is to be pursued thither without delay." Ger. Off. Hist., pt. 1, Vol. II, Appendix 42.

In the South African War a Boer commando retreated into Swaziland (understood and agreed to be neutral), where it was followed and attacked by a British column in March, 1901. Times Hist., Vol. V, p. 177.

In the Russo-Japanese War, Manchuria and Chosen, both neutral States, became the theater of military operations between the two belligerents. The avowed object of the war was the expulsion of the Russians from these two States, neither of which were able to prevent violations of their neutrality. Japan deliberately violated the neutrality of Chosen in order to forestall similar action by Russia. Prof. Ariga said that in many cases "a violation of neutrality may, in land war, have so very great an influence on the general issue of the operations that the other belligerent will usually not have to resort to the always uncertain methods of diplomacy; he must therefore retort in kind and at once to the act of violation, whatever be the intention of the neutral nation." P. 506.

For protest of Mr. Evarts, Secretary of State, against the troops of Gen. Diaz crossing the border into Texas and attacking his enemies, vide Digest of International Law, Moore, sec. 1334.

^a Vide H. C. V. Art. VII, par. 403 *infra*.

^a Rev. Stat. U. S., secs. 5281-5291. Sec. 5282. "Every person who, within the territory or jurisdiction of the United States, enlists or enters himself, or hires or retains another person to enlist or enter himself, or to go beyond the limits or jurisdiction of the United States with intent to be enlisted or entered in the service of any foreign prince, State, colony, district, or people, as a soldier, * * * shall be deemed guilty of a high misdemeanor, and shall be fined not less than one thousand dollars, and imprisoned not more than three years."

Sec. 5291. "The provisions of this title shall not be construed to extend to any subject or citizen of any foreign prince, State, colony, district, or people, who is transiently in the United States."

^a Vide Geneva Conference, 1906, Art. II.

399. Does Not Extend to Individuals. H. C. V, Art. VI. The responsibility of a neutral power is not engaged by the fact of individuals crossing the frontier separately to offer their services to one of the belligerents.

400. What the Test. The prohibition in the two foregoing rules is directed against organized bodies which only require to be armed to become an immediate fighting force. Individuals crossing the frontier singly or in small bands that are unorganized create no obligation on the neutral State.*

401. Nationals of Belligerent Not Included. Nationals of a belligerent State are permitted freely to leave neutral territory to join the armies of their country.¹⁹

402. Officers on Active List. Officers of the land forces of neutral powers on the active list should not be permitted to join a belligerent, and having joined such belligerent forces should be recalled.²⁰

* The Santissima Trinidad, I. Brock, 478. "An American citizen may enter either the land or naval service of a foreign Government without compromising the neutrality of his own."

United States v. Louis Kazinski, 2 Sprague, 7. "It is not a crime, under the neutrality law, to leave this country with intent to enlist in foreign military service; nor to transport persons out of the country with their own consent who have an intention of so enlisting. To constitute a crime under the statute, such person must be hired or retained to go abroad with the intent to be so enlisted."

Vide, 4, Op. Att. Gen., 336 (Nelson) and 7 Op. Att. Gen., 367 (Cushing). 8 id. 468 and id. 476. "It goes without saying that the neutral State must prevent its frontiers being crossed by corps or bands which have been organized on its territory without its knowledge. On the other hand, individuals may be considered as acting in an isolated manner when there exists between them no bond of a known or obvious organization, even when a number of them pass the frontier simultaneously." Hague Con. Actes, p. 127.

¹⁹ In 1870 the United States permitted large numbers of French and Germans to leave this country under recalls from their Governments. In one case about 1,200 Frenchmen embarked in French ships with 96,000 rifles and 11,000,000 cartridges. The United States held that the men were not officered or in any manner organized, and as the arms and ammunition were legitimate subjects of commerce, the issuing of the ships from an American port did not constitute an expedition. Vide Hall Int. Law, p. 609, and Spaight, War Rights on Land, pp. 492 et seq. See also sec. 5291, U. S. Rev. Stat., supra, note 7, par. 397.

²⁰ See 5281, U. S. Rev. Stat.: "Every citizen of the United States who, within the territory or jurisdiction thereof, accepts and exercises a commission to serve a foreign prince, State, colony, district, or people, in war, by land or by sea, against any prince, State, colony, district, or people, with whom the United States are at peace, shall be deemed guilty of a high misdemeanor, and shall be fined not more than two thousand dollars and imprisoned not more than three years." Murray v. Schooner Charming Betsy, 2 Cranch, 64, 82.

The consensus of opinion is that it is an unneutral act for a State to permit its officers on the active list to take service in a foreign belligerent army. The practice of States has not always been uniform. In 1899, Germany recalled and punished some of her officers on the active list for taking service in the South African War. In 1876, Russia permitted many of her officers to serve in the Servian Army against Turkey, but in 1887 withdrew her officers from the Bulgarian Army on the outbreak of war with Servia.

Mr. Spaight says that, "Retired officers, having ceased to possess an official

SUPPLIES.

403. Neutral Not Bound to Prevent Shipment of Supplies. H. C. V, Art. VII. A neutral power is not called upon to prevent the export or transport, on behalf of one or other of the belligerents, of arms, munitions of war, or, in general, of anything which can be of use to an army or a fleet.

404. Obligations of Neutral State as to Supplies. A neutral state, as such, is prohibited from furnishing supplies, munitions of war, or to make loans¹² to a belligerent. It is also forbidden to permit the use of its territory for the fitting out of hostile expeditions.¹³ It should issue a proclamation of neutrality.¹⁴

405. Commercial Transactions Not Prohibited. Commercial transactions by neutral companies, citizens, or persons resident in its territory with belligerents are not prohibited. That is, a belligerent can purchase from neutral companies, citizens, or persons within its territory supplies, munitions of war, or anything that can be of use to an army or fleet, which can be exported or transported without involving the neutral state.¹⁵

character, as it were, are recognized as having a freedom of action which the usages affecting neutrality do not allow to serving officers. War Rights on Land, p. 495.

As to medical personnel, see par. 398.

¹² As to loans by individuals see H. C. V., Art. XVIII, *infra*, par. 430.

¹³ U. S. Rev. Stat., Sec. 5286.—“Every person who, within the territory or jurisdiction of the United States, begins, or sets on foot, or provides or prepares the means for, any military expedition or enterprise, to be carried on from thence against the territory or dominions of any foreign prince or State, or of any colony, district, or people, with whom the United States are at peace, shall be deemed guilty of a high misdemeanor, and shall be fined not exceeding three thousand dollars, and imprisoned not more than three years.”

Kennett v. Chambers, 14 How., 38. *United States v. Ybanez*, 53 Fed. Rep., 536. *Wiborg v. United States*, 163 U. S., 632, 655. *U. S. v. Murphy*, 84 Fed. Rep., 609. *United States v. Hart*, 78 Fed. Rep., 868.—“Sec. 5286, Rev. Stat., creates two offenses, (1) the setting on foot, within the United States, a military expedition, to be carried on against any power, etc., with whom the United States are at peace; (2) providing the means for such expedition.”

Vide as to sales of arms, etc., by the U. S. Govt. Dig. Int. Law, Moore, sec. 1309.

¹⁴ See par. 389 *supra*. For neutrality proclamations of President Grant, Aug. 22, 1870, see For. Rel., 1870, p. 45; also Dig. Int. Law, Moore, sec. 1319. After setting forth categorically acts prohibited by the laws of neutrality, warns the population that “while all persons may lawfully and without restriction, by reason of the aforesaid state of war, manufacture and sell within the United States arms and munitions of war, and other articles ordinarily known as contraband of war, yet they can not carry such articles upon the high seas for the use or service of either belligerent, nor can they transport soldiers and officers of either, * * * without incurring the risk of hostile capture, and the penalties denounced by the law of nations in that behalf.” See also the proclamation of President Roosevelt on February 11, 1904, upon the opening of hostilities between Japan and Russia. For. Rel., 1904, pp. 32 *et seq.*

¹⁵ *United States v. The Laurada*, 85 Fed. Rep., 760.—“The neutrality laws are not designed to interfere with commerce, even in contraband of war, but merely to prevent distinctly hostile acts, as against a friendly power, which tend to involve this country in war.” *Pearson v. Parson*, 108 Fed. Rep., 461.

The *Peterhoff*, 5 Wall., 28.—“The trade of neutrals with belligerents in articles not contraband is absolutely free, unless interrupted by blockade.”

406. Means of Communication. H. C. V, Art VIII. A neutral power is not called upon to forbid or restrict the use on behalf of the belligerents of telegraph or telephone cables or of wireless telegraph apparatus belonging to it or to companies or private individuals.

407. Must Not Manifestly Assist One Belligerent. The liberty of a neutral State to transmit dispatches by means of its telegraph lines on land, its submarine cables, and wireless apparatus does not imply the power to use them or permit their use to lend a manifest assistance to one of the belligerents."

408. Impartiality. H. C. V, Art. IX. Every measure of restriction or prohibition taken by a neutral power in regard to the matters referred to in Articles VII and VIII (pars. 403, 406) must be impartially applied by it to both belligerents.

A neutral power must see to the same obligation being observed by companies or private individuals owning telegraph or telephone cables or wireless telegraph apparatus.

409. Use of Neutral Territory to Establish Wireless Telegraphy. H. C. V, Art. III. Belligerents are likewise forbidden to:

(a) Erect on the territory of a neutral power a wireless telegraphy station or other apparatus for the purpose of communicating with belligerent forces on land or sea."

(b) Use any installation of this kind established by them before the war on the territory of a neutral power for purely military purposes, and which has not been opened for the service of public messages."

410. Neutral State Must Prohibit Acts on Its Own Territory. H. C. V, Art. V. A neutral power must not allow any of the acts referred to in Articles II to IV (pars. 391, 396, 409) to occur on its territory.

It is not called upon to punish acts in violation of its neutrality unless the said acts have been committed on its own territory.

BELLIGERENTS INTERNED IN NEUTRAL TERRITORY.

411. Internment. H. C. V, Art. XI. A neutral power which receives on its territory troops belonging to the belligerent armies shall intern them, as far as possible, at a distance from the theater of war.

It may keep them in camps and even confine them in fortresses or in places set apart for this purpose.

It shall decide whether officers can be left at liberty on giving their parole not to leave the neutral territory without permission.

Northern Pac. Ry. Co. v. American Trading Co., 195 U. S., 439, 465.—
"Contracts for the transportation of contraband articles are enforceable."

Hendricks v. Gonzales, 67 Fed. Rep., 351; 14 C. C. A., 659.—"A collector of customs is not justified in refusing clearance to a vessel and her cargo, under sec. 5290, Rev. Stat., because she is intended to transport arms and munitions of war for the use of an insurrectionary party in a country with which the United States is at peace."

"Hague conference 1907, Actes Vol. III, p. 56. No mention is made of the use of postal services in these rules. It is assumed that they can be used, subject to the same restrictions.

"This paragraph was intended to prohibit in future a repetition of the action by Russia in establishing a wireless station at Chefoo in Chinese territory, by means of which communication was kept up between Port Arthur and the outer world during the siege in 1904. Spaight, War Rights on Land, p. 490.

"Vide Hague Con., 1907, Actes, Vol. III, p. 53.—"The inviolability of the territory of a neutral State is incompatible with the use of this territory by a belligerent in the aid of any of the objects that Art. III is directed at."

412. Duty of Neutral State. A neutral is not bound to permit belligerent troops to enter its territory. On the other hand it may permit them to do so without violating its neutrality. But they must be interned or confined in places designated by the neutral. They will naturally be disarmed and placed under the necessary guard, thereby occupying in many respects the same status as prisoners of war.²⁹

413. Neutral Can Impose Terms. If troops or soldiers of a belligerent are permitted to seek refuge in neutral territory, the neutral can impose the terms upon which they may do so. In case of large bodies of troops seeking refuge in neutral territory, these conditions will be usually stipulated in a convention drawn up by and between the duly authorized representative of the neutral power and the senior officer of the troops.³⁰

414. Parole of Officers. Beyond the right of deciding which, if any, of the officers are to be paroled, no conditions are specified and no penalties are prescribed for breach of parole.³¹

415. Disposition of Arms, Equipment, Etc. The munitions, stores, and effects which the interned troops bring with them should be restored to their Government at the termination of the war.³²

416. Maintenance. H. C. V, Art. XII. In the absence of a special convention to the contrary, the neutral power shall supply the interned with the food, clothing, and relief required by humanity.

At the conclusion of peace the expenses caused by the internment shall be made good.³³

417. Prisoners of War. H. C. V, Art. XIII. A neutral power which receives escaped prisoners of war shall leave them at liberty. If it allows them to remain in its territory it may assign them a place of residence.

The same rule applies to prisoners of war brought by troops taking refuge in the territory of a neutral power.³⁴

418. Sick and Wounded. H. C. V, Art. XIV. A neutral power may authorize the passage into its territory of the sick and wounded belonging to the

²⁹ See as to inviolability of neutral territory, *supra*, pars. 391-395 and notes.

³⁰ The historical example of this is the convention drawn up between Gen. Clinchant, of the French Army, and the Swiss general, Herzog, appendix A to this chapter.

³¹ The proposition by Japan "that officers and other members of the armed forces of a belligerent should not be given their liberty or authorized to return to their country except with the consent and under conditions laid down by the other belligerent, and that the parole given to a neutral State by such individuals should be deemed equivalent to a pledge given to the enemy," was rejected by the committee. Hague Con. Actes, Vol. III, p. 61. As to medical personnel, see *infra*, par. 424.

³² Vide Appendix A to this chapter. The foregoing rule is subject to the exception that the neutral State would certainly sell such articles as are subject to deterioration, utilizing the proceeds for the maintenance of the troops. As to material captured by and in the hands of the troops seeking asylum in neutral territory, the proposition was made that it should be returned at the end of the war to the Government from which it was captured. Objection was raised to this, and the proposal was withdrawn. Hague Conference Actes, Vol. III, pp. 59-60.

³³ See Appendix A, this chapter.

³⁴ Note that a different rule applies with regard to sick and wounded prisoners of the enemy forming part of a convoy permitted to pass through neutral territory under Art. XIV, par. 2. See pars. 107, 418, and 422.

belligerent armies, on condition that the trains bringing them shall carry neither personnel or war material. In such a case, the neutral power is bound to take whatever measures of safety and control are necessary for the purpose.

The sick or wounded brought under these conditions into neutral territory by one of the belligerents, and belonging to the hostile party, must be guarded by the neutral power so as to insure their not taking part again in the military operations. The same duty shall devolve on the neutral State with regard to wounded or sick of the other army who may be committed to its care.²⁸

419. Obligations of Neutral State. The neutral power is under no obligation to permit the passage of a convoy of evacuation of sick and wounded through its territory, but when permitted to pass, the neutral must exercise control, must see that neither personnel nor matériel is carried, and generally must accord impartiality of treatment to the belligerents.²⁹

420. Consent of Other Belligerent. There is no indicated necessity for obtaining the consent of the other belligerent before granting authority for the passage of the convoy, but this action seems advisable, especially where the passage of a considerable body of sick and wounded is contemplated.³⁰

421. Sick and Wounded of Belligerent Convoying Same. The sick and wounded of the belligerent conveying them may be carried through to their own territory. If, however, they are left in the neutral's territory they must be interned so as to insure their not taking part again in the war.

422. Sick and Wounded Prisoners of War. Sick and wounded prisoners of war brought into neutral territory as part of a convoy of evacuation, granted right of passage through neutral territory, can not be transported to their own country nor liberated, as are prisoners of war escaping into or brought by troops seeking asylum in neutral territory, but must be detained by the neutral power.³¹

423. The Geneva Convention. H. C. V, Art. XV. The Geneva convention applies to sick and wounded interned in neutral territory.

424. Medical Personnel. The medical personnel belonging to belligerent forces, who have sought asylum and are interned under Article XI (par. 411), can be released by the neutral and permitted to return to their own State or army. Medical personnel and matériel necessary for the care of the sick and wounded of a convoy of evacuation, permitted to pass through neutral territory under Article XIV (par. 418), may be permitted to accompany the convoy. The neutral State may retain the necessary medical personnel and matériel for the care of the sick and wounded left in its care, and, failing this, may furnish same

²⁸ See pars. 107, 417 and 422, and note.

²⁹ Recognizing that in facilitating the evacuation of sick and wounded of a belligerent a neutral power may render valuable assistance to a belligerent, it was officially explained in the peace conference in 1899 that the article had no other meaning than "to establish that considerations of humanity and hygiene might determine a neutral State to permit such sick and wounded soldiers to cross its territory without failing in its duties of neutrality." Land Warfare, Opp. par. 495. Hague Conference 1899, p. 153.

³⁰ French Manual, p. 82. "Neutral States abstain from authorizing the transit of convoys of sick and wounded until the consent of the belligerent has been obtained." In 1870-1 Belgium, after consulting with England, refused passage of German sick and wounded across its territory on the ground that it would be a breach of neutrality. Luxemburg authorized such passage. Land Warfare, Opp. par. 496, note a.

³¹ See par. 417 supra.

and will have expense of same refunded by the belligerent concerned after the termination of the war.²²

425. Neutral Persons. H. C. V, Art. XVI. The nationals of a State which is not taking part in the war are considered as neutrals.²³

426. Neutral Persons Resident in Enemy Territory. Neutral persons resident in occupied territory are not entitled to claim different treatment, in general, from that accorded the other inhabitants.²⁴ They must refrain from all participation in the war, from all hostile acts, and observe strictly the rules of the occupant.²⁵

427. Diplomatic Agents. Diplomatic agents of neutral sovereigns and Governments must be treated with all courtesy, and be permitted such freedom of action as is possible to allow, with due regard to the necessities of the war.²⁶

²² See note 21, par. 414, supra.

²³ The intention in using the word "nationaux" was to convey the idea of "citizens" as understood in the English use of the word. Hague Convention Actes, 1907, p. 64.

²⁴ The articles relating to neutral persons (XVI, XVII, and XVIII) are what is left of twelve articles proposed to The Hague by Germany. England has never ratified them. The intention of these articles was to accord preferential treatment to the neutral persons and property during war. With regard to the suppressed articles the following two voeux were adopted by the conference:

"1. That in case of war the competent authorities, civil and military, shall make it a special duty to assist and protect the maintenance of peaceful relations, and in particular of commercial and industrial relations, between the inhabitants of the belligerent States and neutral States.

"2. That the high contracting powers shall seek to establish, by agreements between them, uniform contractual provisions determining the relations, in respect of military obligations, of each State with foreigners established in its territory."

²⁵ Vide supra pars. 312 et seq.

Mr. Oppenheim (Land Warfare) says: "Subjects of neutral powers not resident but only on a temporary visit within occupied territory can, to a certain extent, claim different treatment from that accorded to inhabitants, provided they take no part in the war. For instance, they are as a rule exempt from requisitions and contributions, and, if their property is required for military ends and needs, they must be fully indemnified." Par. 505 and note.

²⁶ The same rule applies to consuls of non-Christian countries, excluding Japan. In all countries consuls, while not diplomatic agents, are entitled to have their persons and offices exempted from martial law, except in urgent cases, although their property and business are not necessarily exempted.

As to right of correspondence, see Dig. Int. Law, Moore, sec. 675, as to correspondence by Mr. Washburn, our ambassador in Paris at the time of the siege of that city.

The Japanese in the exceptional case of correspondence by the Imperial Government at Peking and the Provinces in Manchuria laid down the following rules:

"1. Communications of the Government of Peking with local officials in the territory occupied by the enemy, through territory occupied by our army. Not permitted.

"2. Communications addressed by the local Chinese functionaries in the country occupied by the enemy to the Peking Government through territory occupied by our army. Permitted by a designated route which could not be used returning.

428. Punishments. All subjects of neutral powers whether resident or temporarily visiting in occupied territory may be punished for offenses committed by them to the same extent and in the same manner as enemy subjects."

429. Forfeiting Rights by Neutrals. H. C. V, Art. XVII. A neutral can not avail himself of his neutrality:

(a) If he commits hostile acts against a belligerent.

(b) If he commits acts in favor of a belligerent, particularly if he voluntarily enlists in the ranks of the armed force of one of the parties.

In such a case, the neutral shall not be more severely treated by the belligerent as against whom he has abandoned his neutrality than a national of the other belligerent State could be for the same act.

430. What Acts Not Favorable to One Belligerent. H. C. V, Art. XVIII. The following acts shall not be considered as committed in favor of one belligerent in the sense of Article XVII, letter (b):

(a) Supplies furnished or loans made to one of the belligerents, provided that the person who furnishes the supplies or who makes the loans lives neither in the territory of the other party nor in the territory occupied by him, and that the supplies do not come from these territories.

(b) Services rendered in matters of police or civil administration.

RAILWAY MATERIAL."

431. Railway Material. H. C. V, Art. XIX. Railway material coming from the territory of neutral powers, whether it be the property of the said powers or of companies or private persons, and recognizable as such, shall not be requisitioned or utilized by a belligerent except where and to the extent that it is absolutely necessary. It shall be sent back as soon as possible to the country of origin.

A neutral power may likewise, in case of necessity, retain and utilize to an equal extent material coming from the territory of the belligerent power."

"3. Communications from the local Chinese functionaries in the territory occupied by our army to those in territory occupied by the enemy. Absolutely prohibited, except after minute examination by our army.

"4. Communications from local Chinese functionaries in territory occupied by the enemy with regions occupied by our army. Permitted after examination at the outposts of the messengers and the official communications.

"5. Communications between the Government at Peking and the local functionaries in territory occupied by our army. Absolutely free. Ariga. pp. 544-547."

"Vide supra Military occupation, Chapter VIII, and Penalties for Violations of the Laws of War, Chapter X.

"For law as to preference to be given to the transportation of troops and material of war in time of war, see U. S. Stat. at Large, vol. 34, part 1, chap. 3591, p. 587: Provided, That wherever the word "carrier" occurs in this act it shall be held to mean "common carrier."

"That in time of war or threatened war preference and precedence shall, upon the demand of the President of the United States, be given, over all other traffic, to the transportation of troops and material of war, and carriers shall adopt every means within their control to facilitate and expedite the military traffic."

"This paragraph is new, being inserted in 1907. "It has the double object of: 1. To prevent a neutral State having its own railway service disturbed by the loss of its rolling stock; 2. To provide an automatic discouragement, as it were, to the practice of seizing neutral material which a belligerent might be inclined to resort to if the material so obtained became a clear addition to his resources." Spaight, War Rights on Land, pp. 512-513.

Compensation shall be paid by one party or the other in proportion to the material used and to the period of usage."

APPENDIX A.

Military Convention between the Commander of the First French Army and the General-in-chief of the Army of the Swiss Confederation for the entry of the French troops into Switzerland; signed at Les Verrieres, February 1, 1871.

The following convention has been made between General Clinchant, General-in-chief of the First French Army, and General Herzog, General-in-chief of the Army of Swiss Confederation:

Article 1. The French Army demanding to pass into Swiss territory will on entering lay down its arms, equipment, and ammunition.

Art. 2. These arms, equipment, and ammunition will be restored to France after peace and after the definitive settlement of the expenses occasioned to Switzerland by the sojourn of the French troops.

Art. 3. The artillery material and ammunition will be dealt with as above.

Art. 4. The horses, arms, and effects of the officers will remain at their disposal.

Art. 5. Arrangements will be made later as regards the troop horses.

Art. 6. Supply and baggage wagons, after having deposited their contents, will immediately return to France with their drivers and horses.

Art. 7. The treasure chest and post wagons will be handed over with the contents to the Swiss Confederation, which will account for them when the settlement of expenses is taking place.

Art. 8. The execution of these arrangements will take place in the presence of French and Swiss officers nominated for the purpose.

Art. 9. The confederation reserves the designation of the place of internment for officers and soldiers.

Art. 10. It is the right of the Federal Council to indicate the detailed prescriptions necessary to complete the present convention.

Done in triplicate at Les Verrieres, 1st Feb., 1871.

| | |
|----------|------------|
| (Signed) | CLINCHANT. |
| (Signed) | HERZOG. |

"Article XIX recognizes the right of a belligerent to seize and destroy the property of neutrals temporarily passing through his territory in so far as railway material is concerned.

This right as to certain neutral ships was exercised by Germany in December, 1870, by seizing some English colliers lying in the Seine near Rouen and sinking them for the purpose of obstructing the channel so that French gunboats could not ascend the river. The right to do this was not questioned by Great Britain and the matter was settled by Germany paying a satisfactory indemnity. Land Warfare, Opp. pars. 505, note c, and 507-510.

'CHAPTER XII.

AUTOMATIC SUBMARINE CONTACT MINES.¹

432. Kinds of Mines. There are three general classes of mines: (1) Observation mines which are anchored along the coast and connected therewith by wires by which they can be exploded electrically. (2) Anchored automatic contact mines which are attached to heavy weights, and which can be placed at any required depth below the surface; these mines are exploded automatically by contact with heavy bodies such as ships. (3) Unanchored automatic contact mines which also explode by contact.²

433. Unanchored Automatic Contact Mines. H. VIII, art. 1, par. 1. It is forbidden to lay unanchored automatic contact mines unless they be so constructed as to become harmless one hour at most after those who laid them have lost control over them.³

434. Commercial Navigation. H. VIII, art. 2. It is forbidden to lay automatic contact mines off the coasts and ports of the enemy, with the sole object of intercepting commercial navigation.

435. Effect of This Article. It is not probable that a belligerent resorting to the use of these contact mines off the coasts and ports of his enemy will hesitate to disavow the intention of intercepting commercial navigation. In its present form this rule permits the use of such mines so as to cause great risks to neutral navigation.⁴

436. Anchored Automatic Contact Mines. H. VIII, art. 1, par. 2. It is forbidden to lay anchored automatic contact mines which do not become harmless as soon as they have broken loose from their moorings.

437. Precautions to be Taken. H. VIII, art. 3. When anchored automatic contact mines are employed, every possible precaution must be taken for the security of peaceful navigation.

The belligerents undertake to provide, as far as possible, for these mines becoming harmless after a limited time has elapsed, and, where the mines cease to be under observation, to notify danger zones, as soon as military exigencies permit, by a notice to mariners, which must also be communicated to the Governments through the diplomatic channel.

¹ The rules governing this subject are contained in Convention VIII of The Hague of Oct. 18, 1907. The rules contained in this chapter are of special interest to officers of the seacoast artillery and will be of value to other arms of the mobile army in connection with the defense of our seacoast fortifications.

² These rules do not deal with the first class of mines, since they are innocuous to peaceful shipping.

³ This rule as originally presented by Great Britain was as follows: "The employment of unanchored automatic submarine contact mines is forbidden." The rule as stated in the text is decidedly modified by article 6, which fixes no time within which States are obligated to cause their mines to conform to the provisions of this article.

⁴ "This convention, however, as it has been adopted, imposes on the belligerent no restriction as to the placing of anchored mines, which consequently may be laid wherever the belligerent chooses, in his own waters for self-defense, in the waters of the enemy as a means of attack, or, lastly, on the high seas, so that neutral navigation will inevitably run great risks in time of naval warfare and may be exposed to many a disaster. We have already on several occasions insisted on the danger of a situation of this kind." Sir Ernest Satow's declaration before The Hague Committee. Vide The Hague Peace Conference, Higgins, p. 341.

438. Neutral Powers Can Lay Mines. H. VIII, art. 4. Neutral powers which lay automatic contact mines off their coasts must observe the same rules and take the same precautions as are imposed on belligerents.

The neutral power must give notice to mariners in advance of the places where automatic contact mines have been laid. This notice must be communicated at once to the Governments through the diplomatic channel.

439. Must Remove Mines at Close of War. H. VIII, art. 5. At the close of the war the contracting powers undertake to do their utmost to remove the mines which they have laid, each power removing its own mines.

As regards anchored automatic contact mines laid by one of the belligerents off the coast of the other, their position must be notified to the other party by the power which laid them, and each power must proceed with the least possible delay to remove the mines in its own waters.

440. Agreement to Convert Matériel of Mines. H. VIII, art. 6. The contracting powers which do not at present own perfected mines of the description contemplated in the present convention, and which, consequently, could not at present carry out the rules laid down in articles 1 and 3, undertake to convert the matériel of their mines as soon as possible, so as to bring it into conformity with the foregoing requirement.*

441. Torpedoes. H. VIII, art. 1. par. 3. It is forbidden to use torpedoes which do not become harmless when they have missed their mark.

442. Duration of Convention. H. VIII, art. 11. The present convention shall remain in force for seven years, dating from the sixtieth day after the date of the first deposit of ratifications. Unless denounced, it shall continue in force after the expiration of this period.

443. Incompleteness of Convention. That this convention attempted to reduce to writing the rules governing the use of mines principally for the protection of neutral shipping, and in large measure failed, appears from the following facts, to wit: There is nothing in its provisions to prevent a belligerent placing mines on the high seas. There is nothing to prevent a belligerent from placing mines off the coasts of the enemy without regard to neutral shipping, except the proviso that danger zones shall be notified "as soon as military exigencies allow," which is of little or no practical value. The delegate from Great Britain declared that this convention is wholly inadequate for the protection of neutral shipping, and that the signing of the convention would not preclude his Government from contesting the legitimacy of acts

* At the time of The Hague convention the Chinese delegate made the following statement: "The Chinese Government is even to-day obliged to furnish vessels engaged in coastal navigation with special apparatus to raise and destroy floating mines which are found not only on the open sea, but even in its territorial waters. In spite of the precautions which have been taken, a very considerable number of coasting vessels, fishing boats, junks, and sampans have been lost with all hands without the details of the disasters being known to the western world. It is calculated from five to six hundred of our countrymen engaged in their peaceful occupations, have there met a cruel death in consequence of these dangerous engines of war."

* Vide article 1, pars. 433, 436, 441. Mr. Higgins says: "The prohibitions contained in the first article are in effect nullified by the sixth, for no time is specified within which States are to cause their material to conform to the requirements of article 1, and where neutrals suffer from the use of imperfectly constructed mines it is not likely that they will be satisfied with the belligerent's plea that he has been prevented by lack of funds or time from making the needful changes." Peace Conferences, pp. 343-344.

committed in violation of neutral rights. The Institute of International Law formulated rules upon this subject at their meetings in 1908, 1910, and 1912. The two last will be found in the note.¹

¹ The following rules are taken from the proceedings of the Institute of 1910, *Annuaire de L'Institut de Droit International*, vol. 23, pp. 202-204:

1. It is forbidden to lay anchored or unanchored mines on the high seas.
2. Belligerents can place mines in their territorial waters or in those of the enemy.

But they are forbidden, even in territorial waters—

1. To lay unanchored automatic contact mines, unless they be so constructed as to become harmless one hour at most after the person who laid them has ceased to control them.

2. To lay anchored automatic contact mines which do not become harmless as soon as they have broken loose from their moorings.

3. It is forbidden to use, as well in the territorial waters as on the high seas, torpedoes which do not become harmless when they have missed their mark.

4. It is forbidden to block the ports or coasts of the enemy or the points occupied by him by means of automatic contact mines.

It is likewise prohibited to place automatic contact mines in the passage of straits leading into the open sea.

5. When anchored or unanchored automatic contact mines are employed all precautions must be taken for the safety of peaceful navigation.

The belligerents will do their utmost to render these mines harmless after a limited time has elapsed.

In the case where the mines cease to be under observation by them, the belligerents will point out the danger zones as soon as military exigencies permit by a notice to navigation, which must also be communicated to the Governments through diplomatic channels.

6. Neutral powers can lay mines off their coasts for the defense of their neutrality. They must in such a case observe the same rules and take the same precautions as are imposed on belligerents.

The neutral power must give notice to mariners in advance of the places where automatic contact mines will be laid. This notice must be communicated at once to the Governments through diplomatic channels.

7. Omitted.

8. At the close of the war the belligerent and neutral powers will do their utmost, each on its part, to remove the mines which they have laid.

As regards anchored automatic contact mines laid by one of the belligerents off the coast of the other, their position must be indicated to the other party by the power which laid them, and each power must proceed with the least possible delay to raising the mines in its own waters.

The belligerent powers will furthermore announce the date on which the removal of the mines is terminated, and navigation will cease to be dangerous in the zones where the mines had been laid.

9. Omitted.

10. Violation of one of the rules preceding, involves the responsibility of the power at fault.

This responsibility will be brought before the International Prize Court, which will have full liberty for investigating the matter at fault, in appreciating the degree and fixing, if needs be, the amount of reparations.

The following taken from "*Les lois de la guerre maritime dans les rapports entre belligérants.*" Manuel adopté par l'Institut de droit international session d'Oxford, 1913:

Article 20. Submarine mines. It is forbidden to lay on the high seas anchored or unanchored automatic contact mines.

Article 21. The belligerents can lay mines in their territorial waters and in those of the enemy.

But they are forbidden even in these territorial waters:

1. To lay unanchored automatic contact mines, unless they be so constructed as to become harmless, one hour at most, after the person who placed them has ceased to control them.

2. To lay anchored automatic contact mines which do not become harmless as soon as they have broken loose from their moorings.

Article 22. A belligerent can place mines off the coast and ports of his adversary for military and naval purposes only. It is forbidden to place them for establishing or maintaining a blockade to commerce.

Article 23. When anchored or unanchored automatic contact mines are used, every precaution must be taken for the safety of peaceful navigation.

Belligerents will do all that is possible to render the mines harmless after the lapse of a limited time.

In the case where the mines cease to be under observation by them, the belligerents will point out the danger zones as soon as military exigencies permit, by a notice to navigation, which must also be communicated to the Governments through diplomatic channels.

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL

JUNE 20, 1913
REVISED AUGUST 26, 1914
REVISED OCTOBER 25, 1916

War Department,
Office of the Chief of Staff,
Washington, October 25, 1916.

1. Classification of Property. Hereafter Government property in the hands of troops will be divided into classes as follows:

Equipment "A" is the equipment prescribed for use in campaign, in simulated campaign, or on the march. It is limited to the animals and vehicles prescribed in the Tables of Organization, the equipment and clothing worn on the person, and the articles carried on mount, and transported in field, combat, and divisional trains.

Equipment "B" is the equipment which, in addition to equipment "A," is prescribed for the use of troops in mobilization, concentration, instruction, or maneuver camps, and during such pauses in operations against an enemy as permit the better care of troops.

Equipment "C" is the sum of equipments "A" and "B."

Garrison equipment is the equipment prescribed for use in garrison.

2. Unit Accountability Equipment and Accountability Therefor. The unit accountability equipments of the various organizations will consist of the articles of "A" and "B" equipment prescribed in the unit of accountability manuals for the strength authorized and will be accounted for by organization commanders on unit accountability returns (Form No. 451, A. G. O.) in accordance with War Department orders.

3. Accountability and Responsibility for Other Government Property. All garrison equipment and other Government property in the hands of organization commanders, except that held under unit accountability, will be held on memorandum receipts from the various post, regimental, or other designated supply officers, who will render to the chiefs of the staff departments concerned returns as at present for all property for which they are accountable.

4. In this revised manual the unit accountability equipment for the present authorized minimum and maximum strength is given in Part I. In Part II are given the sets of individual arms and equipment of unit accountability equipment by which any increase or decrease in equipment corresponding to any authorized increase or decrease in strength may be readily determined and expressed.

5. Upon receipt of this manual, organization commanders will immediately adjust their (unit) accountability by turning in to the proper supply officer all surplus articles on hand and supplying the deficiencies by requisition, so that the articles on hand of unit accountability equipment of their respective organizations will conform to the number authorized in this manual with the least practicable delay. All such adjustments will be covered by exchange of regular invoices and receipts.

6. In Part III of this revised manual is listed the garrison equipment for the present authorized minimum and maximum strengths.

By order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

INFANTRY UNIT ACCOUNT- ABILITY EQUIPMENT MANUAL

PART I.

EQUIPMENT "A"—HELD ON UNIT ACCOUNTABILITY.

TABLE 1.—ENGINEER PROPERTY.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|-----------------------------|-------------------------------|--------------------|-------------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine- gun company. | Head- quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A." | | | | | | |
| Compasses, watch ¹ | | | | 120 | 120 | \$1.55 |
| RECONNAISSANCE EQUIPMENT.² | | | | | | |
| <i>New model.</i> | | | | | | |
| Alidades..... | | | | 4 | 4 | 1.25 |
| Boards, sketching..... | | | | 4 | 4 | 7.55 |
| Chests, sketching outfit..... | | | | 4 | 4 | 6.60 |
| Clinometers, service, with case..... | | | | 4 | 4 | 8.90 |
| Holders, timing pad..... | | | | 4 | 4 | 1.50 |
| Pace tallies..... | | | | 4 | 4 | 3.25 |
| Pencil pockets..... | | | | 4 | 4 | 2.20 |
| Tripods, wood, folding..... | | | | 4 | 4 | 4.25 |
| INTRENCHING EQUIPMENT. | | | | | | |
| Axes..... | | | | 26 | 26 | .72 |
| Containers for saws and edge tools..... | | | | 4 | 4 | 7.75 |
| Crowbars..... | | | | 7 | 7 | .80 |
| Files, saw..... | | | | 6 | 6 | .22 |
| Nails, 16d. lbs..... | | | | 100 | 100 | .04 |
| Pick mattocks..... | | | | 150 | 150 | .74 |
| Saws, hand..... | | | | 13 | 13 | 1.25 |
| Saws, 2-man..... | | | | 13 | 13 | 2.08 |
| Saw set..... | | | | 1 | 1 | 1.10 |
| Saw tool, 2-man saw..... | | | | 1 | 1 | 1.50 |
| Shovels..... | | | | 300 | 300 | .70 |
| Tool sharpener..... | | | | 1 | 1 | 5.50 |
| Wagon, tool, escort type..... | | | | 1 | 1 | 118.00 |
| Wire..... lbs..... | | | | 25 | 25 | .04 |

¹ Eight for each rifle company to be issued on memorandum receipt, and 24 for assignment by the regimental commander.

² One set, each consisting of one-fourth of the articles, is intended for the regiment and 1 set for each battalion.

Note. When regiment is attached to and serving with a brigade or a division the intrenching tool wagon and contents will be transferred to the commanding officer of the engineer train of the brigade or division. When the regiment is permanently detached from the brigade or division, the intrenching tool wagon will be retransferred to the commanding officer of the supply company of the regiment. In cases of transfer, formal invoices and receipts should be used.

TABLE 2.—SIGNAL PROPERTY.

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A." | | | | | | |
| Glasses, field, type A (or type B) ¹ | 2 | ..... | ..... | ..... | 24 | \$14.65 |
| Glasses, field, type C..... | ..... | 2 | ..... | ..... | 2 | 39.90 |
| Glasses, field, type EE.... | ² 3 | ² 4 | ² 4 | ..... | 44 | 36.25 |
| Kits, flag, combination, Infantry ⁴ | 2 | ..... | ..... | ..... | 24 | 4.04 |
| Kits, flag, combination, standard ⁵..... | ..... | 3 | 16 | ..... | 19 | 4.02 |
| Kits, Artillery, signal ⁶... | ..... | ..... | 4 | ..... | 4 | 4.02 |

¹ Type B glass costs \$17.50 complete. The item of field glasses includes case and strap. Prices of case and strap: For type A glass, \$4.50; type B glass, \$3; type C glass, \$3.50; type E E glass, \$5.40.

² Type E E field glasses will be issued as soon as available without requisition.

³ Until a supply of type E E field glasses is available, machine-gun companies will be equipped with two type A or B and two type E E glasses instead of the four type E E glasses to which they are entitled. Type E E glasses to replace these A or B glasses will be issued to the organizations without requisitions as soon as they are available.

⁴ An Infantry combination flag kit is identical with the standard combination flag kit with the exception that one Infantry flag, 29 cents, is substituted for the red 2 foot flag.

⁵ A standard combination flag kit consists of 1 case, \$1.29; 1 staff, jointed, for 2-foot flag, \$1.75 (when joints are supplied separately the cost for lower section is 63 cents; middle section, 60 cents; upper section, 52 cents); 2 staffs, semaphore flag, 6 cents each; two 2-foot flags (1 red with white center 27 cents, and 1 white with red center 27 cents); and 2 flags, semaphore, standard type, 16 cents each.

⁶ An Artillery signal kit consists of one case, \$1.29; and one signaling device, Artillery, \$2.73.

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1825

TABLE 3.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL HORSE, AND ORGANIZATION EQUIPMENT..

OLD-MODEL EQUIPMENT.

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|-----------------------|-----------------------------------|-------------------------------------|------------------------------|-----------------------------------|--------------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. ^a | Machine-gun company. ^a | Head-quarters company. ^a | Supply company. ^a | Regiment, total for. ¹ | |
| EQUIPMENT "A." | | | | | | |
| ARMS | | | | | | |
| <i>Class VII, section 1.</i> | | | | | | |
| Brushes and thongs ⁴ | 147 | ..... | 23 | 6 | 1,793 | \$0.10 |
| Cleaning rods..... | 18 | ..... | 3 | 1 | 220 | .38 |
| Cleaning-rod cases..... | 18 | ..... | 3 | 1 | 220 | .09 |
| Front-sight covers..... | 147 | ..... | 23 | 6 | 1,793 | .03 |
| Oiler and thong cases ⁴ | 147 | ..... | 23 | 6 | 1,793 | .18 |
| Pouches, telescopic sight ⁶ | 2 | ..... | ..... | ..... | 24 | 1.93 |
| Rifles, U. S., cal. .30..... | 145 | ..... | 23 | 6 | 1,769 | 15.00 |
| Rifles for telescopic sight ⁶ | 2 | ..... | ..... | ..... | 24 | 19.00 |
| Screw drivers, rifle..... | 18 | ..... | 3 | 1 | 220 | .12 |
| Telescopic sights, with screw-driver wrench ⁶ .. | 2 | ..... | ..... | ..... | 24 | 57.31 |
| <i>Class VII, section 2.</i> | | | | | | |
| Magazines, pistol, extra.. | 6 | 148 | 102 | 10 | 332 | .52 |
| Pistols, cal. .45..... | 3 | 74 | 51 | 5 | 166 | 12.50 |
| HAND ARMS. | | | | | | |
| <i>Class VII, section 5.</i> | | | | | | |
| Bayonets..... | 147 | ..... | 7 | 5 | 1,776 | 1.60 |
| Bayonet scabbards..... | 147 | ..... | 7 | 5 | 1,776 | 1.58 |
| Bolos..... | 9 | 74 | ..... | ..... | 182 | 1.95 |
| Bolo scabbards..... | 9 | 74 | ..... | ..... | 182 | 1.85 |
| AMMUNITION, SMALL ARMS. | | | | | | |
| <i>Class VIII, section 1.</i> | | | | | | |
| Cartridges, ball, cal. .30.. | 13,230 | (⁶) | 2,070 | 540 | 187,170 | ⁷ 26.00 |
| <i>Class VIII, section 2.</i> | | | | | | |
| Cartridges, ball, pistol, cal. .45..... | 63 | 1,554 | 1,071 | 105 | 3,486 | ⁷ 14.50 |

¹ Ordnance equipment for Quartermaster Corps troops attached will, if necessary, be provided and accounted for on Form No. 18, Ordnance Department, by the quartermaster under whom they serve.

² Should a detachment of any organization of the regiment be serving at a post separated from the remainder of the organization, the necessary articles of ordnance unit accountability equipment for the detachment will be issued to the officer in charge of the detachment by the commanding officer of the organization, who will continue to account for the property.

³ One wagoner for each authorized wagon of the field and combat train. One set (*i*), p. 1848, in addition to the equipment to be procured for each wagoner present.

⁴ If any rifles are provided with spare-part containers, these numbers will be reduced accordingly.

⁵ If not supplied, U. S. rifles caliber .30, will be issued in lieu thereof.

⁶ For machine guns. 25,800 for Benét Mercié machine gun, caliber .30, model of 1909; 24,000 for Maxim automatic machine gun, model of 1904.

⁷ Per 1,000.

TABLE 3.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

OLD-MODEL EQUIPMENT—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| PERSONAL EQUIPMENT. | | | | | | |
| <i>Class IX, section 1.</i> | | | | | | |
| Blanket-roll straps, sets.. | 150 | 71 | 38 | 5 | 1,914 | \$0.81 |
| Canteens, Infantry ¹ | 147 | ..... | 7 | 5 | 1,776 | .57 |
| Canteen haversack straps | 6 | 142 | 62 | ..... | 276 | 1.01 |
| Cartridge belts, cal. .30, Infantry..... | 147 | ..... | 7 | 5 | 1,776 | 2.90 |
| Cartridge-belt suspenders | 147 | ..... | 23 | 6 | 1,793 | .58 |
| Cups..... | 150 | 74 | 58 | 10 | 1,942 | .29 |
| Forks..... | 150 | 74 | 58 | 10 | 1,942 | .06 |
| Gun slings..... | 147 | ..... | 23 | 5 | 1,792 | .80 |
| Haversacks..... | 150 | 71 | 38 | 5 | 1,914 | 1.48 |
| Knives..... | 150 | 74 | 58 | 10 | 1,942 | .10 |
| Meat cans..... | 150 | 74 | 58 | 10 | 1,942 | .40 |
| Pouches for first-aid packet..... | 150 | 74 | 58 | 10 | 1,942 | .13 |
| Pouches for adhesive tape and foot powder..... | 30 | 15 | 10 | ..... | 385 | .35 |
| Spoons..... | 150 | 74 | 58 | 10 | 1,942 | .06 |
| <i>Class IX, section 2.</i> | | | | | | |
| Canteens, Cavalry ² | 3 | 74 | 51 | 5 | 166 | .49 |
| Canteen straps, Cavalry ²..... | ..... | 3 | 20 | 5 | 28 | .36 |
| Cartridge belts, cal. .30, Cavalry..... | ..... | ..... | 16 | 1 | 17 | 3.00 |
| Magazine pockets, web, double..... | ..... | ..... | 16 | 1 | 17 | .77 |
| Pistol holsters, cal. .45... | 3 | 74 | 51 | 5 | 166 | 1.56 |
| Spurs, pairs..... | ..... | 3 | 20 | 5 | 28 | 1.10 |
| Spur straps, sets..... | ..... | 3 | 20 | 5 | 28 | .22 |
| <i>Class IX, section 3.</i> | | | | | | |
| Pistol belts without saber ring..... | 3 | 74 | 35 | 4 | 149 | 2.10 |
| HORSE EQUIPMENT. | | | | | | |
| <i>Class IX, section 5.</i> | | | | | | |
| Bridles, Cavalry..... | ..... | 3 | 20 | ..... | 23 | 8.84 |
| Bridles, watering ³..... | ..... | 3 | 20 | ..... | 23 | 1.91 |
| Currycombs..... | ..... | 19 | 20 | 5 | 44 | .38 |

¹ In lieu of these the canteen, tin, at 49 cents, with canteen strap, web, at 21 cents; or the canteen, model of 1910, at 46 cents, and dismounted cover, at 48 cents, may be issued.

² In lieu of this canteen and strap, the canteen, model of 1910, at 46 cents, with canteen cover dismounted, at 48 cents, may be issued.

³ Issued with the curb bridle, model of 1902, but not with the Cavalry bridle, model of 1909 or 1912.

TABLE 3.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

OLD-MODEL EQUIPMENT—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| HORSE EQUIPMENT—continued. | | | | | | |
| <i>Class IX, section 5</i> —Continued. | | | | | | |
| Feed bags ¹ | | 19 | 20 | 5 | 44 | \$1.25 |
| Grain bags ¹ | | 19 | 20 | 5 | 44 | .13 |
| Halter bridles, model of 1910..... | | | | 5 | 5 | ^a 6.43 |
| Halter headstalls..... | | 3 | 20 | | 23 | 2.04 |
| Halter tie ropes (or straps)..... | | 3 | 20 | | 23 | .32 |
| Horse brushes..... | | 19 | 20 | 5 | 44 | 1.17 |
| Lariats..... | | 3 | 20 | 5 | 28 | .53 |
| Lariat straps..... | | 3 | 20 | 5 | 28 | .19 |
| Links..... | | 3 | 20 | 5 | 28 | .33 |
| Picket pins..... | | 3 | 20 | 5 | 28 | .28 |
| Rifle scabbards..... | | | 16 | 1 | 17 | 5.25 |
| Saddles, Cavalry..... | | 3 | 20 | | 23 | 26.88 |
| Saddles, mule ³ | | | | 5 | 5 | 32.00 |
| Saddlebags, pairs..... | | 3 | 20 | 5 | 28 | 7.84 |
| Saddle blankets ⁴ | | 3 | 20 | 5 | 28 | 6.00 |
| Surcingles..... | | 3 | 20 | 5 | 28 | .33 |
| INTRENCHING TOOLS. | | | | | | |
| <i>Class X, section 3.</i> | | | | | | |
| Hand axes..... | 8 | | | | 96 | .54 |
| Hand-ax carriers..... | 8 | | | | 96 | .97 |
| Pick-mattocks..... | 34 | | | | 408 | .41 |
| Pick-mattock carriers..... | 34 | | | | 408 | 1.20 |
| Rule, 2-foot, folding..... | 1 | | | | 12 | .25 |
| Shovels..... | 68 | | | | 816 | .63 |
| Shovel carriers..... | 68 | | | | 816 | .97 |
| Wire cutters..... | 17 | 4 | 16 | | 224 | .95 |
| Wire-cutter carriers..... | 17 | 4 | 16 | | 224 | .17 |
| ORGANIZATION EQUIPMENT. | | | | | | |
| <i>Class X, section 5.</i> | | | | | | |
| Marking outfit for stamping leather..... | | (^b) | 1 | | ^a 2 | 3.22 |
| Marking outfit for stamping metal..... | (^b) | (^b) | 1 | | ^a 14 | 4.39 |

¹ In lieu of feed bags combined with grain bags, nose bags, at \$1.20, may be issued.

² With rope reins, \$4.91.

³ Until these saddles are supplied, the saddle, McClellan, Cavalry, at \$26.88, may be used.

⁴ Also supplied as part of pack for machine-gun equipment.

^a Carried in equipment "B" of company and machine-gun company. See Table 8, pp. 1843-1844.

TABLE 3.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

OLD-MODEL EQUIPMENT—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| ORGANIZATION EQUIPMENT—continued. | | | | | | |
| Class X, section 5—Continued. | | | | | | |
| Stencil, canteen ¹ | 1 | 1 | 1 | 1 | 15 | \$0.23 |
| Stencil, haversack ² | 1 | 1 | 1 | 1 | 15 | .44 |
| Stencil outfit | (³) | (³) | 1 | ..... | ³ 14 | 1.94 |
| Stencil, wagon, sets ⁴ ..... | ..... | ..... | 1 | ..... | 1 | 5.04 |
| Class X, section 6. | | | | | | |
| Range finder, 80 c. m. base, with carrying case and tripod | (⁵) | 1 | ..... | ..... | 4 | 500.00 |
| Class X, section 9. | | | | | | |
| Company repair kit, complete ⁶ ..... | ..... | ..... | 3 | ..... | 3 | 5.06 |
| Pistol-cleaning kit ..... | ..... | 1 | 1 | ..... | 2 | 5.35 |

¹ Price for company and supply company, \$0.23; machine-gun and headquarters company, \$0.29.

² Price for company and supply company, \$0.44; machine-gun and headquarters company, \$0.50.

³ See footnote (¹). A stencil outfit consists of 1 chest, at 47 cents; 1 stencil brush, at 11 cents; 1 box of stencil paste, at 10 cents; 1 set of letters, $\frac{1}{2}$ -inch, A to Z, character "&," and period, each letter 1 cent, 28 cents; 1 set of figures, $\frac{1}{2}$ -inch, 0 to 9, inclusive, each figure 1 cent, 10 cents; 4 end pieces, $\frac{1}{4}$ -inch, 1 cent each, 4 cents; 1 set of letters, 1-inch, A to Z, character "&," and period, each letter 2 cents, 56 cents; 1 set of figures, 1-inch, 0 to 9, inclusive, each figure 2 cents, 20 cents; 4 end pieces, 1-inch, 2 cents each, 8 cents.

⁴ A set consists of 26 letters, A to Z, and 10 numbers, 0 to 9, $5\frac{1}{2}$ inches high. In garrison, where parts of regiments are serving at separate stations, these wagon stencils can be sent by parcel post to organizations detached from headquarters for necessary time to mark their wagons.

⁵ One is issued to each battalion, to be accounted for by the company to which it is assigned on the return of unit accountability equipment (Form No. 451, A. G. O.) under the entry "The equipment includes one range finder for use of battalion." Where a greater number is issued for experimental purposes the additional number should be held on memorandum receipt from the post or regimental supply officer.

⁶ One for the use of each battalion for field operations. In permanent camp or garrison two of them will be used by other organizations of the regiment. Organizations not otherwise supplied in permanent camp or garrison will be furnished "company repair kits" by the post ordnance officer or supply officer on memorandum receipt.

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1829

TABLE 3.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.
OLD-MODEL EQUIPMENT—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| OFFICERS' HORSE EQUIPMENT. | | | | | | |
| <i>Class IX, sections 5 and 6.</i> | | | | | | |
| Officers' horse equipment, sets ¹ | | 4 | 5 | 2 | 11 | \$67.90 |

Note. If any organization is provided with .38 or .45 caliber revolvers instead of .45-caliber pistols, the fact will be stated on the ordnance return and the above unit accountability equipment will be modified as shown by note on p. 1845.

TABLE 4.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT.
NEW-MODEL EQUIPMENT (1910).

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|-----------------------|-----------------------------------|-------------------------------------|------------------------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. ⁴ | Machine-gun company. ⁴ | Head-quarters company. ⁴ | Supply company. ⁴ | Regiment, total for. | |
| EQUIPMENT "A." | | | | | | |
| ARMS. | | | | | | |
| <i>Class VII, section 1.</i> | | | | | | |
| Brushes and thongs ⁴ | 147 | | 23 | 6 | 1,793 | \$0.10 |
| Cleaning rods..... | 18 | | 3 | 1 | 220 | .38 |
| Cleaning-rod cases..... | 18 | | 3 | 1 | 220 | .09 |
| Front-sight covers..... | 147 | | 23 | 6 | 1,793 | .03 |
| Oilier and thong cases ⁴ | 147 | | 23 | 6 | 1,793 | .18 |
| Pouches, Telescopic sight ⁷ | 2 | | | | 24 | 1.93 |
| Rifles, U. S., cal. .30..... | 145 | | 23 | 6 | 1,769 | 15.00 |
| Rifles for telescopic sight ⁷ | 2 | | | | 24 | 19.00 |
| Screw drivers, rifle..... | 18 | | 3 | 1 | 220 | .12 |
| Telescopic sights, with screw-driver wrench ⁷ | 2 | | | | 24 | 57.31 |

¹ For the parts of a set of officers' horse equipment, see Table 14 (o), p. 1852.

² For staff officers and chaplain; 4 sets only if chaplain has field rank, which fact should be stated on return under section II, page 2.

³ Ordnance equipment for Quartermaster Corps troops attached will, if necessary, be provided and accounted for on Form No. 18, Ordnance Department, by the quartermaster under whom they serve.

⁴ Should a detachment of any organization of the regiment be serving at a post separated from the remainder of the organization, the necessary articles of ordnance unit accountability equipment for the detachment will be issued to the officer in charge of the detachment by the commanding officer of the organization, who will continue to account for the property.

⁵ One wagoner for each authorized wagon of the field and combat train. One set (i), p. 1851 in addition to the equipment given above to be procured for each wagoner present.

⁶ If any rifles are provided with spare-part containers, these numbers will be reduced accordingly.

⁷ If not supplied, U. S. rifles caliber .30 will be issued in lieu thereof

TABLE 4.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

NEW-MODEL EQUIPMENT (1910)—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|--------------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| ARMS—Continued. | | | | | | |
| <i>Class VII, section 2.</i> | | | | | | |
| Magazines, pistol, extra... | 6 | 148 | 102 | 10 | 332 | \$0.52 |
| Pistols, cal. .45..... | 3 | 74 | 51 | 5 | 166 | 12.50 |
| HAND ARMS. | | | | | | |
| <i>Class VII, section 5.</i> | | | | | | |
| Bayonets..... | 147 | ..... | 7 | 5 | 1,776 | 1.60 |
| Bayonet scabbards..... | 147 | ..... | 7 | 5 | 1,776 | .94 |
| Bolos..... | 9 | 74 | ..... | ..... | 182 | 1.95 |
| Bolo scabbards..... | 9 | 74 | ..... | ..... | 182 | 1.03 |
| AMMUNITION, SMALL ARMS. | | | | | | |
| <i>Class VIII, section 1.</i> | | | | | | |
| Cartridges, ball, cal. .30.. | 14,700 | (¹) | 2,300 | 600 | 205,100 | ² 26.00 |
| <i>Class VIII, section 2.</i> | | | | | | |
| Cartridges, ball, pistol, cal. .45..... | 63 | 1,554 | 1,071 | 105 | 3,486 | ² 14.50 |
| PERSONAL EQUIPMENT. | | | | | | |
| <i>Class IX, section 1.</i> | | | | | | |
| Bacon cans..... | 150 | 74 | 58 | 10 | 1,942 | .13 |
| Canteens..... | 150 | 74 | 58 | 10 | 1,942 | .51 |
| Canteen covers, dis-mounted..... | 150 | 74 | 58 | 10 | 1,942 | .48 |
| Cartridge belts, cal. .30, dismounted..... | 147 | ..... | 7 | 5 | 1,776 | 3.40 |
| Cartridge belts, cal. .30, mounted..... | ..... | ..... | 16 | 1 | 17 | 3.77 |
| Condiment cans..... | 150 | 74 | 58 | 10 | 1,942 | .11 |
| Cups..... | 150 | 74 | 58 | 10 | 1,942 | .29 |
| Forks..... | 150 | 74 | 58 | 10 | 1,942 | .06 |
| Gun slings..... | 147 | ..... | 23 | 5 | 1,792 | .80 |
| Haversacks..... | 140 | 71 | 38 | 5 | 1,914 | 2.42 |
| Knives..... | 150 | 74 | 58 | 10 | 1,942 | .10 |
| Meat cans..... | 150 | 74 | 58 | 10 | 1,942 | .40 |
| Pack carriers..... | 150 | 71 | 38 | 5 | 1,914 | .60 |
| Pouches for first-aid packet..... | 150 | 74 | 58 | 10 | 1,942 | .13 |

¹ For machine guns: 25,800 for Benét Mercié machine gun, caliber .30, model of 1909; 24,000 for Maxim automatic machine gun, model of 1904.² Per 1,000.

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1831

TABLE 4.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

NEW-MODEL EQUIPMENT (1910)—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| PERSONAL EQUIPMENT—continued. | | | | | | |
| <i>Class IX, section 1—Continued.</i> | | | | | | |
| Pouches for adhesive tape and foot powder..... | 30 | 15 | 10 | ..... | 385 | \$0.35 |
| Spoons..... | 150 | 74 | 58 | 10 | 1,942 | .06 |
| <i>Class IX, section 2.</i> | | | | | | |
| Magazine pockets, web, double ¹..... | ..... | ..... | 16 | 1 | 17 | .77 |
| Pistol holsters, cal. .45... 3 | 74 | 51 | 5 | 166 | 1.56 | |
| Spurs, pairs..... | 3 | 20 | 5 | 28 | 1.10 | |
| Spur straps, sets..... | 3 | 20 | 5 | 28 | .22 | |
| <i>Class IX, section 3.</i> | | | | | | |
| Pistol belts without saber ring..... | 3 | 74 | 35 | 4 | 149 | 2.10 |
| HORSE EQUIPMENT. | | | | | | |
| <i>Class IX, section 5.</i> | | | | | | |
| Bridles, Cavalry..... | 3 | 20 | ..... | 23 | 8.84 | |
| Bridles, watering ² | 3 | 20 | ..... | 23 | 1.91 | |
| Currycombs..... | 19 | 20 | 5 | 44 | .38 | |
| Feed bags ³ | 19 | 20 | 5 | 44 | 1.25 | |
| Grain bags ³ | 19 | 20 | 5 | 44 | .13 | |
| Halter bridles, model of 1910..... | ..... | ..... | 5 | 5 | 6.43 | |
| Halter headstalls..... | 3 | 20 | ..... | 23 | 2.04 | |
| Halter tie ropes (or straps)..... | 3 | 20 | ..... | 23 | .32 | |
| Horse brushes..... | 19 | 20 | 5 | 44 | 1.17 | |
| Lariats..... | 3 | 20 | 5 | 28 | .53 | |
| Lariat straps..... | 3 | 20 | 5 | 28 | .19 | |
| Links..... | 3 | 20 | 5 | 28 | .33 | |
| Picket pins..... | 3 | 20 | 5 | 28 | .28 | |
| Rifle scabbards..... | ..... | 16 | 1 | 17 | 5.25 | |
| Saddles, Cavalry..... | 3 | 20 | ..... | 23 | 26.88 | |
| Saddles, mule ⁴..... | ..... | ..... | 5 | 5 | 32.00 | |
| Saddlebags, pairs..... | 3 | 20 | 5 | 28 | 7.84 | |
| Saddle blankets ⁵ | 3 | 20 | 5 | 28 | 6.00 | |
| Surcingles..... | 3 | 20 | 5 | 28 | .33 | |

¹ The magazine pockets are issued only when the cartridge belt, caliber .30, mounted, is provided with revolver cartridge pockets.

² Issued with the curb bridle, model of 1902, but not with the Cavalry bridle, model of 1909 or 1912.

³ In lieu of feed bags combined with grain bags, nose bags, at \$1.20, may be issued.

⁴ Until these saddles are supplied, the saddle, McClellan, Cavalry, at \$26.88, may be used.

⁵ Also supplied as part of pack for machine-gun equipment.

TABLE 4.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

NEW-MODEL EQUIPMENT (1910)—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| INTRENCHING TOOLS. | | | | | | |
| <i>Class X, section 3.</i> | | | | | | |
| Hand axes..... | 8 | | | | 96 | \$0.54 |
| Hand-ax carriers..... | 8 | | | | 96 | .30 |
| Pick mattocks..... | 34 | | | | 408 | .41 |
| Pick-mattock carriers..... | 34 | | | | 408 | .36 |
| Shovels..... | 68 | | | | 816 | .63 |
| Shovel carriers..... | 68 | | | | 816 | .27 |
| Steel tapes, 5-foot..... | 1 | | | | 12 | .42 |
| Wire cutters..... | 17 | 4 | 16 | | 224 | .95 |
| Wire-cutter carriers..... | 17 | 4 | 16 | | 224 | .17 |
| ORGANIZATION EQUIPMENT. | | | | | | |
| <i>Class X, section 5.</i> | | | | | | |
| Marking outfit for stamping leather..... | | (¹) | 1 | | ¹ 2 | 3.22 |
| Marking outfit for stamping metal..... | (²) | (²) | 1 | | ² 14 | 4.39 |
| Stencil outfit..... | (³) | (²) | 1 | | ³ 14 | 1.94 |
| Stencil, personal equipment ⁴ | 1 | 1 | 1 | 1 | 15 | .22 |
| Stencils, wagon, sets ⁴ | | | 1 | | 1 | 5.04 |
| <i>Class X, section 6.</i> | | | | | | |
| Range finder, 80 c. m. base, with carrying case and tripod..... | (⁵) | 1 | | | 4 | 500.00 |

¹ Carried in equipment "B" of machine-gun company. See Table 8, p. 1844.² Carried in equipment "B" of company and machine-gun company. See Table 8, p. 1844. A stencil outfit consists of 1 chest, at 47 cents; 1 stencil brush, at 11 cents; 1 box of stencil paste, at 10 cents; 1 set of letters, $\frac{1}{2}$ -inch, A to Z, character "&," and period, each letter 1 cent, 28 cents; 1 set of figures, $\frac{1}{2}$ -inch, 0 to 9, inclusive, each figure 1 cent, 10 cents; 4 end pieces, $\frac{1}{2}$ -inch, 1 cent each, 4 cents; 1 set of letters, 1-inch, A to Z, character "&," and period, each letter 2 cents, 56 cents; 1 set of figures, 1-inch, 0 to 9, inclusive, each figure 2 cents, 20 cents; 4 end pieces, 1-inch, 2 cents each, 8 cents.³ Price per company, 22 cents; per machine-gun company, 28 cents; per headquarters company, 28 cents; per supply company, 23 cents.⁴ A set consists of 26 letters, A to Z, and 10 numbers, 0 to 9, $5\frac{1}{4}$ inches high. In garrison, where parts of regiments are serving at separate stations, these wagon stencils can be sent by parcel post to organizations detached from headquarters, for necessary time to mark their wagons.⁵ One is issued to each battalion to be accounted for by the company to which it is assigned on the return of unit accountability equipment (Form No. 451, A. G. O.) under the entry "The equipment includes one range finder for use of battalion." Where a greater number is issued for experimental purposes the additional number should be held on memorandum receipt from the post or regimental supply officer.

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1833

TABLE 4.—ORDNANCE PROPERTY—ARMS, AMMUNITION, PERSONAL, HORSE, AND ORGANIZATION EQUIPMENT—Continued.

NEW-MODEL EQUIPMENT (1910)—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| ORGANIZATION EQUIPMENT—continued. | | | | | | |
| <i>Class X, section 9.</i> | | | | | | |
| Arm repair chests, complete, model of 1910... | (1) | ..... | 1 | ..... | 13 | \$57.54 |
| Pistol-cleaning kit..... | | 1 | | | 1 | 5.35 |
| OFFICERS' HORSE EQUIPMENT. | | | | | | |
| <i>Class IX, sections 5 and 6.</i> | | | | | | |
| Officers' horse equipment, sets ² | | 4 | 5 | 2 | 11 | 67.90 |

¹ Carried in equipment "B" of company. See Table 8, p. 1844.

² For the parts of a set of officers' horse equipment, see Table 14 (o), p. 1852.

³ For staff officers and chaplain; 4 sets only if chaplain has field rank, which fact should be stated on the return under section II, page 2.

Note. If any organization is provided with .38 or .45 caliber revolvers instead of .45-caliber pistols, the fact will be stated on the ordnance return and the above unit accountability equipment will be modified as shown by note on p. 1845.

TABLE 5.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR BENÉT MERCIÉ MACHINE GUN, CALIBER .30, MODEL OF 1909.

[Note. In case the machine-gun company is provided with this equipment, the notation will be made on the ordnance return.]

[These articles are prescribed for organizations equipped with either the old-model equipment or the new-model equipment.]

| Articles. | Enlisted strength. | | Unit price. |
|--|-----------------------------------|----------------------|-------------|
| | 74 | | |
| | Machine-gun company. ¹ | Regiment, total for. | |
| EQUIPMENT "A." | | | |
| Class IV, section 1. | | | |
| Benét Mercié machine guns, cal. .30..... | 4 | 4 | \$412.84 |
| Telescopic sights, with screw-driver wrench..... | 4 | 4 | 46.65 |
| Packs, including: | | | |
| Pack harness— | | | |
| Aparejos..... | 16 | 16 | 39.32 |
| Aparejo cinchas..... | 16 | 16 | 5.24 |

¹ If the number of sets of equipment of ammunition mules on hand is less than that shown in the tables, it will be reported as "short-sets (s)." See pp. 1847 or 1850.

TABLE 5.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR BENET MERCIÉ
MACHINE GUN, CALIBER .30, MODEL OF 1910—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|--|----------------------|----------------------|--|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| Class IV, section I—Continued. | | | |
| Blinders..... | 16 | 16 | { \$1.53 3.52 9.52 5.41 13.50 16.82 |
| Coronas..... | 16 | 16 | |
| Cruppers..... | 16 | 16 | |
| Halter bridles, with leather reins..... | 8 | 8 | |
| Halter bridles, with rope reins..... | 8 | 8 | |
| Saddle blankets..... | 16 | 16 | 6.00 |
| Sobrejalmas..... | 16 | 16 | 8.07 |
| Special pack equipment— | | | |
| Ammunition hangers..... | 27 | 27 | 5.22 |
| Broad hatchet-head cases..... | 2 | 2 | 1.08 |
| Pack frames..... | 16 | 16 | 9.45 |
| Rifle cases..... | 5 | 5 | 24.87 |
| Rifle hangers..... | 5 | 5 | 10.53 |
| Thongs, 0.375 by 30 inches..... | 96 | 96 | .09 |
| TOOLS AND ACCESSORIES FOR GUNS. | | | |
| Class IV, section I. | | | |
| Ammunition boxes..... | 86 | 86 | 7.00 |
| Barrel cases..... | 4 | 4 | 9.18 |
| Cleaning brushes..... | 24 | 24 | .05 |
| Cleaning-brush holders..... | 4 | 4 | .18 |
| Cleaning-rod handles (with sleeves)..... | 4 | 4 | .09 |
| Cleaning-rod stems (with sleeves)..... | 4 | 4 | .18 |
| Cooling sponges and handles..... | 4 | 4 | 1.15 |
| Cut patches (cotton flannel)..... | 200 | 200 | .05 |
| Cut patches tampa flannel)..... | 200 | 200 | .05 |
| Defective-cartridge extractors..... | 4 | 4 | .15 |
| Dismounting wrenches..... | 4 | 4 | .75 |
| Dismounting tools..... | 4 | 4 | .12 |
| Drift (bronze)..... | 2 | 2 | .15 |
| Ejector keys..... | 4 | 4 | .20 |
| Feed strips..... | 860 | 860 | .20 |
| Gas-cylinder cleaners (complete)..... | 4 | 4 | 1.25 |
| Grease brush..... | 2 | 2 | .10 |
| Grease pot..... | 2 | 2 | .35 |
| Gunners' pouches (without small parts case)..... | 4 | 4 | 3.14 |
| Hammer (copper)..... | 2 | 2 | .75 |
| Hand extractors..... | 4 | 4 | .20 |
| Latigo straps..... | 4 | 4 | .22 |
| Loading tool..... | 2 | 2 | 11.55 |
| Loading-tool case..... | 2 | 2 | 4.42 |
| Mittens, pairs..... | 4 | 4 | 2.20 |
| Oil cans..... | 4 | 4 | .50 |

¹ Model of 1910.² Model of 1906.³ Model of 1905.⁴ Model of 1912.⁵ Per 100.

TABLE 5.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR BENÉT MERCIÉ MACHINE GUN, CALIBER .30, MODEL OF 1909—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|--|----------------------|----------------------|---------------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| TOOLS AND ACCESSORIES FOR GUNS—continued. | | | |
| Class IV, series 1—Continued. | | | |
| Pliers..... | 2 | 2 | \$0.26 |
| Pouches for telescopic sights..... | 4 | 4 | 1.93 |
| Rammers..... | 4 | 4 | .05 |
| Resizing tools..... | 2 | 2 | 5.15 |
| Screw drivers..... | 4 | 4 | .16 |
| Small parts cases ¹ | 4 | 4 | .61 |
| Spare parts cases..... | 2 | 2 | 14.60 |
| TOOLS AND ACCESSORIES FOR PACKS. | | | |
| Class IV, section 1. | | | |
| Chest for supplies..... | 1 | 1 | 18.50 |
| Cooling-sponge cover..... | 4 | 4 | .28 |
| Manila rope, $\frac{1}{8}$ -inch..... foot..... | 200 | 200 | 2.06 |
| Picket-pin bodies..... | 4 | 4 | 1.50 |
| Picket-pin eyes..... | 4 | 4 | .53 |
| Picket-rope sections..... | 3 | 3 | 1.47 |
| Rigging covers..... | 2 | 2 | { ^a 4.67 |
| Supply sacks for leather and spare parts..... | 1 | 1 | { ^a 5.88 |
| Supply bags..... | 8 | 8 | { ^a 1.90 |
| | | | { ^a .31 |
| | | | { ^a .20 |
| Class IV, section 9. | | | |
| Broad hatchet ⁷ | 2 | 2 | 1.18 |
| Pick mattocks ⁷ | 2 | 2 | .46 |
| Rule, boxwood, folding 2-foot ⁷ | 1 | 1 | .26 |
| Shovel, short handled ⁷ | 6 | 6 | .91 |
| Set of saddler's tools ^a | 1 | | |
| SPARE PARTS FOR GUNS. | | | |
| Class IV, section 1. | | | |
| Benét Mercié machine gun, cal. .30, model of 1909..... | 1 | 1 | 412.84 |
| Actuator springs..... | 4 | 4 | .25 |
| Barrels..... | 4 | 4 | 16.75 |
| Breechblock, with extractor and spring..... | 2 | 2 | 15.54 |
| Cartridge stops..... | 4 | 4 | .09 |

¹ Part of gunner's pouch.

² Per foot.

³ 17-foot.

⁴ 22-foot.

⁵ 20-inch.

⁶ 10-inch.

⁷ These tools were formerly issued by the Engineer Department. They should not be confused with the intrenching tools with similar names carried by individuals.

^a For number and kind see pp. 1841-1842.

TABLE 5.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR BENÉT MERCIÉ
MACHINE GUN, CALIBER .30, MODEL OF 1909—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|---|----------------------|----------------------|-------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| SPARE PARTS FOR GUNS—continued. | | | |
| Class IV, section I—Continued. | | | |
| Cartridge-stop holders..... | 4 | 4 | \$0.25 |
| Cartridge-stop springs..... | 4 | 4 | .10 |
| Ejectors..... | 4 | 4 | .14 |
| Ejector caps..... | 4 | 4 | .45 |
| Ejector springs..... | 4 | 4 | .10 |
| Extractors..... | 12 | 12 | .50 |
| Extractor springs..... | 12 | 12 | .04 |
| Feed pieces..... | 4 | 4 | 5.00 |
| Feed-piece springs (complete)..... | 4 | 4 | 1.00 |
| Fermeture nuts..... | 4 | 4 | 6.00 |
| Firing pins..... | 6 | 6 | .55 |
| Front sight, including cover and screws..... | 2 | 2 | 1.75 |
| Locking nuts..... | 4 | 4 | 4.08 |
| Locking screws..... | 4 | 4 | .20 |
| Rear-sight, complete, without windage screw ¹ | 2 | 2 | 10.19 |
| Rear-sight windage screw, complete ² | 2 | 2 | .31 |
| Sear springs..... | 4 | 4 | .07 |
| Stocks..... | 4 | 4 | 5.00 |
| SPARE PARTS FOR PACKS. | | | |
| Spare parts for ammunition hangers: | | | |
| Rear top braces..... | 2 | 2 | .07 |
| Side braces, right and left..... | 2 | 2 | .14 |
| Quick-release device, assembled..... | 1 | 1 | .57 |
| 1.5-inch by 1.5-inch strap loop, with rollers..... | 1 | 1 | .05 |
| 2-inch by 1.25-inch strap loop, with roller and strap fastener..... | 1 | 1 | .08 |
| Five-sided strap loop, with 2-inch strap fastener.... | 1 | 1 | .05 |
| Holding-down clips..... | 4 | 4 | .05 |
| 1-inch by 0.5-inch strap loops..... | 4 | 4 | .02 |
| Spare rivets: | | | |
| 0.187 ($\frac{1}{8}$)-inch by 0.5-inch round-head..... | 30 | 30 | \$.05 |
| 0.187 ($\frac{1}{8}$)-inch by 0.875-inch round-head..... | 40 | 40 | \$.06 |
| 0.187 ($\frac{1}{8}$)-inch by 1.25-inch round-head..... | 10 | 10 | \$.07 |
| 0.25-inch by 0.75-inch round-head..... | 25 | 25 | \$.08 |
| 0.25-inch by 1.75-inch round-head..... | 6 | 6 | \$.17 |
| Spare parts for gun hangers: | | | |
| Upper frame brace..... | 1 | 1 | .20 |
| Hanger bar..... | 1 | 1 | 1.10 |
| Diagonal brace..... | 1 | 1 | .10 |
| Frame limb, front with buckle..... | 1 | 1 | .43 |
| Rifle-hanger hasp..... | 1 | 1 | .23 |
| Rifle-hanger hasp lock..... | 1 | 1 | .30 |
| Rifle-hanger link, clasp, and clasp plate assembled.. | 1 | 1 | .51 |
| Rifle-hanger clevises, with pins..... | 2 | 2 | .10 |
| Ammunition-box rest..... | 1 | 1 | .40 |

¹ A rear sight, complete, does not include the rear-sight fixed base and screw.² The windage screw is part of rear sight, complete.³ Per 100.

TABLE 5.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR BENÉT MERCIÉ MACHINE GUN, CALIBER .30, MODEL OF 1909—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|--|----------------------|----------------------|-------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| SPARE PARTS FOR PACKS—continued. | | | |
| Spare parts for pack frames: | | | |
| Side braces..... | 4 | 4 | \$0.09 |
| Pack-frame pins..... | 2 | 2 | .18 |
| Strap-loop clevises..... | 2 | 2 | .04 |
| Superframes..... | 2 | 2 | .30 |
| Hook hinge..... | 1 | 1 | .19 |
| Arch..... | 1 | 1 | .59 |
| Brace bar..... | 1 | 1 | .10 |
| Brace-bar board..... | 1 | 1 | .23 |
| Side bar..... | 1 | 1 | .11 |
| Side-bar board..... | 1 | 1 | .11 |
| Split pins, $\frac{1}{16}$ inch by 0.625 inch..... | 10 | 10 | .01 |
| Spare parts for pack harness and tools: | | | |
| Top sticks, right and left..... | 2 | 2 | .83 |
| Boot sticks, right and left..... | 2 | 2 | .62 |
| Ribs, set of 10..... | 2 | 2 | .51 |

TABLE 6.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR MAXIM AUTOMATIC MACHINE GUN, MODEL OF 1904.

[These articles are prescribed for organizations equipped with either the old-model equipment or the new-model equipment.]

| Articles. | Enlisted strength. | | Unit price. |
|--|-----------------------------------|----------------------|------------------------|
| | 74 | | |
| | Machine-gun company. ¹ | Regiment, total for. | |
| EQUIPMENT "A." | | | |
| <i>Class IV, section 1.</i> | | | |
| Maxim automatic machine guns, model of 1904..... | 4 | 4 | \$1,200.00 |
| Tripods..... | 4 | 4 | 190.00 |
| Packs, including— | | | |
| Pack harness— | | | |
| Aparejos..... | 20 | 20 | 39.32 |
| Blinders..... | 10 | 10 | { ² 1.53 |
| Aparejos cinchas..... | 20 | 20 | ³ 3.52 |
| Coronas..... | 20 | 20 | 5.24 |
| Cruppers..... | 20 | 20 | { ⁴ 4.52 |
| | | | ⁵ 5.41 |
| | | | ² 13.50 |
| | | | ¹ 16.82 |

¹ If the number of equipments of ammunition mules on hand is less than that shown in the tables, it will be reported as "short—sets (#)." See pp. 1847 and 1851.

² Model of 1910.

³ Model of 1916.

⁴ Model of 1915.

⁵ Model of 1912.

TABLE 6.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR MAXIM AUTOMATIC MACHINE GUN, MODEL OF 1904—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|---|----------------------|----------------------|--|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| Class IV, section 1—Continued. | | | |
| Packs including— | | | |
| Pack harness—Continued. | | | |
| Halter bridles, with leather or rope reins. | 20 | 20 | { ¹ \$6.43 ² 4.81 |
| Saddle blankets. | 20 | 20 | |
| Sobrejalmas. | 20 | 20 | |
| Special pack equipment— | | | |
| Ammunition hangers. | 32 | 32 | 6.66 |
| Broad-hatchet head cases. | 2 | 2 | 1.08 |
| Pack frames. | 20 | 20 | 7.26 |
| Gun cases. | 4 | 4 | 12.69 |
| Gun hangers. | 4 | 4 | 3.98 |
| Tripod hangers. | 4 | 4 | 7.85 |
| Tools and accessories for guns: | | | |
| Ammunition boxes. | 96 | 96 | 9.40 |
| Belt-filling machines. | 4 | 4 | 98.00 |
| Belt-filling machine boxes. | 4 | 4 | 9.90 |
| Belt repairing tools. | 4 | 4 | 1.45 |
| Clearing tools. | 4 | 4 | .40 |
| Files, half round. | 4 | 4 | .35 |
| Oil cans, pint. | 8 | 8 | .45 |
| Pliers, pair. | 4 | 4 | .55 |
| Screw drivers, large. | 4 | 4 | .30 |
| Tin boxes, small parts. | 8 | 8 | .28 |
| Cartridge belts. | 96 | 96 | 3.32 |
| Cleaning rods. | 4 | 4 | 1.20 |
| Filling cups. | 4 | 4 | 2.60 |
| Mittens, pairs. | 4 | 4 | 2.20 |
| Pouches for rear-sight carriage. | 4 | 4 | .48 |
| Tool boxes. | 4 | 4 | 9.90 |
| Barrel-disk locking-pin wrenches. | 4 | 4 | .20 |
| Combined spanners. | 4 | 4 | 7.00 |
| Drifts, steel. | 8 | 8 | .28 |
| Drifts, brass. | 8 | 8 | .28 |
| Monkey wrenches. | 4 | 4 | 1.20 |
| Screw drivers, small. | 4 | 4 | .28 |
| Spring balances. | 4 | 4 | 1.00 |
| Water boxes. | 24 | 24 | 11.75 |
| Steam condensing devices. | 4 | 4 | 1.50 |
| TOOLS AND ACCESSORIES FOR PACK. | | | |
| Class IV, section 9. | | | |
| Broad hatchets. | 2 | 2 | 1.18 |
| Pick mattocks. | 2 | 2 | .46 |
| Rules, boxwood. | 1 | 1 | .26 |
| Shovels, short-handled. | 6 | 6 | .91 |

¹ Leather rein.² With rope rein.

TABLE 6.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR MAXIM AUTOMATIC MACHINE GUN, MODEL OF 1904—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|--|----------------------|----------------------|-------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| TOOLS AND ACCESSORIES FOR PACK—continued. | | | |
| Class IV, section 1. | | | |
| Chest for supplies..... | 1 | 1 | \$16.64 |
| Manila rope, ½-inch..... | 200 | 200 | 1.20 |
| Picket-pin bodies..... | 4 | 4 | 1.50 |
| Picket-pin eyes..... | 4 | 4 | .53 |
| Picket-rope sections..... | 3 | 3 | 1.47 |
| Rigging covers..... | 2 | 2 | 4.57 |
| Spare-barrel cases..... | 4 | 4 | 2.25 |
| Supply sacks for leather and spare parts..... | 1 | 1 | 1.36 |
| Supply bags..... | 8 | 8 | (?) |
| Spare parts for gun: | | | |
| Asbestos packing, sets..... | 8 | 8 | .09 |
| Bottom pawl spring..... | 4 | 4 | .99 |
| Crank adjusting nut washer, 0.005 inch..... | 12 | 12 | .09 |
| Crank adjusting nut washer, 0.003 inch..... | 12 | 12 | .09 |
| Ejector tube spring..... | 4 | 4 | .40 |
| Firing pin..... | 8 | 8 | 3.50 |
| Gib..... | 4 | 4 | 1.20 |
| Gib spring..... | 16 | 16 | .23 |
| Lock, complete..... | 4 | 4 | 101.40 |
| Main spring..... | 8 | 8 | 1.45 |
| Recoil spring, complete..... | 4 | 4 | 7.00 |
| Safety-catch spring..... | 4 | 4 | .35 |
| Safety sear..... | 4 | 4 | 1.80 |
| Safety-sear pin..... | 4 | 4 | .23 |
| Safety-sear spring..... | 4 | 4 | .28 |
| Side-lever pin..... | 8 | 8 | 1.60 |
| Sight-pawl spring..... | 8 | 8 | .08 |
| Sight spring..... | 4 | 4 | .14 |
| Tall spring..... | 8 | 8 | 1.20 |
| Trigger spring..... | 4 | 4 | .14 |
| Tumbler and hand-sear pin..... | 16 | 16 | .23 |
| Upper pawl spring..... | 4 | 4 | .08 |
| Water-jacket cap hole plug stem, complete..... | 8 | 8 | .37 |
| Barrel..... | 4 | 4 | 3.50 |
| Feed-box, complete..... | 4 | 4 | 62.50 |
| Spare parts for pack harness: | | | |
| Aparejo-top stick, right..... | 1 | 1 | .83 |
| Aparejo-top stick, left..... | 1 | 1 | .83 |
| Aparejo-boot stick, right..... | 1 | 1 | .62 |
| Aparejo-boot stock, left..... | 1 | 1 | .62 |
| Aparejo ribs (set of 10)..... | 2 | 2 | .51 |
| Spare parts for pack frames: | | | |
| Side brace..... | 4 | 4 | .15 |
| Pack-frame pin..... | 2 | 2 | .18 |
| Strap-loop clevis..... | 2 | 2 | .24 |
| Superframe..... | 2 | 2 | .25 |
| Hook hinge..... | 1 | 1 | .36 |
| Arch..... | 1 | 1 | .59 |
| Side bar..... | 1 | 1 | .11 |

¹ Per 100 feet.

² 10-inch, 20 cents; 20-inch, 31 cents.

TABLE 6.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR MAXIM AUTOMATIC MACHINE GUN, MODEL OF 1904—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|--|----------------------|----------------------|-------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| TOOLS AND ACCESSORIES FOR PACK—continued. | | | |
| Class IV, section 1—Continued. | | | |
| Spare parts for pack frames—Continued. | | | |
| Brace bar..... | 1 | 1 | \$0.10 |
| Side-bar board..... | 1 | 1 | .17 |
| Brace-bar board..... | 1 | 1 | .23 |
| Split pins, 0.156 ($\frac{1}{16}$) inch by 0.625 inch..... | 10 | 10 | .01 |
| Spare parts for ammunition hanger: | | | |
| Rear-top brace..... | 2 | 2 | .07 |
| Side brace, 1 right, 1 left..... | 2 | 2 | .15 |
| Clasp and plate (assembled)..... | 1 | 1 | .51 |
| Five-sided strap loop..... | 1 | 1 | .05 |
| Holding-down clip..... | 4 | 4 | .05 |
| 1.5 inches by 1.5 inches strap loop..... | 1 | 1 | .05 |
| 2 inches by 1.25 inches strap loop..... | 1 | 1 | .05 |
| 1 inch by 0.5 inch strap loop..... | 4 | 4 | .05 |
| Quick-release device..... | 1 | 1 | .57 |
| Spare parts for gun hanger: | | | |
| If model of 1910— | | | |
| Hanger frame (including fasteners and loops)..... | 1 | 1 | 2.82 |
| Frame brace..... | 1 | 1 | .42 |
| Diagonal brace..... | 1 | 1 | .07 |
| Lateral brace..... | 1 | 1 | .02 |
| Gun-hanger eyes..... | 2 | 2 | .13 |
| Riser (including fastener and loop)..... | 1 | 1 | .28 |
| If model of 1911— | | | |
| Gun-hanger frame limb, rear..... | 1 | 1 | .32 |
| Gunhanger case rest..... | 1 | 1 | .42 |
| Diagonal brace..... | 2 | 2 | .07 |
| Spare parts for tripod hanger: | | | |
| If model of 1910— | | | |
| Hanger frame (with fasteners, loops, and clamp hooks)..... | 1 | 1 | 7.17 |
| Tripod rest..... | 1 | 1 | .44 |
| Clamp-pivot clip (rear)..... | 1 | 1 | .56 |
| Clamp-pivot clip (front)..... | 1 | 1 | .67 |
| Hanger-frame brace (rear)..... | 1 | 1 | .46 |
| Hanger-frame brace (front)..... | 1 | 1 | .46 |
| Hanger eye..... | 2 | 2 | .13 |
| Rear clamp (with clamp loop and rear-clamp bearing block)..... | 1 | 1 | .78 |
| Front clamp (with clamp loop and tripod retainer)..... | 1 | 1 | .78 |
| If model of 1911— | | | |
| Tripod-bearing spring and block, assembled ... | 1 | 1 | .53 |
| Tripod rest (front)..... | 1 | 1 | .44 |
| Tripod rest (rear)..... | 1 | 1 | .44 |
| Tripod-hanger clamp, with clamp loop, assembled..... | 2 | 2 | .78 |
| Tripod-hanger frame limb (rear)..... | 2 | 2 | .46 |
| Diagonal brace..... | 2 | 2 | .07 |

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1841

TABLE 6.—ORDNANCE PROPERTY—MACHINE-GUN EQUIPMENT FOR MAXIM AUTOMATIC MACHINE GUN, MODEL OF 1904—Continued.

| Articles. | Enlisted strength. | | Unit price. |
|---|----------------------|----------------------|---------------------|
| | 74 | | |
| | Machine-gun company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | |
| TOOLS AND ACCESSORIES FOR PACKS—continued. | | | |
| Class IV, section 1—Continued. | | | |
| Spare rivets: | | | |
| 0.187 ($\frac{7}{32}$) inch by 0.5 inch, round-head..... | 30 | 30 | ¹ \$0.05 |
| 0.187 ($\frac{7}{32}$) inch by 0.875 inch, round-head..... | 40 | 40 | ¹ .06 |
| 0.187 ($\frac{7}{32}$) inch by 1.25 inches, round-head..... | 10 | 10 | ¹ .07 |
| 0.25 inch by 0.75 inch, round-head..... | 25 | 25 | ¹ .08 |
| 0.25 inch by 1.75 inches, round-head..... | 6 | 6 | ¹ .17 |
| Spare parts for belt-filling machines: | | | |
| Feed-pawl spring..... | 16 | 16 | .09 |
| Feed-lever spring..... | 8 | 8 | .14 |
| Spare parts for belts: | | | |
| Brass strip, long..... | 96 | 96 | .01 |
| Brass strip, short..... | 96 | 96 | .01 |
| Eyelets..... | 400 | 400 | .05 |

¹ Per 100.

TABLE 7.—ORDNANCE PROPERTY—BLACKSMITH'S AND SADDLER'S TOOLS.
[Issued with either the model equipment or the new model equipment.]

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A." | | | | | | |
| BLACKSMITH'S TOOLS. | | | | | | |
| Class X, section g. | | | | | | |
| Anvil, 34 pounds..... | | 1 | | 1 | 2 | \$7.00 |
| Apron, blacksmith's..... | | 1 | | 1 | 2 | 2.10 |
| Box, shoeing, leather..... | | 1 | | 1 | 2 | 2.05 |
| Chisel, handled, for cold iron, 1 pound 6 ounces..... | | 1 | | 1 | 2 | .22 |
| Clinch cutter..... | | 1 | | 1 | 2 | 1.82 |
| Clinching iron..... | | 1 | | 1 | 2 | .68 |
| Creaser, steel handled..... | | 1 | | 1 | 2 | 3.20 |
| File, 12-inch, second cut..... | | 1 | | 1 | 2 | .15 |
| File, 8-inch, 3-square taper..... | | 1 | | 1 | 2 | .10 |
| Fire rake..... | | 1 | | 1 | 2 | .26 |
| Fire shovel..... | | 1 | | 1 | 2 | 1.07 |
| Hammers: | | | | | | |
| Rounding, 2-pound, 14-inch handle..... | | 1 | | 1 | 2 | 1.20 |
| Shoeing, 10-ounce..... | | 1 | | 1 | 2 | .38 |
| Handles, cold chisel, spare..... | | 2 | | 2 | 4 | .08 |
| Hardie, $\frac{1}{8}$ -inch shank, 1-inch bit..... | | 1 | | 1 | 2 | .08 |

TABLE 7.—ORDNANCE PROPERTY—BLACKSMITH'S AND SADDLER'S TOOLS—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A."—Continued. | | | | | | |
| BLACKSMITH'S TOOLS—continued. | | | | | | |
| <i>Class X, section 9—Continued.</i> | | | | | | |
| Nipper, cutting, 14-inch..... | | 1 | | 1 | 2 | \$1.05 |
| Pritchel, $\frac{1}{8}$ -inch flats, 9-inch..... | | 1 | | 1 | 2 | .54 |
| Schaller forge..... | | 1 | | 1 | 2 | 98.00 |
| Schaller forge tool chest..... | | 1 | | 1 | 2 | 38.26 |
| Shoeing knife..... | | 1 | | 1 | 2 | .25 |
| Shoeing pincers, 14-inch..... | | 1 | | 1 | 2 | 1.00 |
| Shoeing rasp, 16-inch..... | | 1 | | 1 | 2 | .38 |
| Tongs, horseshoer's, 18.5-ounce..... | | 1 | | 1 | 2 | .28 |
| Tool kit for Schaller forge..... | | 1 | | 1 | 2 | 6.80 |
| Vise, 2.5-inch jaws..... | | 1 | | 1 | 2 | 1.10 |
| Whetstone, 10-inch..... | | 1 | | 1 | 2 | .12 |
| Wrench, screw, 8-inch..... | | 1 | | 1 | 2 | .36 |
| SADDLER'S TOOLS. | | | | | | |
| <i>Class X, section 9.</i> | | | | | | |
| Awl blades, harness, assorted, Nos. 43 to 48..... | | 12 | | 12 | 24 | .02 |
| Awls, pegging..... | | 1 | | 1 | 2 | .02 |
| Awls, seat, handled..... | | 1 | | 1 | 2 | .15 |
| Carriages, pricking, 3 wheels..... | | 1 | | 1 | 2 | 1.25 |
| Compasses, 6-inch..... | | 1 | | 1 | 2 | .58 |
| Creasers, double, lignum-vitæ..... | | 1 | | 1 | 2 | .23 |
| Edge tools, No. 1..... | | 1 | | 1 | 2 | .15 |
| Edge tools, No. 2..... | | 1 | | 1 | 2 | .15 |
| Extra blades, with followers for draw gage..... | | 2 | | 2 | 4 | .08 |
| Gages, draw, brass..... | | 1 | | 1 | 2 | 1.60 |
| Hammers, No. 3, riveting..... | | 1 | | 1 | 2 | .40 |
| Hafts, awl, patent, with wrench..... | | 2 | | 2 | 4 | .41 |
| Handles, peg, awl, with wrench..... | | 1 | | 1 | 2 | .07 |
| Knives, round..... | | 1 | | 1 | 2 | .82 |
| Knives, splitting..... | | 1 | | 1 | 2 | 3.42 |
| Needle cases, leather..... | | 1 | | 1 | 2 | .26 |
| Needles, Glover's, No. 3, papers..... | | 1 | | 1 | 2 | .08 |
| Needles, harness: | | | | | | |
| No. 4, papers..... | | 2 | | 2 | 4 | .05 |
| No. 5, papers..... | | 2 | | 2 | 4 | .05 |
| No. 6, papers..... | | 2 | | 2 | 4 | .05 |
| Nippers, cutting, 10-inch..... | | 1 | | 1 | 2 | 2.95 |
| Oilstone, unmounted..... | | 1 | | 1 | 2 | .36 |
| Pliers, 6-inch..... | | 1 | | 1 | 2 | .55 |

INFANTRY UNIT ACCOUNTABILITY EQUIPMENT MANUAL. 1843

TABLE 7.—ORDNANCE PROPERTY—BLACKSMITH'S AND SADDLER'S TOOLS—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|------------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "A"—Continued. | | | | | | |
| SADDLER'S TOOLS—continued. | | | | | | |
| <i>Class X, section 9—Continued.</i> | | | | | | |
| Punches, revolving, 4 tubes..... | | 1 | | 1 | 2 | \$1.00 |
| Punches, round, hand, Nos. 5, 7, 8, and 10.... | | 4 | | 4 | 8 | (¹) |
| Rivet sets..... | | 1 | | 1 | 2 | .52 |
| Rule, boxwood, 2-foot, 4-fold..... | | 1 | | 1 | 2 | .26 |
| Screw drivers, 3-inch blade..... | | 1 | | 1 | 2 | .09 |
| Sewing palms, leather..... | | 1 | | 1 | 2 | .68 |
| Shears, 10-inch, bent trimmers..... | | 1 | | 1 | 2 | .85 |
| Shoe knives, broad point..... | | 1 | | 1 | 2 | .25 |
| Shoe knives, square point..... | | 1 | | 1 | 2 | .18 |
| Slickers, steel..... | | 1 | | 1 | 2 | .42 |
| Stitching clamps..... | | 1 | | 1 | 2 | 3.00 |
| Stitching horses..... | | 1 | | 1 | 2 | 8.95 |
| Thimbles, best aluminum-lined steel..... | | 2 | | 2 | 4 | .04 |
| Tool bags, saddler's..... | | 1 | | 1 | 2 | 13.25 |
| Tools, claw..... | | 1 | | 1 | 2 | .31 |

¹ No. 5, 16 cents; Nos. 7, 8, and 10, each, 19 cents.

Note. The blacksmith's and saddler's tools issued to the supply company are for use by the headquarters company also.

TABLE 8.—ORDNANCE PROPERTY.

| Articles. | Enlisted strength. | | | | | Unit price. |
|--|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "B." | | | | | | |
| <i>Class VII, section 1.</i> | | | | | | |
| Cleaning rod, barracks... | 18 | | 3 | 1 | 220 | \$0.14 |
| <i>Class X, section 1.</i> | | | | | | |
| Arm locker, model of 1903 rifle..... | 1 | | 1 | 1 | 14 | 9.00 |
| Arm locker, automatic pistol, cal. 45..... | | 1 | | | 1 | 6.50 |

TABLE 8.—ORDNANCE PROPERTY—Continued.

| Articles. | Enlisted strength. | | | | | Unit price. |
|---|--------------------|----------------------|------------------------|-----------------|----------------------|-------------|
| | 150 | 74 | 58 | 10 | 1,942 | |
| | Company. | Machine-gun company. | Head-quarters company. | Supply company. | Regiment, total for. | |
| EQUIPMENT "B." continued. | | | | | | |
| Class X, section 5. | | | | | | |
| Marking outfit, for stamping leather ¹ | | 1 | (²) | | ³ 2 | \$3.22 |
| Marking outfit, for stamping metal ¹ | 1 | 1 | (²) | | ³ 14 | 4.39 |
| Seal stamp ¹ | 1 | 1 | 1 | | 14 | 2.10 |
| Stencil outfit ¹ | 1 | 1 | (²) | | ³ 14 | 1.94 |
| Class X, section 9. | | | | | | |
| Arm repair chest, complete, model of 1910 ⁴ .. | 1 | | (²) | | ⁵ 13 | 57.54 |

¹ When a regiment is in the field these articles, except those pertaining to Equipment "A" of the headquarters company, are left in the storehouse.

² One of each carried in Equipment "A" of headquarters company. See Table 3, p. 1827, and Table 4, p. 1832.

³ One carried in Equipment "A" of headquarters company, see pp. 1827 and 1832. A stencil outfit consists of 1 chest, at 47 cents; 1 stencil brush, at 11 cents; 1 box of stencil paste, at 10 cents; 1 set of letters, $\frac{1}{4}$ -inch, A to Z, character "&", and period, each letter 1 cent, 28 cents; 1 set of figures, $\frac{1}{4}$ -inch, 0 to 9, inclusive, each figure 1 cent, 10 cents; 4 end pieces, $\frac{1}{2}$ -inch, 1 cent each, 4 cents; 1 set of letters, 1-inch, A to Z, character "&," and period, each, letter 2 cents, 56 cents; 1 set of figures, 1-inch, 0 to 9, inclusive, each figure 2 cents, 20 cents; 4 end pieces, 1-inch, 2 cents each, 8 cents.

⁴ For companies equipped with new-model equipment. When a regiment is in the field 3 of these arm repair chests are carried with Equipment "A" of the headquarters company for use of each battalion, the balance of the arm repair chests to be left in the storehouse.

⁵ Carried in Equipment "A" of headquarters company. See Table 4, p. 1833.

PART II.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS.

ORDNANCE PROPERTY.

Individual sets of arms and equipments are prescribed as follows:

Note: The tables below show the equipment for use with the .45-caliber pistol. In case organizations are equipped with the .38- or .45-caliber revolver instead of the .45-caliber pistol, substitute for the articles of pistol equipment the corresponding articles of revolver equipment, as follows:

| Articles of Pistol Equipment. | Corresponding Articles of Revolver Equipment. |
|--|--|
| 21 cartridges, ball, pistol, caliber .45 | 20 cartridges, ball, revolver, caliber .38 or .45. |
| 1 pistol. | 1 revolver. |
| 1 pistol holster. | 1 revolver holster. |
| 1 pistol belt, without saber ring. | 1 revolver cartridge belt, without. |
| 2 magazines, pistol, extra. | saber ring. |
| 1 magazine pocket, web, double. | |

1. OLD MODEL EQUIPMENT.

(a) For sergeants major, regimental supply sergeants, color sergeants, and also the first sergeant of supply company:

| | |
|---|------------------------------------|
| 1 blanket-roll straps, set (4) (if dis- | 1 knife. |
| mounted). | 2 magazines, pistol, extra. |
| 1 canteen, Cavalry. | 1 meat can. |
| 1 canteen strap, Cavalry (if mounted). | 1 pistol. |
| 2 canteen-haversack straps (if dis- | 1 pistol belt, without saber ring. |
| mounted). | 1 pistol holster. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pouch for first-aid packet. |
| 1 cup | 1 spoon. |
| 1 fork. | 1 spurs, pair (if mounted). |
| 1 haversack (if dismounted). | 1 spur straps, set (if mounted). |

(b) For mounted orderlies (privates of headquarters company) and corporal of supply company:

| | |
|---|--|
| 1 brush and thong. ¹ | 1 magazine pocket, web, double. |
| 1 canteen, Cavalry. | 1 meat can. |
| 1 canteen strap, Cavalry. | 1 oiler and thong case. ¹ |
| 90 cartridges, ball, caliber .30. | 1 pistol. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pistol holster. |
| 1 cartridge belt, caliber .30, Cavalry. | 1 pouch for first-aid packet. |
| 1 cartridge-belt suspenders, pair. | 1 rifle scabbard. |
| 1 cup. | 1 spoon. |
| 1 fork. | 1 spurs, pair. |
| 1 front-sight cover. | 1 spur straps, set. |
| 1 gun sling. | 1 United States rifle, caliber .30. |
| 1 knife. | 1 wire cutter. } For mounted |
| 2 magazines, pistol, extra. | 1 wire-cutter carrier. } orderlies only. |

¹To be omitted if rifle is provided with spare-part container.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(c) For members of machine-gun company:

| | |
|--|------------------------------------|
| 1 blanket-roll straps, set (4) (if dis-mounted). | 1 knife. |
| 1 bolo. | 2 magazines, pistol, extra. |
| 1 bolo scabbard. | 1 meat can. |
| 1 canteen, Cavalry. | 1 pistol. |
| 1 canteen strap, Cavalry (if mounted). | 1 pistol belt, without saber ring. |
| 2 canteen-haversack straps (if dis-mounted). | 1 pistol holster. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pouch for first-aid packet. |
| 1 cup. | 1 spoon. |
| 1 fork. | 1 spurs, pair (if mounted). |
| 1 haversack (if dismounted). | 1 spur straps, set (if mounted). |
| | 1 wire cutter. |
| | 1 wire-cutter carrier. |
| | } For certain designated members. |

(d) For mess sergeants, supply sergeants, sergeants, corporals, cooks, mechanics, and privates of a company; mess sergeants, supply sergeants, stable sergeants, cooks, and horseshoers of headquarters company; and mess sergeants, stable sergeants, cooks, saddlers and horseshoers of supply company:

| | |
|--|--------------------------------------|
| 1 blanket-roll straps, set (4). | 1 front-sight cover. |
| 1 bayonet. | 1 gun sling. |
| 1 bayonet scabbard. | 1 haversack. |
| 1 brush and thong. ^a | 1 knife. |
| 1 canteen, Infantry. ^a | 1 meat can. |
| 90 cartridges, ball, caliber .30. | 1 oiler and thong case. ^a |
| 1 cartridge belt, caliber .30, Infantry. | 1 pouch for first-aid packet. |
| 1 cartridge-belt suspenders, pair. | 1 spoon. |
| 1 cup. | 1 United States rifle, caliber .30. |
| 1 fork. | |

(e) For first sergeants and members of bands of headquarters company and first sergeants and buglers of a company:

| | |
|---|---|
| 1 blanket-roll straps, set (4). | 1 meat can. |
| 1 canteen, Cavalry. | 1 pistol. |
| 2 canteen-haversack straps. | 1 pistol belt, without saber ring. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pistol holster. |
| 1 cup. | 1 pouch for first-aid packet. |
| 1 fork. | 1 rule, 2-foot (for first sergeants of company only). |
| 1 haversack. | 1 spoon. |
| 1 knife. | |
| 2 magazines, pistol, extra. | |

(f) For company buglers, in addition to (e):

| | |
|----------------|------------------------|
| 1 wire cutter. | 1 wire-cutter carrier. |
|----------------|------------------------|

(g) Horse equipment for each man mounted on a horse:

| | | |
|------------------------------------|--|---------------------|
| 1 bridle, curb, model of 1902, and | } or 1 bridle, Cavalry, model of 1909. | 1 horse brush. |
| 1 bridle, watering | | 1 lariat. |
| 1 currycomb. | | 1 lariat strap. |
| 1 feed bag | } or 1 nose bag. | 1 link. |
| and | | 1 picket pin. |
| 1 grain bag | | 1 saddlebags, pair. |
| 1 halter headstall. | | 1 saddle blanket. |
| 1 halter tie rope. | | 1 saddle, Cavalry. |
| | | 1 surcingle. |

^aTo be omitted if rifle is provided with spare-part container.^aThe canteen, tin, with canteen strap, web, or canteen, model of 1910, and dismounted cover, may be issued.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(h) Horse equipment for each man mounted on a mule.

| | |
|---------------------------------|---------------------|
| 1 currycomb. | 1 lariat strap. |
| 1 feed bag | 1 link. |
| and | 1 picket pin. |
| 1 grain bag } or 1 nose bag. | 1 saddle, mule. |
| | 1 saddlebags, pair. |
| 1 halter bridle, model of 1910. | 1 saddle blanket. |
| 1 horse brush. | 1 surcingle. |
| 1 lariat. | |

(i) Equipment of ammunition mule for Benét Mercié machine gun, caliber .30, model of 1909:

| | |
|--|-----------------------|
| 1 aparejo. | 1 pack frame. |
| 1 aparejo cincha. | 2 ammunition hangers. |
| 1 blinder. | 1 currycomb. |
| 1 corona. | 1 feed bag. |
| 1 crupper. | 1 grain bag. |
| 1 halter bridle, with leather or rope reins. | 1 horse brush. |
| 1 saddle blanket | 6 ammunition boxes. |
| 1 sobrejalma. | 60 feed strips. |
| | 6 thongs. |

(j) Equipment of gun mule for Benét Mercié machine gun, caliber .30, model of 1909:

| | |
|--------------------------------------|-----------------------------------|
| 1 aparejo. | 1 grain bag. |
| 1 aparejo cincha. | 1 horse brush. |
| 1 blinder. | 4 ammunition boxes. |
| 1 corona. | 40 feed strips. |
| 1 crupper. | 1 rifle. |
| 1 halter bridle, with leather reins. | 1 rifle case. |
| 1 saddle blanket. | 1 spare barrel.* |
| 1 sobrejalma. | 1 spare-barrel case.* |
| 1 pack frame. | 1 gunner's pouch, with contents.* |
| 1 rifle hanger. | 1 cooling sponge.* |
| 1 ammunition hanger. | 1 cooling-sponge cover.* |
| 1 currycomb. | 1 latigo strap. |
| 1 feed bag. | 6 thongs. |

(k) Equipment for ammunition mule, Maxim automatic machine gun, model of 1904:

| | |
|--|-----------------------|
| 1 aparejo. | 2 ammunition hangers. |
| 1 aparejo cincha. | 1 pack frame. |
| 1 blinder. | 6 thongs. |
| 1 corona. | 6 ammunition boxes. |
| 1 crupper. | 6 cartridge belts. |
| 1 halter bridle, with leather or rope reins. | 1 feed bag. |
| 1 saddle blanket. | 1 grain bag. |
| 1 sobrejalma. | 2 water boxes. |

(1). Equipment for gun mule, Maxim automatic gun, model of 1904:

| | |
|-------------------------------------|------------------|
| 1 aparejo. | 1 sobrejalma. |
| 1 aparejo cincha. | 1 gun case. |
| 1 blinder. | 1 gun hanger. |
| 1 corona. | 1 pack frame. |
| 1 crupper. | 6 thongs. |
| 1 halter bridle, with leather rein. | 1 tripod hanger. |
| 1 saddle blanket. | |

*Not carried by spare-gun mule.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(m) For men armed with rifle:

| | |
|---------------------|--------------------------|
| 1 cleaning rod. | } For every 8 rifles. |
| 1 cleaning-rod case | |
| 1 screw driver | |

(n) For each squad of a company:

| | | | |
|--------------------------|------------------------------------|------------------------|---------------------------------|
| 1 hand ax or | } To be carried by privates. | 4 shovels. | } To be carried by privates. |
| 1 bolo | | 4 shovel carriers. | |
| 1 hand ax carrier or | | 1 wire cutter. | } To be carried by corporal. |
| 1 bolo scabbard | | 1 wire-cutter carrier. | |
| 2 pick mattocks. | } To be carried by privates. | | |
| 2 pick-mattock carriers. | | | |

Each odd-numbered squad of a company will have:

| | |
|------------|------------------|
| 1 bolo and | 1 bolo scabbard. |
|------------|------------------|

Each even-numbered squad of a company will have:

| | |
|---------------|--------------------|
| 1 hand ax and | 1 hand-ax carrier. |
|---------------|--------------------|

(t) For wagoner (Infantry) with each authorized wagon of field and combat train:

| | |
|---------------------------------|---|
| 1 blanket-roll straps, set (4). | 1 meat can. |
| 1 canteen, Cavalry. | 1 pistol. |
| 2 canteen-haversack straps. | 21 cartridges, ball, pistol, caliber .45. |
| 1 cup. | 1 pistol belt, without saber ring. |
| 1 fork. | 1 pistol holster. |
| 1 haversack. | 1 pouch for first-aid packet. |
| 1 knife. | 1 spoon. |
| 2 magazines, pistol, extra. | |

2. NEW-MODEL EQUIPMENT (1910).

(a) For sergeants major, regimental supply sergeants, color sergeants, and also the first sergeant of supply company:

| | |
|---|------------------------------------|
| 1 can, bacon. | 1 meat can. |
| 1 can, condiment. | 1 pack carrier (if dismounted). |
| 1 canteen. | 1 pistol belt, without saber ring. |
| 1 canteen cover, dismounted. | 1 pistol. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pistol holster. |
| 1 cup. | 1 pouch for first-aid packet. |
| 1 fork. | 1 spoon. |
| 1 haversack (if dismounted). | 1 spurs, pair (if mounted). |
| 1 knife. | 1 spur straps, set (if mounted). |
| 2 magazines, pistol, extra. | |

(b) For mounted orderlies (privates of headquarters company) and corporal of supply company:

| | |
|------------------------------|---|
| 1 can, bacon. | 100 cartridges, ball, caliber .30. |
| 1 can, condiment. | 21 cartridges, ball, pistol, caliber .45. |
| 1 brush and thong.* | 1 cartridge belt, caliber .30 (mounted). |
| 1 canteen. | 1 cup. |
| 1 canteen cover, dismounted. | 1 fork. |

* To be omitted if rifle is provided with spare-part container.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

| | |
|----------------------------------|--------------------------------------|
| 1 front-sight cover. | 1 pouch for first-aid packet. |
| 1 gun sling. | 1 rifle scabbard. |
| 1 knife. | 1 spoon. |
| 2 magazines, pistol, extra. | 1 spurs, pair. |
| 1 magazine pocket, web, double.* | 1 spur straps, set. |
| 1 meat can. | 1 United States rifle, caliber .30. |
| 1 oiler and thong case.† | 1 wire cutter. |
| 1 pistol. | 1 wire-cutter carrier. } For mounted |
| 1 pistol holster. | orderlies only. |

(c) For members of machine-gun company:

| | |
|---|--------------------------------------|
| 1 can, bacon. | 1 meat can. |
| 1 can, condiment. | 1 pack carrier (if dismounted). |
| 1 bolo. | 1 pistol. |
| 1 bolo scabbard. | 1 pistol belt, without saber ring. |
| 1 canteen. | 1 pistol holster. |
| 1 canteen cover, dismounted. | 1 pouch for first-aid packet. |
| 21 cartridges, ball, pistol, caliber .45. | 1 spoon. |
| 1 cup. | 1 spurs, pair (if mounted). |
| 1 fork. | 1 spur straps, set (if mounted). |
| 1 haversack (if dismounted). | 1 wire cutter. |
| 1 knife. | 1 wire-cutter carrier. } For certain |
| 2 magazines, pistol, extra. | designated members. |

(d) For mess sergeants, supply sergeants, sergeants, corporals, cooks, mechanics, and privates of a company; mess sergeants, supply sergeants, stable sergeants, sergeants, cooks, and horseshoers of headquarters company; and mess sergeants, stable sergeants, cooks, saddlers, and horseshoers of supply company:

| | |
|---|-------------------------------------|
| 1 can, bacon. | 1 fork. |
| 1 can, condiment. | 1 front-sight cover. |
| 1 bayonet. | 1 gun sling. |
| 1 bayonet scabbard. | 1 haversack. |
| 1 brush and thong.* | 1 knife. |
| 1 canteen. | 1 meat can. |
| 1 canteen cover, dismounted. | 1 oiler and thong case.† |
| 100 cartridges, ball, caliber .30. | 1 pack carrier. |
| 1 cartridge belt, caliber .30 (dismounted). | 1 pouch for first-aid packet. |
| 1 cup. | 1 spoon. |
| | 1 United States rifle, caliber .30. |

(e) For first sergeants and members of bands of headquarters company and first sergeants and buglers of a company:

| | |
|---|---|
| 1 can, bacon. | 1 meat can. |
| 1 can, condiment. | 1 pack carrier. |
| 1 canteen. | 1 pistol. |
| 1 canteen cover, dismounted. | 1 pistol holster. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pistol belt, without saber ring. |
| 1 cup. | 1 pouch for first-aid packet. |
| 1 fork. | 1 spoon. |
| 1 haversack. | 1 steel tape, 5-foot (for first sergeants of company only). |
| 1 knife. | |
| 2 magazines, pistol, extra. | |

* Issued only if the cartridge belt, caliber .30, mounted, is provided with revolver cartridge pockets.

† To be omitted if rifle is provided with spare-part container.

* To be omitted if rifle is provided with spare-part container.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(f) For company buglers, in addition to (e):

1 wire cutter.

1 wire-cutter carrier.

(g) Horse equipment for each man mounted on horse:

| | | |
|--|--|---------------------|
| 1 bridle, curb, model of 1902, and | } or 1 bridle, Cav- alry, model of 1909. | 1 horse brush. |
| 1 bridle, watering, | | 1 lariat. |
| 1 currycomb. | | 1 lariat strap. |
| 1 feed bag | } or 1 nose bag. | 1 link. |
| and | | 1 picket pin. |
| 1 grain bag | | 1 saddlebags, pair. |
| 1 halter headstall. | | 1 saddle blanket. |
| 1 halter tie rope. | | 1 saddle, Cavalry. |
| | | 1 surcingle. |

(h) Horse equipment for each man mounted on a mule:

| | | |
|---------------------------------|----------------|---------------------|
| 1 currycomb. | | 1 link. |
| 1 feed bag | } or nose bag. | 1 picket pin. |
| 1 grain bag | | 1 saddle, mule. |
| 1 halter bridle, model of 1910. | | 1 saddlebags, pair. |
| 1 horse brush. | | 1 saddle blanket. |
| 1 lariat. | | 1 surcingle. |
| 1 lariat strap. | | |

(i) Equipment of ammunition mule, Benét Mercié machine gun, caliber .30, model of 1909:

| | |
|---|-----------------------|
| 1 aparejo. | 1 pack frame. |
| 1 aparejo cincha. | 2 ammunition hangers. |
| 1 blinder. | 1 currycomb. |
| 1 corona. | 1 feed bag. |
| 1 crupper. | 1 grain bag. |
| 1 halter bridle, with leather or rope reins. | 1 horse brush. |
| 1 saddle blanket. | 6 ammunition boxes. |
| 1 sobrejalma. | 60 feed strips. |
| | 6 thongs. |

(j) Equipment of gun mule, Benét Mercié machine gun, caliber .30, model of 1909:

| | |
|--------------------------------------|-----------------------------------|
| 1 aparejo. | 1 grain bag. |
| 1 aparejo cincha. | 1 horse brush. |
| 1 blinder. | 4 ammunition boxes. |
| 1 corona. | 40 feed strips. |
| 1 crupper. | 1 rifle. |
| 1 halter bridle, with leather reins. | 1 rifle case. |
| 1 saddle blanket. | 1 spare barrel.* |
| 1 sobrejalma. | 1 spare-barrel case.* |
| 1 pack frame. | 1 gunner's pouch, with contents.* |
| 1 rifle hanger. | 1 cooling sponge.* |
| 1 ammunition hanger. | 1 cooling-sponge cover.* |
| 1 currycomb. | 1 latigo strap. |
| 1 feed bag. | 6 thongs. |

* Not carried by spare-gun mule.

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(k) Equipment for ammunition mule, Maxim automatic machine gun, model of 1904:

| | |
|-----------------------|--|
| 6 ammunition boxes. | 1 grain bag. |
| 2 ammunition hangers. | 1 halter bridle, with leather or rope reins. |
| 1 aparejo. | 1 pack frame. |
| 1 aparejo cincha. | 1 saddle blanket. |
| 1 blinder. | 1 sobrejalma. |
| 6 cartridge belts. | 6 thongs. |
| 1 corona. | 2 water boxes. |
| 1 crupper. | |
| 1 feed bag. | |

(l) Equipment for gun mule, Maxim automatic machine gun, model of 1904:

| | |
|-------------------|--------------------------------------|
| 1 aparejo. | 1 halter bridle, with leather reins. |
| 1 aparejo cincha. | 1 pack frame. |
| 1 blinder. | 1 saddle blanket. |
| 1 corona. | 1 sobrejalma. |
| 1 crupper. | 6 thongs. |
| 1 gun case. | 1 tripod hanger. |
| 1 gun hanger. | |

(m) For men armed with rifle:

| | |
|---------------------|--------------------------|
| 1 cleaning rod | } For every 8 rifles. |
| 1 cleaning-rod case | |
| 1 screw driver | |

(n) For each squad of a company:

| | | | |
|--------------------------|------------------------------------|------------------------|---------------------------------|
| 1 hand ax or | } To be carried by privates. | 4 shovels. | } To be carried by privates. |
| 1 bolo | | 4 shovel carriers. | |
| 1 hand-ax carrier or | | 1 wire cutter. | } To be carried by corporal. |
| 1 bolo scabbard. | | 1 wire-cutter carrier. | |
| 2 pick mattocks. | } To be carried by privates. | | |
| 2 pick-mattock carriers. | | | |

Each odd-numbered squad of a company will have:

| | |
|------------|------------------|
| 1 bolo and | 1 bolo scabbard. |
|------------|------------------|

Each even-numbered squad of a company will have:

| | |
|---------------|--------------------|
| 1 hand ax and | 1 hand-ax carrier. |
|---------------|--------------------|

(t) For wagoner (Infantry) with each authorized wagon of field and combat train:

| | |
|---|------------------------------------|
| 1 can, bacon. | 2 magazines, pistol, extra. |
| 1 can, condiment. | 1 meat can. |
| 1 canteen. | 1 pack carrier. |
| 1 canteen cover, dismounted. | 1 pistol. |
| 21 cartridges, ball, pistol, caliber .45. | 1 pistol holster. |
| 1 cup. | 1 pistol belt, without saber ring. |
| 1 fork. | 1 pouch for first-aid packet. |
| 1 haversack. | 1 spoon. |
| 1 knife. | |

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

(o) For officers entitled to horse equipment (paragraph 1520, Army Regulations of 1913): "

| | |
|---|---|
| 1 bridle, Cavalry. | 1 link. |
| 1 bridle, watering (issued only with curb bridle, model of 1902). | 1 picket pin. |
| 1 currycomb. | 1 saber straps, pair. |
| 1 feed bag. | 1 saddle (McClellan or Whitman). |
| 1 grain bag. | 1 saddlebags, pair. |
| 1 halter headstall. | 1 saddle blanket. |
| 1 halter tie rope. | 2 saddlecloths, with insignia, officers'. |
| 1 horse brush. | 1 spurs, pair. |
| 1 lariat. | 1 spur straps, russet, set. |
| 1 lariat strap. | 1 spur straps, black, set. |
| | 1 surcingle. |

(p) Pistol equipment for use of officers under A. R. 1522: "

| | |
|------------------------------|---------------------------------|
| 21 cartridges, ball, pistol. | 1 pistol holster. |
| 2 magazines, pistol, extra. | 1 pistol belt, with saber ring. |
| 1 pistol. | |

Note: The above equipments are for use with the .45-caliber pistol. In case organizations are equipped with .38 or .45 caliber revolvers substitute for the articles of pistol equipment the corresponding articles of revolver equipment as follows:

(q) Revolver equipment for use of officers under A. R. 1522: "

| | |
|--------------------------------|----------------------------|
| 20 cartridges, ball, revolver. | 1 revolver holster. |
| 1 revolver. | 1 revolver cartridge belt. |

Note: The sets of officers' horse equipments, pistol or revolver equipment on hand, and also all individual equipment units retained on hand for additional men, will, in each case, be briefly reported (in the space provided for the purpose), on page 2 of the return—Form No. 451, A. G. O.—as so many sets, followed by the letters (a), (b), (c), etc., given in this manual to designate the unit, after the following manner:

| | |
|-------------|-------------|
| 7 sets (a). | 3 sets (p). |
| 7 sets (e). | 3 sets (q). |
| 3 sets (o). | |

Each set of horse or pistol equipment provided for use of officers, and each set of individual equipment obtained on account of additional men, should be complete and consist of only the articles enumerated in this manual as the unit for the set indicated by the letter.

If at any time the number of rifles, gun slings, cartridge belts, and cartridge-

" Articles held on unit accountability under the provisions of paragraph 1520, A. R., 1913, will be limited to those shown under (o). The additional equipment (halter headstall and halter tie rope), authorized by orders where an officer below the grade of major has provided himself with two mounts, will be obtained on memorandum receipt from the post ordnance officer or ordnance supply officer, by the officers individually concerned.

" Organization commanders may keep on hand a sufficient number of sets of these articles to meet the provisions of paragraph 1522, A. R., 1913. Articles held under the provisions of this paragraph will be limited to those shown under (p) or (q).

TABLE 14.—SETS OF INDIVIDUAL ARMS AND EQUIPMENTS—Continued.

belt suspenders on hand pertaining to the regular unit accountability equipment of the organization is not sufficient to meet the provisions of paragraph 1522, A. R., 1913, then such stores should be drawn by the individual officers requiring the use of them from the post ordnance officer or ordnance supply officer, under memorandum receipt. Rifles, gun slings, cartridge belts, and cartridge-belt suspenders drawn by officers under paragraph 1522, A. R., are for garrison use only; therefore, when an officer to whom any of these articles have been issued under this authority departs for service in the field he will, before leaving the post turn in all of them to the ordnance officer from whom he held them on memorandum receipt.

The small-arms ammunition drawn by officers under paragraph 1522, A. R., 1913, for expenditure in authorized target practice, will be taken from the ammunition which is held by organization commanders under memorandum receipt from the supply officer, as authorized by paragraph 6, G. O., No. 52, W. D., 1915.

ENGINEER PROPERTY.

- (a) For sergeants of a company:

1 compass, watch.

SIGNAL PROPERTY.

- (a) For headquarters company:

For mounted orderlies of regimental and battalion commanders—

4 glasses, field, type EE.

16 kits, flag, combination, standard.

For regimental and battalion sergeants major—

4 kits, Artillery, signal.

- (b) For machine-gun company:

2 glasses, field, type C.

4 glasses, field, type EE (or type A or B).

For signalman—

3 kits, flag, combination, standard.

- (c) For company buglers—

For company buglers—

2 glasses, field, type A (or type B).

2 kits, flag, combination, Infantry.

For first sergeant and two sergeants—

3 glasses, field, type EE.

PART III.

GARRISON EQUIPMENT.¹ HELD ON MEMORANDUM RECEIPT—NOT PART OF UNIT ACCOUNTABILITY EQUIPMENT.

TABLE 15.—ORDNANCE PROPERTY.

| Articles. | Enlisted strength. | | | | | Philip- pine Scouts. ² | Unit price. |
|---|--------------------|-----------------------------|-------------------------------|--------------------|------------------------------|---|----------------|
| | 150 | 74 | 58 | 10 | 1,942 | | |
| | Com- pany. | Machine- gun company. | Head- quarters company. | Supply company. | Regi- ment, total for. | | |
| GARRISON EQUIPMENT. | | | | | | | |
| <i>Class IV, section 1.</i> | | | | | | | |
| Arm chests for Benét Mercié machine gun, cal. .30, model of 1909 (C. M.) ³ | | 2 | | | 2 | | \$19.80 |
| Arm chest for Maxim automatic machine gun (C. M.) ⁴ | | 4 | | | 4 | | 19.80 |
| <i>Class VII, section 1.</i> | | | | | | | |
| Brushes and thongs (C. M.)..... | 1 | 75 | | | 87 | | .10 |
| Cleaning rods, barrack (C. M.)..... | | 10 | | | 10 | | .14 |
| Drift slides (C. M.)..... | 58 | 30 | 10 | 2 | 738 | | .10 |
| Front-sight covers (C. M.)..... | | 74 | | | 74 | | .03 |
| Oiler and thong cases (C. M.)..... | 1 | 75 | | | 87 | | .18 |
| Rifles, gallery practice, with appendages (C. M.)..... | 8 | 4 | | | 100 | | 15.45 |
| Rifles, U. S., cal. .30, model of 1903 (C. M.)..... | | 74 | | | 74 | | 15.00 |
| Rifles, U. S., with Maxim silencer (C. M.)..... | 1 | 1 | | | 13 | | 22.75 |
| Screw drivers, rifle (C. M.)..... | | 10 | | | 10 | | .12 |
| <i>Class VII, section 2.</i> | | | | | | | |
| Magazines, pistol, extra (C. M.) ⁵ | 20 | | 8 | 4 | 252 | | .52 |
| Pistols, cal. .45 (C. M.) ⁶ | 10 | | 4 | 2 | 126 | | 12.50 |
| <i>Class VII, section 5.</i> | | | | | | | |
| N. C. S. O. saber and scabbard (C. M.)..... | 1 | 1 | 7 | 4 | 24 | | * 6.00 |
| N. C. S. O. sword and scabbard (C. M.) ⁷ | | | 4 | | 4 | | * 4.80 |
| <i>Class VIII, section 1.</i> | | | | | | | |
| Cartridges, dummy, cal. .30..... | 735 | | 115 | 25 | 8,820 | | *22.50 |

¹ Articles of garrison equipment marked C. M. will, so far as practicable, be held by and for the use of the organization to which originally issued. In case of permanent change of station such C. M. property will be transferred with it, by the usual exchange invoices and receipts by the supply officers concerned unless specific orders are given otherwise.

² As directed by the commanding general, Philippine Department.

³ When equipped with Benét Mercié machine guns.

⁴ When equipped with Maxim automatic machine guns.

⁵ For provost guard and like occasions for each sergeant, except such sergeants as are provided with pistols, etc., in Equipment "A."

⁶ Saber, \$3.50; scabbard, \$2.50.

⁷ For old-model equipment.

⁸ Sword, \$3.20; scabbard, \$1.60.

⁹ Per 1,000.

TABLE 15.—ORDNANCE PROPERTY—Continued.

| Articles. | Enlisted strength. | | | | | Philip- pine Scouts. | Unit price. |
|--|--------------------|-----------------------------|-------------------------------|--------------------|------------------------------|----------------------------|------------------|
| | 150 | 74 | 58 | 10 | 1,942 | | |
| | Com- pany. | Machine- gun company. | Head- quarters company. | Supply company. | Regi- ment, total for. | | |
| GARRISON EQUIPMENT— continued. | | | | | | | |
| <i>Class VIII, section 2.</i> | | | | | | | |
| Cartridges, ball, pistol, cal. .45 ¹ | 210 | ..... | 84 | 42 | 2,646 | ..... | \$14.50 |
| <i>Class IX, section 1.</i> | | | | | | | |
| Belts, garrison, band, model of 1910 (C. M.)..... | 2 | ..... | 28 | ..... | 52 | ..... | .85 |
| Belts, garrison, enlisted men's, model of 1910 (C. M.)..... | 147 | ..... | 7 | 5 | 1,776 | ..... | 1.99 |
| Belts, garrison, for mounted scouts, machine-gun com- pany, and corporal of supply company, model of 1910 (C. M.)..... | ..... | 73 | 16 | 1 | 90 | ..... | .85 |
| Belts, garrison, N. C. S. O., model of 1910 (C. M.)... | 1 | 1 | 7 | 4 | 24 | ..... | 2.71 |
| Cartridgeboxes, McKeever, cal. .30 (C. M.) ² | 147 | ..... | 23 | 5 | 1,792 | ..... | 1.99 |
| Waist belt (C. M.) ³ | 147 | ..... | 23 | 5 | 1,792 | ..... | .93 |
| Waist belt adapter (C. M.) ³ | 147 | ..... | 23 | 5 | 1,792 | ..... | .06 |
| Waist belt, N. C. S. O. (C. M.) ³..... | ..... | ..... | 4 | ..... | 4 | ..... | 1.45 |
| Waist belt, Infantry, band (C. M.) ³..... | ..... | ..... | 28 | ..... | 2 | ..... | 1.39 |
| <i>Class IX, section 2.</i> | | | | | | | |
| Pistol holsters, cal. .45 (C. M.) ³ | 10 | ..... | 4 | 2 | 12 | ..... | 1.56 |
| Saber knots (C. M.)..... | 1 | 1 | 7 | 4 | 2 | ..... | .85 |
| <i>Class IX, section 3.</i> | | | | | | | |
| Pistol belts without saber ring (C. M.) ¹ | 10 | ..... | 4 | 2 | 126 | ..... | 2.10 |
| <i>Class IX, section 5.</i> | | | | | | | |
| Halter chains (C. M.)..... | ..... | 23 | 25 | 7 | 55 | ..... | .69 |
| Horse covers (C. M.) ⁴..... | ..... | ..... | ..... | ..... | ..... | ..... | (⁶) |
| Saber straps, pairs (C. M.)..... | ..... | ..... | 4 | 4 | 8 | ..... | .46 |
| <i>Class X, section 1.</i> | | | | | | | |
| Arm racks, rifle and pistol.. | 8 | 4 | 2 | 1 | 103 | ..... | 14.50 |
| Arm racks, pistol..... | ..... | ..... | 1 | ..... | 1 | ..... | 32.75 |

¹ For provost guard and like occasions for each sergeant, except such sergeants as are provided with pistols, etc., in Equipment "A."

² Per 1,000.

³ For old-model equipment.

⁴ To be kept on hand in organizations only where climatic conditions may require their use, 1 for each horse, including officers' mounts.

⁵ Model of 1912 (includes surcingle), \$3.36; model of 1912, blanket lined (includes surcingle), \$8; unlined, \$5; blanket lined, \$10 (old model).

TABLE 15.—ORDNANCE PROPERTY—Continued.

| Articles. | Enlisted strength. | | | | | Philip- pine Scouts. | Unit price. |
|---|--------------------|-----------------------------|-------------------------------|--------------------|------------------------------|----------------------------|----------------|
| | 150 | 74 | 58 | 10 | 1,942 | | |
| | Com- pany. | Machine- gun company. | Head- quarters company. | Supply company. | Regi- ment, total for. | | |
| GARRISON EQUIPMENT— continued. | | | | | | | |
| <i>Class X, section 2.</i> | | | | | | | |
| Fencing outfits, Cavalry, sets (C. M.) ¹ | 4 | ..... | ..... | ..... | 48 | ..... | \$14.98 |
| Fencing outfits, Infantry, sets (C. M.) ² | 16 | ..... | ..... | ..... | 192 | ..... | 23.46 |
| <i>Class X, section 7.</i> | | | | | | | |
| Aiming devices..... | 6 | 2 | 1 | ..... | 75 | ..... | .40 |
| Recording rifle rod outfits ³ | 15 | 8 | 3 | ..... | 191 | ..... | 1.55 |
| Slide rules for determining accuracy in estimating distances..... | 1 | 1 | 1 | ..... | 14 | ..... | .80 |
| <i>Class X, section 8.</i> | | | | | | | |
| Decapping and cleaning tools, sets (C. M.) ⁴ | 1 | 1 | 1 | ..... | 14 | ..... | 4.95 |

¹ A set consists of 1 right-hand glove, \$3.10; 1 Cavalry plastron, \$4.75; 1 Cavalry mask, \$6.30; 1 singlestick, \$0.44; 1 wooden saber, \$0.39.

² A set consists of 1 pair of gloves, \$6.20; 1 Infantry plastron, \$6.20; 1 Infantry mask, \$6.46; 1 fencing musket, \$2.65; 1 fencing bayonet, \$1.95.

³ Complete with device for dummy cartridges, \$5.87.

⁴ For the components of a set of these tools, see Ordnance Pamphlet No. 1990.

Bacon and condiment chests have been discontinued as a part of the field equipment. Those on hand form part of the permanent camp equipment until the supply on hand is exhausted. (G. O. No. 3, W. D., 1915.)

In addition to the above, the necessary garrison equipment should be procured for each wagoner present with each authorized wagon of the field and combat train.

REGULATIONS FOR THE UNIFORM OF THE UNITED STATES ARMY

TO INCLUDE CHANGES 18, DECEMBER 30, 1916.

General Orders, }
No. 63. }

War Department,
Washington, May 15, 1917.

The following instructions regarding uniforms will be complied with during the continuance of war conditions:

1. The service uniform, Tables of Occasions, pages 1886-1888, for officers, and 1896, 1897, for enlisted men, Uniform Regulations, 1914, is prescribed for all occasions except as indicated to the contrary for wear at the White House, page 1895, those regulations.

2. Department commanders in the tropics may in their discretion authorize the use of the white mess jacket and the white uniform as contemplated, page 1894, Uniform Regulations.

3. The uniform as above prescribed will be worn by all officers on active duty at all times.

4. Section III, General Orders No. 49, War Department, 1917, relating to instructions regarding uniforms during the continuance of war conditions, is rescinded.

By order of the Secretary of War:

H. L. SCOTT,
Major General, Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

**War Department,
Office of the Chief of Staff,
Washington, July 22, 1914.**

The following are the regulations for the uniform of the United States Army, and the equipment of officers.

They will be referred to officially as the Uniform Regulations (abbreviated U. R.).

All regulations, in any form, heretofore published with reference to the uniform are rescinded.

By order of the Secretary of War:

**W. W. WOTHERSPOON,
Major General, Chief of Staff.**

REGULATIONS FOR THE UNIFORM OF THE UNITED STATES ARMY

PART I.

GENERAL PROVISIONS.

1. Rescinded.

2. **Additional Officers** will wear the same uniform as other officers according to the rules set forth in this order. For the insignia of corps, department, or arm of service of those not regularly assigned to organizations, see par. 24.

3. **Alaska.** All clothing, specially provided for troops stationed in Alaska, including those of the Signal Corps on duty aboard cable ships during service in Alaskan waters, will be issued gratuitously or on memorandum receipt in conformity with the recommendations of the board of officers convened pursuant to the provisions of Special Orders, No. 36, Headquarters, Western Division, February 12, 1912, as approved by the Secretary of War. (C. U. R. No. 6, Dec. 26, 1914.)

4. **Alterations, Fitting of Uniforms, Etc.** Alterations will not be made in any article of the uniform that will result in a material change from the cut prescribed for it in regulations; nor will hooks be placed on the front of the coat below the buttons. Company commanders will exercise personal supervision over the fitting of the uniforms of the men of their companies, and permit only such changes as will insure a proper fit without disturbing the general appearance of the uniform.

5. **Athletic Clothes.** Tennis, baseball, football, golf, and other athletic clothes may be worn when engaged in athletic games and sports.

6. **Band Uniforms.** Bands will wear the general uniform of their regiment or corps. Commanding officers may, from regimental or band funds (A. R. 325 and 326), add such ornaments to the full dress and the dress uniform as they may deem proper and which are not contrary to the provisions of this order. Such ornaments will not include shoulder knots, shoulder straps, officers' trouser stripes, officers' insignia of rank, or any other article specially prescribed for officers.

Drum majors of mounted bands will carry sabers. Those of dismounted bands will carry batons.

The Ordnance Department will issue to bands, without charge, waist belts of enamel leather of the color of their corps or arm of the service. The Quartermaster Corps will issue, without charge, batons, music pouches, and black lynx-skin shakos. These articles will remain the property of the United States, but will be charged in case of loss or damage.

7. **Boards of Officers** will hold their first session in such uniform as the President may prescribe. Thereafter the board will decide the uniform.

8. **Changes and Modifications in Articles of Uniform.** When changes or modifications are made in articles of clothing or equipage, issues to the Regular Army and Organized Militia of the kinds and patterns then on hand will be continued until the supply thereof is exhausted; and whenever any particular kind or size of articles of clothing or equipage that has been modified is exhausted, requisitions for that kind or size will be filled from the new pattern that may be adopted.

9. **Chaplains.** When a particular coat or vestment is required by the church to which a chaplain belongs he may wear such coat or vestment while conducting services.

10. **Civilian Clothing.**

(a) Civilian evening dress will not be worn at posts by officers belonging to the command.

(b) Enlisted Men on Pass and Furlough. Enlisted men may wear civilian clothing on furlough, and within the continental limits of the United States they may be authorized by the commanding officer to wear civilian clothing when on pass.

(c) The wearing of civilian clothing within the post by officers and enlisted men will be restricted to the time necessary in entering and leaving same. (See "Uniform to be worn in camp and garrison," par. 51.)

(d) Philippines and Other Foreign Stations. Officers stationed in the Philippines, the Hawaiian Islands, Alaska, the Panama Canal Zone, and Porto Rico are not authorized to wear civilian clothing except when leaving or returning to such countries, unless especially exempted by the Secretary of War. Officers with troops on other foreign service will be governed by the same rule.

(e) Not to be Accompanied by Parts of Uniform. When officers or enlisted men wear civilian dress, it will not be accompanied by any mark or part of the uniform, except that officers may wear service breeches and regulation leather leggings or russet-leather boots with civilian coat when riding outside of post limits and off duty. The use of the service hat and the regulation saddle-cloth by officers riding in civilian clothes is prohibited.

(f) Optional Wear of Rosettes and Buttons. Rosettes or buttons of approved pattern, to consist of ribbons of the same color as those that pertain to the several service medals and badges, are authorized for optional wear with civilian clothing on the part of those persons to whom such medals and badges have been awarded or may be awarded, in lieu of the medals or badges to which such rosettes or buttons pertain respectively.

11. **Civilians Not to Wear the Uniform.** In Alabama, Arizona, Arkansas, California, Connecticut, Florida, Georgia, Idaho, Illinois, Iowa, Maine, Maryland, Michigan, Mississippi, Missouri, Montana, New Hampshire, New Mexico, New York, North Dakota, Oklahoma, Oregon, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Washington, West Virginia, and Wisconsin it is a misdemeanor for any person not an officer or enlisted man of the United States Army, Navy, Marine Corps, National Guard, Revenue Service or Forestry Service, or inmate of a veterans' or soldiers' home to wear the uniform of the United States Army. The law does not apply to persons of the theatrical profession while actually engaged in their profession.

12. **Conformity of Articles of the Uniform and Arms and Equipments to Standard Patterns, and Publication of Descriptions and Specifications of Same.** All articles of the uniform, including garments of headgear, footgear, ornaments, insignia, buttons, decorations, and other articles herein specified, will,

with the exceptions stated in this paragraph, conform in the quality, design, and color to the sealed patterns in the office of the Quartermaster General, who will from time to time publish descriptions and specifications of such patterns. Exceptions: Officers' collars, cuffs, evening dress shirts, neckties, shirt studs, shoes, socks, and white gloves; also suspenders for officers and enlisted men.

Organization commanders and other officers may obtain copies of the Uniform Specifications upon application to the Chief, War College Division, Washington, D. C.

The articles of equipment furnished by the Ordnance Department will conform to the patterns in the office of the Chief of Ordnance, who will from time to time publish descriptions and specifications of same.

The red-cross brassards will conform to the pattern in the office of the Surgeon General.

13. Decorations, Jewelry, Etc. No decoration received from a foreign Government, and no civilian decoration or jewelry, watch chains, fobs, etc., shall appear exposed on the uniform, except that fob may be worn exposed with the special evening dress and the blue mess jacket.

14. Dental Surgeon. The uniform of dental surgeons will be the same as that prescribed for a first lieutenant of the Medical Reserve Corps, except that the letters "D. C." will replace the letters "R. C." on the caduceus (see par. 25).

15. Dignity of the Uniform. Officers, especially organization commanders, will impress upon enlisted men that the dignity of the uniform and the respect due it are best preserved when its wearers so conduct themselves as never to cast discredit upon it. Permission to wear civilian clothes when on pass should never be granted enlisted men merely as a reward for good conduct, as this would appear to discredit the uniform. Such permission should be given only when conditions indicate that it would be for the best interests of the service, and is not in violation of the provisions of these regulations.

16. Discrimination Against the Uniform a Misdemeanor in the District of Columbia, Territories, Insular Possessions, and Certain States. In the District of Columbia, in any Territory, the District of Alaska, and any insular possession of the United States, and in the States of Connecticut, Florida, Maryland, Massachusetts, Minnesota, New Hampshire, New York, Oklahoma, Pennsylvania, Rhode Island, and Wyoming, it is a misdemeanor for the proprietor, manager, or employee of a theater or other public place of entertainment or amusement to discriminate against any person lawfully wearing the uniform of the Army of the United States.

17. Evening Uniform. These uniforms will be worn by officers in the evening:

(a) In the United States, Including Alaska:

For Ordinary Evening Wear. The dress uniform (dismounted) or the blue mess jacket, or the special evening dress will be worn. In warm weather the white uniform or the white mess jacket may be worn instead.

Evening Functions, Social or Official, of a General Nature. The special evening dress will be worn. If the occasion be one of special ceremony, the full dress will be prescribed by the commanding officer. In warm weather the white uniform may be prescribed instead.

Private Formal Dinners and Other Private Formal Social Functions Occurring in the Evening. The blue mess jacket or the special evening dress will be worn. In warm weather the white mess jacket may be worn instead. See par. 35 (b).

(b) In the Tropics:

For Evening Functions, Social or Official, of a General Nature, for Formal Dinners and Other Private Formal Social Functions Occurring in the Evening. The white mess jacket will be worn. The commanding officer may prescribe the white uniform for evening official functions under arms.

For ordinary evening wear, the white uniform or the white mess jacket will be worn.

(c) On transports: See par. 53 (a).

18. Example by Officers. Officers will, by their appearance, set an example of neatness and strict conformity to regulations in uniform and equipment.

19. Foreign Countries. In foreign countries, on occasions of reviews, official balls, entertainments given by military or naval authorities, or messes, or by civil officials during official visits of ceremony, and at social functions partaking of an official character, officers present in an official capacity will appear in uniform suitable for the occasion.

20. Funerals. For military funerals the uniform prescribed will be the full dress or dress with side arms. For commands not provided with the full dress or dress uniform the service uniform with side arms will be prescribed.

21. Special Courts-martial and Courts of Inquiry will hold their first session in the dress or service uniform, as the president may prescribe. Thereafter the court will decide the uniform. Side arms will be worn.

The judge advocate and counsel will wear the same uniform as the court, without side arms; so will the accused, when practicable.

Witnesses and orderlies will appear in the same uniform as the court, with side arms.

22. General Courts-martial will hold their first session in such uniform as may be prescribed by the president. Thereafter the court will decide the uniform, except that when the members of a general court-martial are assembled from different stations the president of the court will, upon receipt of the order convening the court, at once notify every member of the uniform to be worn, and all sessions of the court will be held in the uniform so prescribed by the president. Side arms will be worn.

The judge advocate and counsel will wear the same uniform as the court, without side arms; so will the accused, when practicable.

Witnesses and orderlies will appear in the same uniform as the court, with side arms.

23. Guard. The uniform of the guard will be prescribed by the commanding officer, and unless he orders a change, individual members of the guard will wear until retreat the identical garments in which they are mounted. After retreat, and until breakfast, they may wear other garments of the uniform prescribed.

24. Insignia of Detailed, Detached, and Unassigned Officers.

(a) Officers detailed to fill vacancies in The Adjutant General's Department, the Inspector General's Department, the Quartermaster Corps, the Ordnance Department, the Signal Corps, and the Bureau of Insular Affairs, and officers of the General Staff Corps, acting judge advocates, and acting inspectors general under the provisions of the act of June 23, 1874, will wear the uniform of the corps, department, or arm of service to which they permanently belong, omitting the insignia therefor, and substituting the insignia of the corps or department in which they are serving (see "Aiguillettes," par. 55). Permanent officers of the former Subsistence and Pay Departments may continue to wear the uniform of their respective former departments while such uniforms are serviceable, substituting the insignia of the Quartermaster

Corps for other insignia. If detailed to the General Staff Corps they will wear the insignia of that corps instead.

(b) The 200 officers detached from their proper commands under the provisions of section 27 of the act approved February 2, 1901, as amended by the act of Congress approved March 3, 1911, except those who come under the provisions of (a), above, will continue during the period of their detached service to wear the insignia of their arms or corps without the regimental numbers. Their saddlecloths will also be used without the regimental numbers.

(c) Officers not regularly assigned to any regiment will be governed by the same rule (b), above, unless attached to some regiment for duty, in which case they will wear the insignia of the regiment to which attached.

(d) Officers detailed on duty carrying increased rank will wear the uniform of their permanent corps, department, or arm of the service with proper insignia to indicate increased rank and their particular duty as may be prescribed by the Secretary of War.

25. Medical Reserve Corps. The uniform for officers of the Medical Reserve Corps will be the same as that prescribed for officers of the Medical Corps, except that the caduceus of gold or gilt, will be superimposed in the center by a monogram of dull finish bronze, bearing the letters "R. C.," and the caduceus of bronze will be superimposed in the center by the same monogram in gold or gilt.

26. Mourning. The badge of military mourning will consist of a straight band of black crêpe or plain black cloth, 5 inches wide, worn around the left arm above the elbow; also, when the sword is worn, a knot of black crêpe on the hilt; but no badge of military mourning shall be worn with the uniform, except at funerals or for occasions prescribed by the War Department. As family mourning, officers may wear the arm band prescribed in the foregoing.

27. Officer of the Day. Until retreat the officer of the day will wear the uniform of the guard. After retreat, he may wear any one of the evening uniforms prescribed in par. 17. With the mess jacket or the special evening dress, the saber belt, with full-dress slings, will be worn under the waistcoat. (See note, par. 59 (d).)

When present at a function of a general nature, he will wear the uniform prescribed for the occasion.

He will wear side arms during his tour of duty. (See par. 98 (d).)

28. Officers Not Serving with Troops will wear the prescribed uniform during the hours of duty, unless authorized by the Secretary of War to wear civilian clothing.

29. Officers to be in Same Uniform as Troops. When troops appear in any of the uniforms prescribed in these regulations, all officers on duty therewith or attached thereto in any capacity shall wear the corresponding uniform prescribed for officers. This does not apply to inspectors, who will wear such uniform as is best adapted to the performance of their duty.

30. Orderlies will wear side arms. In garrison, musician orderlies will wear only the belt; with the dress or full-dress uniform they will wear white gloves.

31. Over-sea Traveling. Whenever enlisted men, including recruits, are ordered to over-sea stations, except in Alaska, commanding officers of military posts and stations, including recruit depots, will see that each soldier, upon departing for the point of embarkation, has one suit of fatigue uniform and two suits of cotton olive-drab in his telescope case or canvas bag for use aboard the transport. (See par. 66 (c).)

32. Quartermasters will wear the service uniform when paying troops.

33. Philippine Scouts. The uniform of the Philippine Scouts shall be the

olive-drab cotton uniform, with the insignia of the Infantry or Cavalry, according to their organization, the letter "P" taking the place of the number of the regiment wherever it occurs.

34. Porto Rico Regiment of Infantry. The uniform of the Porto Rico Regiment of Infantry will be the same as that prescribed for Infantry, except that the letters "P. R." will replace the number of the regiment wherever it occurs.

35. Prescribing the Uniform.

(a) The uniform to be worn by a command, as well as that to be worn by officers on all occasions, social or official, of a general nature will, in every case, be prescribed by the commanding officer in accordance with the provisions of this order (see "Tables of Occasions," p. 1886, and "Evening uniform," par. 17), and whatever the dress prescribed may be, there must be uniformity.

(b) When a social function of a general nature is given by an individual officer in his quarters or elsewhere on the post, the uniform to be worn will, subject to the approval of the commanding officer, be indicated by the officer giving the entertainment. The uniform indicated will be in accordance with the "Tables of Occasions."

(c) For inspection of the condition of an organization and its equipment by its commander, the latter may prescribe the uniform and equipment.

(d) In case of inspections by a superior commander, or by a staff officer deputed to perform that duty, such officer may prescribe any regulation uniform and equipment according to the special object which he has in view.

36. Providing of Uniforms and Inspections of Same.

(a) All officers will provide themselves with the uniforms, arms, and personal and horse equipments pertaining to their rank and duty, and maintain them thoroughly neat and serviceable.

(b) Commanding officers will be held responsible that all officers have each uniform prescribed by them in accordance with the "Tables of Occasions," whether or not such officers be present upon the occasion for which the uniform is prescribed. Commanding officers will inspect and verify the arms, service uniforms, and field equipments of officers and enlisted men as often as they may deem necessary to assure themselves that all members of their commands are prepared to take the field upon short notice, fully equipped and uniformed, as prescribed herein.

37. Record of Sizes of Clothing.

(a) A record will be kept in each company, troop, battery, and detachment of the sizes of clothing required for each enlisted man thereof as ascertained by actual trial of the various articles of clothing. A sample of each size of garment used at the post will be furnished to post quartermasters for the use of organization commanders in "trying on" the garments until a satisfactory fit is secured and the soldier's record is correct. This record will be amended from time to time, especially in the case of young soldiers, as occasion may require. Requisitions will conform to the record of sizes.

When, for any reason, the proper sizes can not be obtained by actual trial, the tables published in the Annual Price List of Clothing and Equipage will be consulted by organization commanders in the preparation and maintenance of the soldier's record, which may be kept conveniently by entering the name of each man and the name and required size of each article of clothing on one of the individual slips of the clothing requisition blank, and then binding these slips to form 86, Quartermaster Corps, suitably labeled to show contents.

(b) Size sticks for use in measuring the feet of enlisted men with a view to determining the correct sizes of shoes required, and shoe stretchers for use whenever necessary, will be furnished by the Quartermaster Corps upon

duly approved requisitions at the rate of one size stick and two shoe stretchers for each company or detachment.

38. Recruiting Service. Officers and enlisted men on duty at general recruiting stations will wear, according to the season, either the dress or the service uniform. Olive-drab shirts may be worn when considered necessary by the recruiting officer in charge of the district, who will also determine for his district the time for wearing any particular uniform.

Recruiting officers and members of their recruiting parties will be in uniform when on duty as such.

While posted at the main entrance of recruiting stations, or while on duty in parks and squares, or on other duty as may be directed by the recruiting officer in charge, enlisted men will, while wearing the dress uniform, wear white gloves and the garrison belt.

39. Responsibility of Officers Regarding the Uniform.

(a) Commanding officers will issue such instructions as may be necessary to have all enlisted men on pass inspected before they leave and when they return to the post. Men who are not in proper uniform and who do not present a neat appearance will not be allowed to leave the limits of the post, and men who return in an untidy or dirty condition will be disciplined. This will also apply to enlisted men on transports in foreign or home ports.

(b) Organization commanders will be held responsible for the appearance of their men in garrison and on pass, and they will do everything possible to facilitate the proper care, cleaning, and preservation of the uniform, encouraging their men to keep their uniforms clean and neat.

(c) All officers will observe the appearance of enlisted men seen on pass and will report cases of men who are untidy or not in proper uniform.

40. Retired Enlisted Men may wear the pattern of uniform prescribed at the date of their retirement, except that the insignia of corps, department, or arm of service will be omitted.

41. Retired Officers.

The uniform of retired officers will be, at their option, either the pattern prescribed for officers of corresponding rank in their corps, department, or arm of service at date of retirement, or the pattern that is at present or may hereafter be prescribed for officers on the active list, except that the two uniforms shall not be mixed and officers below the grade of brigadier general shall omit the insignia of corps, department, or arm of service.

Retired officers on active duty may wear the uniform prescribed for officers on the active list, except that the insignia of corps, department, or arm of service will be omitted.

Uniform of Actual Rank to Be Worn. A retired officer is not authorized to wear any uniform other than that of his actual rank.

42. Saddle. All officers when on duty will use one of the types of the regulation saddles as furnished by the Ordnance Department for sale to officers.

Officers may use a flat type of saddle similar to the English saddle, covered with russet leather, open stirrup of white metal or steel finish, for polo, park riding, horse training, and other similar purposes.

43. Sale or Purchase of Uniform and Equipment Illegal.

(a) Sale. The clothes, arms, military outfits, and accouterments furnished by the United States to any soldier shall not be sold, bartered, exchanged, pledged, loaned, or given away; and no person not a soldier or duly authorized officer of the United States, who has possession of any such clothes, arms, military outfits, or accouterments, so furnished, and which have been the subject of any such sale, barter, exchange, pledge, loan, or gift, shall have any right, title, or interest therein; but the same may be seized and taken wherever

found by any officer of the United States, civil or military, and shall thereupon be delivered to any quartermaster, or other officer authorized to receive the same. The possession of any such clothes, arms, military outfits, or accouterments by any person not a soldier or officer of the United States shall be presumptive evidence of such a sale, barter, exchange, pledge, loan, or gift. (Sec. 3748, R. S.)

(b) **Purchase.** Whoever shall knowingly purchase or receive in pledge for any obligation or indebtedness from any soldier, sailor, or other person called into or employed in the military or naval service, any arms, equipments, ammunition, clothes, military stores, or other public property, whether furnished to the soldier, sailor, officer, or person, under a clothing allowance or otherwise, such soldier, sailor, officer, or other person not having the lawful right to pledge or sell the same, shall be fined not more than \$500, and imprisoned not more than two years. (Act of Mar. 4, 1909.)

44. Scouts. The uniform for enlisted scouts will, in general, be the same as the service uniform prescribed for enlisted men of the corresponding arm of service, the letters "U. S. S." in dull finish bronze replacing the collar ornaments.

45. Standard Patterns. A set of standard patterns of officers' uniforms will be kept in the office of the quartermaster of every territorial department for examination by officers, and a set of the articles of equipment furnished by the Ordnance Department will be kept in the office of the ordnance officer of the department.

46. Summary Court. The summary court officer, the accused, and the witnesses will wear the uniform of the command, without side arms.

47. Tailors (Enlisted Men). When necessary a soldier may be relieved from ordinary military duty to make, repair, or alter uniforms. The post exchange council will fix the rates to be charged, which will not exceed the cost of doing such work at the clothing depot, and company commanders will cause to be deducted from the pay of enlisted men and turned over to the proper person the amount properly due therefor. (A. R., 279.)

48. Unauthorized Articles of Uniform. Enlisted men will not be permitted to wear any articles of uniform which are not furnished by the Quartermaster Corps, nor will they be permitted to wear articles of the uniform other than those furnished to the organization to which they belong.

49. Unauthorized Combinations.

(a) Combinations of various articles of the uniform other than the combinations prescribed in these regulations are prohibited.

(b) Former post commissary sergeants and other enlisted men transferred to the Quartermaster Corps may continue to wear the uniform of their corps, department, or arms of the service in their possession at time of transfer until such uniforms, including service chevrons and trousers stripes, are worn out, changing insignia and grade of chevrons only at time of transfer to conform to those prescribed for enlisted men in the Quartermaster Corps.

50. Underclothing and Stockings. Wool knit undershirts, cotton knit undershirts, canton flannel or jean drawers, and woolen and cotton stockings will be provided for enlisted men according to climatic conditions.

51. Uniforms to be Worn in Camp and Garrison.

(a) Officers belonging to a camp or garrison will, whenever within the limits of such camp or garrison, wear the prescribed uniform, except when wearing civilian clothing as authorized in par. 10 (c).)

(b) The uniform appropriate to the occasion, with side arms, will be worn by officers when making official calls of the kind mentioned in paragraphs 403, 407, 408, and 409, Army Regulations, 1913, and other state calls.

(c) Officers reporting for duty will wear the uniform of the command, with side arms.¹

(d) Enlisted men will at all times, whether on or off duty, wear the uniform except when wearing civilian clothing as authorized in par. 10 (b) and par. 15.

52. Uniform that May be Worn by Certain Persons Who Served During the Civil War or the Spanish-American War. Officers who served during the War with Spain or since as officers of the Regular or Volunteer Army of the United States, and officers who served during the Civil War, and who have been honorably separated from the service, by discharge, resignation, or otherwise, may, upon occasions of ceremony, wear the uniform of the highest grade that they held by brevet or other commission in the regular or volunteer service. (Sec. 1226, R. S., and acts of Feb. 4, 1897, and Feb. 2, 1901.)

The uniform of such officers will be, at their option, either the pattern prescribed for officers of corresponding rank in their corps, department, or arm of service at date of separation from the service, or the pattern that is at present or may hereafter be prescribed for officers on the active list, except that the two uniforms shall not be mixed, and officers below the grade of brigadier general shall omit the insignia of corps, department, or arm of service.

53. (a) United States Army Transports, in time of peace.

Enlisted men will wear the service uniform and those on fatigue duty the fatigue uniform. (See par. 39 (a).)

Officers. Until retreat the service or the white uniform will be worn. After retreat the service or any one of the evening uniforms (par. 17) will be worn. The commanding officer will prescribe the uniform for all functions of a general nature on shore and for official or semiofficial functions whether or not of a general nature, and whatever the dress prescribed may be there must be uniformity. In foreign ports the special evening dress will be worn by all officers dining with naval or military authorities, messes, or civil officials. At official dinners of special formality side arms will be worn. (See note, par. 59.) These regulations will apply to all officers on board, whether or not on duty with troops.

(b) United States Military Academy. The uniform and the insignia of the permanent professors, the master of the sword, the chaplain, and the civilian instructors, and the insignia of the superintendent, commandant of cadets, and temporary professors, are prescribed in the regulations of the Academy.

54. Rescinded.

¹This requirement will not apply to the various headquarters and other places where civilian clothing is worn during office hours by authority of the Secretary of War. (See par. 28.)

PART II.

VARIOUS ARTICLES OF UNIFORM AND EQUIPMENT—BY WHOM, WHEN, AND HOW WORN.

55. Aiguillettes.

(a) By Whom Worn. They will be worn by officers of the General Staff Corps, and by the permanent and detailed officers of The Adjutant General's and the Inspector General's Departments (including acting inspectors general detailed under the provisions of the act of Congress approved June 23, 1874), the officers of the Bureau of Insular Affairs, aids, the adjutant of the United States Military Academy at West Point, N. Y., brigade and regimental adjutants, adjutants of coast artillery districts and coast defense commands, adjutants of engineer battalions, and military attachés.



(b) When Worn. They will be worn with the full dress and with the special evening dress on all occasions, with the dress uniform and white uniform under arms, and with the mess jacket on special occasions.

(c) How Worn. Except by the Chief of Staff and aides to the President, aiguillettes will be worn from the left shoulder, the long pencil cord in rear and the short pencil cord in front, the loops crossing on the arm, the front loop on top. By the Chief of Staff and aides to the President they will be worn from the right shoulder.

The short brass bar will be used except with the dress uniform, the hinge loop of the shoulder knot or epaulet passing through it. With the white uniform this bar will be fastened underneath the shoulder loop of the coat and concealed thereby. With the dress uniform the long brass bar will be slipped lengthwise under the shoulder strap.

With the full dress, the dress and the white uniforms the front pencil will be hung on the top button (right side with full dress in case of the Chief of Staff and aides to the President; left side in case of other officers), and the rear pencil cord, passing under the arm, on the second button, both cords, when the aiguillettes are worn from the right side, being so hung before the coat is buttoned.

With the special evening dress and the mess jacket the pencil cords will be hung on supports correspondingly placed beneath the right lapel in case of the Chief of Staff and aids to the President and beneath the left lapel in case of other officers.

56. Badges and Medals.

(a) Military and Naval Badges and Medals Awarded by the Government. The military and naval badges awarded by the Government are enumerated in subsection (l), section (j), paragraph 58.

Officers and enlisted men of the Army are authorized to wear with the uniform any medals or badges awarded to them by the Government during previous service in any other branch of the Government.

(b) Part of the Uniform. The badges and medals named above are a part of the uniform and will be worn as prescribed in these regulations.

(c) The Badges of Military Societies and of Corps and Divisions that Officers Are Authorized to Wear Are: The badges of military societies commemorative of the wars of the United States, including the Philippine insurrection and the China relief expedition; 2. The badges of the Regular Army and Navy Union of the United States and of the Army and Navy Union of the United States; 3. The corps and division badges of the Civil War.

(d) Badges and Medals Enumerated in (a) and (c) Not to Be Worn Together. The badges enumerated in paragraph (c) may be worn as prescribed in these regulations; will not be worn with the badges and medals named in paragraph (a) above, except with those named in (a-6.)

57. Medal of Honor.

(a) By Whom Worn. By those to whom it has been awarded.

(b) When Worn. With the full dress uniform, the special evening dress, and the mess jacket.

(c) How Worn. With the full dress the medal of honor will be worn pendent from the neck, the ribbon passing between the upper and lower hooks of the coat collar so that the medal proper shall hang about 1 inch below the opening of the collar; with the special evening dress and mess jacket it will be worn pendent from the neck, the ribbon passing around the neck under the collar so that the medal proper shall hang about 1 inch below the tie.

(d) The medal of honor will not be worn by officers suspended from rank and command, nor by enlisted men serving sentence of confinement.

(See "Philippine Scouts," par. 58 (l).)

58. Other Medals and Badges.

(a) By Whom Worn. Badges and medals awarded by the Government are worn by those entitled thereto by law and regulations. (For those entitled to campaign badges, see General Orders, No. 129, War Department, 1908, and General Orders, No. 23, War Department, 1911; for those entitled to wear the Army of Cuban Pacification badge, see General Orders, No. 96, War Department, 1909, and for those entitled to wear the Army of Cuban Occupation badge, see General Orders, No. 40, War Department, 1915.)

(b) Badges of military societies may be worn by officers and enlisted men who, in their own right or by the right of inheritance, are members of military societies of men who served in the armies and navies of the United States in the War of the Revolution, the War of 1812, the Mexican War, the Civil War, or

the Indian wars of the United States, the Spanish-American War and the incidental insurrection in the Philippines, or the China Relief Expedition, or are members of the Regular Army and Navy Union of the United States, or of the Army and Navy Union of the United States.

(c) Corps and Division Badges of the Civil War. Officers and enlisted men who served as officers, noncommissioned officers, privates, or other enlisted men in the Regular Army, volunteer or militia forces of the United States during the Civil War, and have been honorably discharged from the service, or still remain in the same, may wear the distinctive Army badge ordered for or adopted by the Army corps or division, respectively, in which they served.

(d) When Worn. Badges and medals are worn with the full dress uniform. (See "Philippine Scouts," par. 58 (l).)

(e) The various distinctive marks awarded for excellence in marksmanship, the aviator's badge, and the swordsman's badge may be worn with the full dress, the dress, and the service uniforms. However, they will not be worn in the field.

(f) When worn with the ribbons, they will be worn as prescribed in par. (i).

(g) How Worn. Badges and medals will be worn on the left breast of the coat in a horizontal line, about 4 inches below the middle point of the top of the shoulder, those with ribbons being suspended from a bar of metal passed through the upper ends and tops of the ribbons. The badges and medals that have ribbons will be worn in but one line, overlapping, if necessary. See (j) (3).

(h) Distinctive marks awarded for excellence in marksmanship and corps and division badges of the Civil War are worn in a similar manner, except that they are not suspended from bars of metal passing through ribbons.

(i) When marksmanship badges are worn with ribbons, the badges will be worn under the ribbons, in a horizontal line parallel to and three-eighths inch from the bottom of the ribbons.

(j) Order in Which Worn. They will be worn in the following order of precedence, beginning at the right:

(1) Military, Naval, and Other Badges and Medals Awarded by the Government. 1. Certificate of merit badge (issued by the War Department); 2. Medal commemorating the Battle of Manila Bay (issued by the Navy Department); 3. Medal commemorating the naval engagements in the West Indies (issued by the Navy Department); 4. Special meritorious medal for service during the War with Spain, other than in battle (issued by the Navy Department); 5. Philippine Congressional medal (issued by the War Department); 6. Campaign badges, in the order of the dates of the campaigns (issued by the War and Navy Departments); 7. Gold life-saving medal (issued by the Treasury Department); 8. Silver life-saving medal (issued by the Treasury Department); 9. Army of Cuban Occupation badge (issued by War Department); 10. Army of Cuban Pacification badge (issued by the War and Navy Departments); 11. Good-conduct medal (issued by the Navy Department); 12. Aviator's badge (issued by the War Department); 13. Various distinctive marks awarded for excellence in small-arms practice (issued by the War and Navy Departments); 14. Swordsman's badge (issued by the War Department); 15. Medals or badges awarded for service performed while in the Army, Navy, or Marine Corps, or other branch of the Government, if not included among those specified above.

(2) Badges of Military Societies and Corps and Divisions. 1. The badges of military societies commemorative of the wars of the United States, including the Philippine Insurrection and the China Relief Expedition, in the order of the dates of such wars; 2. The badges of the Regular Army and Navy Union of the United States and of the Army and Navy Union of the United States;

3. The corps and divisions badges of the Civil War and the War with Spain;
4. The badge of the Enlisted Men's Abstinence League.

(3) When Worn in More than One Line. If necessary to have more than one line of badges and medals, the second line will be placed below the first line, the bars from which the badges and medals are suspended being parallel to the upper bar and three-eighths inch from the bottom of the lowest medal, the middle of the lower line of medals being in the same vertical line as the middle of the upper line.

(k) Organized Militia. Officers and enlisted men of the active list of the Organized Militia, who have had service as indicated in paragraph 1, General Orders, No. 129, War Department, 1908, are entitled to campaign badges. (For instructions regarding preparation of requisitions, etc., see Circular No. 4, War Department, 1909.)

(l) Philippine Scouts. Officers, including majors, and enlisted men of the Philippine Scouts, who are entitled thereto, will wear the medal of honor, the certificate of merit badge, the Philippine congressional medal, and the campaign badges with service uniform on all occasions of ceremony. The medal of honor will be worn as in the case of the full dress uniform. (Par. 57 (c).)

(m) Campaign Badges. An officer or enlisted man of the Army who rendered, while an officer or enlisted man of the Navy or Marine Corps, service that would have entitled him to a campaign badge had it been rendered as an officer or enlisted man of the Army, is entitled to wear such campaign badge.

(n) Rescinded.

(o) Badges and Medals Not to be Worn by Officers Suspended from Command Nor by Enlisted Men Serving Sentence of Confinement. Neither badges nor medals will be worn by officers suspended from rank and command nor by enlisted men serving sentence of confinement.

59. Belts, Saber.

(a) Officers. The full dress saber belt, with full dress slings, will be worn with the full dress uniform and on the outside of the coat.

[Note: The black webbing belt prescribed for brigadier generals is worn on the outside of the full dress coat, under the sash.]

(b) The garrison belt, with slings, will be worn with the service uniform, on the outside of the coat. The garrison belt for infantry officers is of olive-drab webbing; for cavalry officers it is of russet leather. The present russet leather saber belt may be worn for a period of three months after the date on which any organization may be issued the 1910 infantry equipment.

(c) The full dress or the garrison belt, with full dress slings, will be worn with the dress and the white uniforms, under the coat.

A belt of webbing or of soft, pliable leather, with detachable full dress slings, may be worn with the dress and the white uniforms.

(d) The belt will not be worn outside the overcoat.

[Note: When the special evening dress or the mess jacket is worn, as authorized in par. 27 and par. 53 (a), the full dress or the service belt or a belt of webbing or of soft pliable leather, with full dress slings, will be worn under the waistcoat.]

(e) Enlisted Men. Saber belts and cartridge-carrying devices, when worn with the overcoat, will be worn outside the overcoat.

(For manner of wearing pistol belt, see par. 95.)

59½. Bolo. Enlisted men armed with the bolo will wear it suspended from the waist belt on the left side, as prescribed in orders from the War Department (Par. I, G. O. No. 172, W. D., 1908.) When mounted the wearer should carry the bolo on the left hip far enough forward so as not to mar the saddle.

60. Boots.

(a) **Leather.** Boots of black, black enamel, or patent leather will be worn with the mounted full dress and the mounted dress uniforms.

Unless otherwise prescribed, boots of russet leather may be worn with the service uniform by mounted officers, and russet leather boots may be worn with the service uniform and black boots with the blue uniform by other officers when mounted.

(b) **Rubber.** Rubber boots may be worn by officers in inclement weather.

Rubber boots (half hip) are authorized for enlisted men of mine companies, mine planters, cable steamers, and enlisted men of the Quartermaster Corps.

Rubber boots (hip) are authorized for issue to troops in Alaska.

61. Brassards.

Red. The authorized mounted orderlies of infantry and cavalry regiments, the mounted men assigned as orderlies to brigade and higher commanders, and agents of communication of the Field Artillery and machine-gun companies will, while on duty in that capacity at drill or in the field, wear a red brassard on the right forearm.

The brassards will be furnished by the Quartermaster Corps.

Red Cross. In time of war with a signatory of the Geneva convention, all persons in the military service rendered neutral by the terms of said convention will wear a brassard of white cloth, with a Geneva cross of red cloth in the center, on the left arm above the elbow while on duty in the field of operations. These persons are entitled to wear brassards: Chaplains attached to armies; the personnel charged exclusively with the removal, transportation, and treatment of the sick and wounded, and those charged with the administration of sanitary formations and establishments, e. g., surgeons, members of the Hospital Corps, and nurses.

Red-cross brassards will be worn by those entitled to wear them, when equipped for field duty.

They will be furnished by the Medical Department.

62. Breast Cord. The breast cord will be worn by enlisted men when full dress is prescribed. It will be attached to the dress coat, beginning at the button of the left shoulder loop, one cord passing in rear of the neck and the other in front, under the first button of the coat, crossing under the right shoulder loop and brought together under the right arm with a slide, then passing across the breast between the third and fourth buttons and attached to the left shoulder button.

63. Canteen will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, the canteen will be worn on the right buttock, when dismounted; when mounted, it will be fastened to the off cantle ring.

64. Cap Covers. In stormy weather officers may wear a black waterproof cover over the dress cap and an olive drab one over the service cap.

65. Cape. The cape may be worn by officers when not on duty with troops under arms. It may be worn by the officer of the day while visiting and inspecting the guard in evening uniform. (See par. 27.)

66. Caps.

(a) **Dress.** The dress cap will be worn with the full dress, the special evening dress, the blue mess jacket, and the dress uniform, except that general officers will wear the chapeau with the full dress dismounted uniform, unless shoulder knots are worn instead of epaulets, as authorized in par. 105, in which event the dress cap will be worn.

(b) **Fur.** Fur caps are authorized for troops serving in Alaska. (See par. 3.)

(c) **Service.** The service cap will be worn with the service uniform except as provided in paragraph 77 (c). When organizations or individual enlisted men are ordered for service in the Philippine Islands, Hawaii, and the Canal Zone, service caps will not be taken, except that all recruits en route from recruit depots to join the organizations to which they have been assigned, whether such organizations be stationed in the United States or elsewhere, will wear service caps. Service hats will be issued to them after they shall have joined the organizations to which they have been assigned. (C. U. R. No. 3, Nov. 10, 1914.)

(d) **White.** The white cap will be worn with the white mess jacket; with the white uniform it will be worn by all officers and by enlisted men as authorized.

(e) **Winter.** The winter cap may be worn by officers and enlisted men in cold weather when not at formations and will be worn whenever prescribed by the commanding officer.

(f) **Chin Strap.** At all mounted formations of ceremony, and such other occasions as may be necessary, the chin strap on dress and service caps will be used.

67. Chapeau. The chapeau will be worn by general officers with the full dress, dismounted except when shoulder knots are worn with cape, waterproof, or overcoat because of inclement weather, in which event the dress cap will be worn. The chapeau will be worn with the front peak turned slightly to the left, showing the gilt ornaments upon the right side.

68. Coats. The full dress, the dress, the white, and the service coats will be buttoned throughout whenever worn.

69. Cravats.

(a) Officers will wear an evening dress tie of black silk with the special evening dress and the mess jacket.

(b) Chaplains may wear either a black or white tie with the clerical coat or vestment authorized in par. 9.

(c) When off duty, in permanent and maneuver camp and out of camp, when service uniform with olive-drab shirt and without coat is authorized, officers and enlisted men will wear a plain black cravat tied as a four-in-hand. No other style or color of cravat will be so worn.

70. Currycomb and Horsebrush will be carried as prescribed in orders from the War Department and in authorized equipment manuals whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, these articles will be carried in the off-side saddlebag or the off-side pommel pocket.

71. Dispatch Case. Staff officers and inspector-instructors of the Organized Militia, and those acting as such, will, when the nature of their duty requires it, carry a dispatch case to be furnished by the Ordnance Department. Dispatch cases will be furnished inspector-instructors on requisition and will be accounted for as are other articles of ordnance property that are supplied to those officers; they will be furnished other officers on memorandum receipt.

72. Epaulets.

(a) Epaulets will be worn by general officers with the dismounted full dress.

(b) In case of inclement weather, when capes, waterproofs, or overcoats are worn, shoulder knots may take the place of epaulets.

73. Field Glasses will be carried by all officers, except officers of the Medical Department and chaplains, when equipped for the field, and will be carried on the right side, the strap passing over the left shoulder.

Medical officers on duty with sanitary units of the mobile army will carry field glasses.

74. First-aid Packet and Magazine Pocket. The first-aid packet for troops of the line will be worn with the field rifle or pistol belt on the left hip just back

of the seam of the breeches. The magazine pocket, web, double, will be worn on the Cavalry field rifle belt, in front of the left hip. When the pistol belt is worn with field equipment, the magazine pocket, web, double, will be worn in front of the left hip. Hospital Corps men will wear the first-aid packet on the waist belt with field equipment, in front of the left hip.

Officers will wear the first-aid packet and magazine pocket, web, double, in corresponding positions.

75. Gloves for Enlisted Men.

(a) Leather gloves of the pattern prescribed for the purpose will be issued to enlisted men of the Coast Artillery, of mountain batteries of Field Artillery, of the machine-gun platoons, of the Ordnance Department, of the Signal Corps, and of the Corps of Engineers, to protect their hands while handling guns, machinery, and other appliances. (C. U. R. No. 3, Nov. 10, 1914.)

(b) Regulation riding gloves will be worn, when mounted, when prescribed.

(c) White cotton or olive-drab woolen gloves will be worn on dismounted duty when prescribed, but white gloves will not be worn with the service uniform. When off duty olive-drab woolen gloves may be worn with the full dress, the dress, and the woolen service uniform.

(d) When ordered, gloves will be worn under arms and with side arms, except with the cotton uniform.

76. Gloves for Officers.

(a) Dress Uniform. White leather gloves will be worn with the dress uniform when mounted.

(b) When under arms and not mounted, plain white gloves will be worn.

(c) At afternoon receptions and on other social occasions of a similar nature, whether or not under arms, plain white gloves (except white cotton gloves) will be worn with the blue uniform.

(d) Aids and other officers who may be in official attendance on distinguished persons will wear white gloves (except white cotton gloves) when in dress uniform, without side arms.

(e) Upon other occasions when not on duty with troops under arms, officers may wear any of the gloves prescribed above.

(f) Full Dress Uniform. White leather gloves will be worn with the full dress uniform when mounted.

(g) When not mounted, plain white gloves (except white cotton gloves) will be worn.

(h) Mess Jacket. At dances plain white kid gloves will be worn with the blue mess jacket, and plain white lisle thread gloves with the white mess jacket. On other occasions the wearing of gloves is optional.

(i) Service Uniform. Regulation riding gloves will be worn with the service uniform when mounted, and may be worn with the service uniform upon other occasions when the olive-drab woolen glove is not prescribed. The olive-drab woolen glove will be prescribed for officers whenever it is prescribed for enlisted men; on other occasions it may be worn with the woolen olive-drab uniform.

(j) Special Evening Dress. Same as blue mess jacket.

(k) White Uniform. When under arms, and also when at dances, plain white gloves of lisle thread will be worn.

(l) Chaplains may wear white gloves whenever their duty requires it.

77. Hats.

(a) Blue Denim. The blue denim hat will be worn with the fatigue uniform by enlisted men of the Coast Artillery, Quartermaster Corps, field companies of the Signal Corps when on duty on cable ships, and the Aviation Section, Signal Corps.

(b) **Oilskin.** The oilskin hat may be worn by officers and enlisted men of mine companies, mine planters, and cable ships.

(c) **Service.** The service hat will be worn with the service uniform for field duty and target practice; also with the cotton service uniform by all troops in the United States when stationed south of parallel 35° north latitude, and by all troops in the Philippine Islands, Hawaii, Porto Rico, and the Canal Zone. It will also be worn with the fatigue uniform and with stable frocks, except by enlisted men of the Coast Artillery Corps and the Aviation Section, Signal Corps. It may be worn in garrison with the service uniform when waterproof coats, overcoats, slickers, or ponchos are worn, or when authorized by the post commander on account of exceptional or severe climatic conditions, when the wearing of caps would endanger the health of his command. (C. U. R. No. 10, Mar. 24.)

(d) **Hat Strings.** At all mounted formations of ceremony, and such other occasions as may be necessary, the hat strings provided on service hats will be used, tied either under the chin or as chin straps on the point of the chin.

78. Haversacks will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, the 1910 model haversack and the 1912 model ration-bag knapsack will be worn on the back. When dismounted, the old model haversack will be worn on the left side, the strap, in the case of officers, passing over the right shoulder; when mounted, saddlebags or pommel pockets and ration bags will be carried instead.

79. Identification Tag. When equipped for field duty the identification tag will be worn under the shirt, suspended from a cord around the neck.

80. Insignia on Cap.

(a) **Officers.** The insignia is embroidered in gold or gilt on the dress cap. The detachable insignia of bronze will be worn on the service cap, and those of gold or gilt metal on the white cap. They will be attached to the front of the cap so that the top of the insignia will be slightly below the top of the cap.

(b) **Enlisted Men.** The detachable insignia of gilt will be worn on the dress and the white caps, and the detachable insignia of bronze on the service cap, the fastenings of the insignia being inserted in the eyelet in the front of the cap.

81. Insignia on Collar of Coat.

All insignia will be of metal.

For the Regular Army the letters "U. S."; for the Volunteer Army the letters "U. S. V."; for the Officers' Reserve Corps and the Enlisted Reserve Corps the letters "U. S. R."; for the National Guard while in the service of the United States, the letters—not to exceed four—forming the abbreviation of the name of the State, Territory, or District of Columbia.

(a) **Officers.** The letters "U. S." will be worn 1 inch from each end of the collar, with a suitable space between the letters, and placed midway between the upper and lower edges of the collar. The letters "U. S. V." or "U. S. R." will be similarly worn, but five-eighths inch from each end of collar.

If the abbreviation of the name of a State, Territory, or the District of Columbia consists of but two letters, it will be worn at 1 inch from the end of the collar; in other cases at five-eighths of an inch.

The insignia of the corps, department, or arm of service and the insignia of aids, chiefs of staff, and chaplains will be worn five-eighths inch from the letters "U. S.," and one-half inch from the letters "U. S. V.," or "U. S. R.," next to letter farthest from opening of collar.

The same rule will establish intervals from State, Territory, and District of Columbia abbreviations.

(b) The gold or gilt insignia will be worn on the collar of the dress and white uniforms, and the bronze insignia on the collar of the service uniform, except that chaplains will wear the silver Latin cross on all uniforms.

(c) Enlisted Men. The letters "U. S.," "U. S. V.," "U. S. R.," or those forming the State abbreviation, and the insignia of corps, department, or arm of service will be worn on the dress and the white coats, and will be placed as in the case of officers. No insignia will be worn on the white coats of cooks or bakers except those of the Quartermaster Corps.

The button insignia will be worn on the service coat, the button with the letters "U. S.," "U. S. V.," "U. S. R.," or those forming the State, Territory, or District of Columbia abbreviations being worn on the right side of the collar, and the button with the corps, department, or regiment and company on the left side; the edge of the button to be 1 inch from the end of the collar, and the button to be midway between the upper and the lower edges of the collar.

82. Insignia on Collar of Shirt. (When the shirt is worn without the coat.) See paragraph 102 (a). The insignia of rank worn on the collar of the shirt will be of metal and will be worn as follows:

(a) OFFICERS.

(1) Regular Service.

Major General of the Line. On both sides, in the middle of the collar, the letters "U. S.," and two stars, points up. On each side, the letters "U. S." to be 1 inch from the end of collar.

Brigadier General of the Line. Same as for major general, but with only one star on each side.

For General Officers of Staff Corps or Departments. Substitute for the letters "U. S." on the left side, the proper device.

Colonel. On the right side, in the middle of the collar, the letters "U. S." and an eagle, beak to the front; the letters "U. S." to be one inch from end of collar. On the left side, in the middle of the collar, and one inch from the end, the insignia of corps, department, or arm of service.

Lieutenant Colonel. On the right side, in the middle of the collar, the letters "U. S." and a silver oak leaf, point up; the letters "U. S." to be one inch from the end of the collar. On the left side, in the middle of the collar, and one inch from the end, the insignia of corps, department, or arm of service.

Major. Same as lieutenant colonel (substituting "a gold oak leaf").

Captain. Same as lieutenant colonel (substituting "two bars, one-fourth inch apart and parallel to the end of the collar").

First lieutenant. Same as lieutenant colonel (substituting "one bar parallel to the end of the collar").

Second Lieutenant. On the right side, in the middle of the collar, and one inch from the end, the letters "U. S." On the left side, in the middle of the collar, and one inch from the end, the insignia of corps, department, or arm of service.

General Staff Officers, Chiefs of Staff, Aids, and Chaplains. Substitute on the left side of the collar the proper device in place of the insignia of corps, department, or arm of the service.

(2) National Guard Service.

Same as for officers of the regular service, except that the letters—not to exceed four—forming the abbreviation of the name of the State, Territory, or District of Columbia will be substituted for the letters "U. S."

(a) **Volunteers or Officers' Reserve Corps.**

Same as for officers of the regular service, except that the letters "U. S. V." or "U. S. R." will be substituted for the letters "U. S."

(B) **ENLISTED MEN.**

When the shirt is worn without the coat, the button insignia will be worn on the collar as prescribed for the service coat in paragraph 81 (c).

83. Insignia on Saddlecloth. The bronze insignia of staff corps, department, and Coast Artillery, and the regiment number in enamel in case of the Infantry, Cavalry, and Field Artillery, will be placed in each flank corner of the saddlecloth, in this position: Draw a line bisecting the angle made by the inner seams of the binding; place the median line of the insignia on this line in the same manner as if the bisector were a vertical line on the collar of the dress coat, the lowest point of the insignia being at the following distances from the intersection of the inner seams:

2.25 inches:

Ordnance Department.

Medical Department.

Chaplains.

2.5 inches:

Infantry.

Cavalry.

Field Artillery.

Adjutant General's Department.

Signal Corps.

Aids.

2.75 inches:

Quartermaster Corps.

3.25 inches:

Coast Artillery. (The line joining the lowest points of the two cannon to cut the bisector of the angle at a point 3.25 inches from the intersection of the inner seams of the binding.)

Judge Advocate General's Department. (The line adjoining the two lowest points of the wreath to cut the bisector of the angle at a point 3.25 inches from the intersection of the inner seams of the binding.)

Corps of Engineers.

3.5 inches:

General Staff. (The point of the star farthest from the intersection of the inner seams of the binding, to be on the bisector of the angle; the line joining the two points (of the star) nearest the intersection of the inner seams, to cut the bisector at a point 3.5 inches from the intersection of seams.)

Inspector General's Department. (The line joining the two lowest points of the wreath, to cut the bisector of the angle at a point 3.5 inches from the intersection of the inner seams of the binding.)

GENERAL OFFICERS (BRONZE INSIGNIA).

General. The coat of arms will be placed with the longer median line on the bisector of the angle, center of eagle 5.25 inches from the intersection of the inner seams, a star being placed on each side of the coat of arms and midway

between the eagle and the inner seam, two of the points of each star being on the arc of a circle of a radius of 5.25 inches, with the intersection of the inner seams as a center.

Lieutenant General. The large star will be placed on the bisector of the angle, with a small star on each side, two of the points of each of the three stars being on the arc of a circle of a radius of 6 inches, with the intersection of the inner seams as a center, each small star being midway between the large star and the inner seam.

Major General. Two of the points of each star will be placed on the arc of a circle of a radius of 4 inches, with the intersection of the inner seams as a center, the centers of the two stars being $2\frac{3}{4}$ inches apart, the stars being equidistant from the bisector of the angle.

Brigadier General. The star will be placed as in the case of the General Staff insignia.

84. Insignia on Shoulder Loop. On the shoulder loops of the service and the white uniforms, metal insignia of rank will be worn as follows:

General. The coat of arms, head of eagle up, in center of loop, midway between the two stars, whose centers will be 3 inches apart, point up.

Lieutenant General. The large star, point up, in center of loop, midway between the two small stars, whose centers will be 3 inches apart, point up.

Major General. The centers of the two stars, point up, $2\frac{3}{4}$ inches apart, the stars to be equidistant from the ends of the loop.

Brigadier General. Star in center of loop, point up.

Colonel. Eagle, head up, beak to the front, in middle of loop, talons of eagle five-eighths inch from sleeve end of loop.

Lieutenant Colonel. Oak leaf, point up, in middle of loop, stem of leaf five-eighths inch from sleeve end of loop.

Major. Oak leaf to be worn same as oak leaf of lieutenant colonel.

Captain. The two bars, one-fourth inch apart, in middle of loop, lower bar parallel to and five-eighths inch from sleeve end of loop.

First Lieutenant. The bar in middle of loop, parallel to and five-eighths inch from sleeve end of loop.

85. Insignia on Sleeve.¹ The sleeve insignia of corps, department, arm of service, or aid will be of metal (gilt or gold), except that officers who already have embroidered insignia may continue to wear them on their present uniforms until they change corps, department, or arm of service.

OFFICERS.

(a) Full dress coat, special evening dress coat, and mess jacket.

General Officers of the Staff Corps and Departments. The proper corps or department insignia will be placed in the center of sleeve, 1 inch above the cuff.

[Note: The stars indicating rank will be worn 1 inch above the corps or department insignia. General officers of the line will wear the stars 1 inch above the cuff.]

All Officers Below the Rank of Brigadier General, Except Officers of the

¹ The insignia of rank in the case of officers below the grade of brigadier general, as indicated by knots on the sleeves and the braid ornamentations, are given in detail in the specifications issued by the Quartermaster General of the Army. In the case of officers above the grade of colonel the rank is indicated by stars.

General Staff Corps. The insignia of corps, department, arm of service, or aid will be placed in the center of the open space under the lace insignia, or if no lace insignia are worn, the ornament will be placed with the base line 1 inch above the gold band.

Officers of the General Staff Corps will wear the corps insignia on the shoulder knot.

(b) Overcoat. The insignia of corps, department, or arm of service, or aid, will not be worn on the sleeve of the overcoat.

The insignia of rank will be indicated on the sleeve as described in the specifications issued by the Quartermaster General.

ENLISTED MEN.

(c) Chevrons of noncommissioned officers will be worn on both sleeves, points up and midway between the elbow and top of sleeve. They will be worn on the sleeves of the overcoat and all coats; also on the sleeves of the olive-drab shirt when worn without the coat. (See par. (j).)

(d) Insignia for Excellence in Target Practice, Coast Artillery. Enlisted men belonging to the batteries of the Coast Artillery Corps making the highest average figure of merit for the year in each class of heavy gun and mortar battery practice indicated in War Department orders, will wear on the cuff of the right sleeve of the dress coat a badge consisting of a scarlet figure "1," embroidered on a blue cloth disk. This badge will be attached at the middle line of the outside of the cuff, 2 inches from the bottom.

A badge of similar design, consisting of the figure "1" embroidered upon olive-drab cloth for the cotton service coat, or upon olive-drab woolen melton for the woolen service coat, will be worn on the cuff of the right sleeve by enlisted men belonging to batteries entitled to wear this badge.

Figures will be issued by the Quartermaster Corps upon requisition as soon as practicable after the annual ratings of the winning batteries are announced by the War Department. They will be issued without cost and all enlisted men of the batteries will wear them until the ratings for the succeeding year are published.

(e) Gunners' Insignia, Field and Coast Artillery. The gunners' insignia will be worn on both sleeves of the dress coat, the service coat and the overcoat. The insignia will not be worn with the fatigue uniform, nor will it be worn by noncommissioned staff officers of the Field or the Coast Artillery, nor by enlisted men of the Coast Artillery holding rated positions.

The gunners' insignia of Field Artillery and of gun and mortar companies, Coast Artillery, will be worn in a position corresponding to that prescribed for the insignia of rated positions, point of projectile up; the insignia of mine companies will also be similarly worn, with the maneuver ring of the mine case up.

(f) Insignia of Rated Positions in the Coast Artillery. The insignia of rated positions in the Coast Artillery will be worn on both sleeves of the overcoat and the dress, service, and fatigue coats. In the case of noncommissioned officers, the line connecting the two points of the lower bar of the chevron will be tangent to the circle indicating the rating; if this is not practicable, the insignia will be worn one-half inch below the center of the lower edge of the chevron. If not a noncommissioned officer, the insignia will be worn in the middle of the sleeve and midway between the elbow and top of sleeve.

The following-named insignia of rated positions will be worn as indicated:
 Casemate electrician, chief planter, and chief loader: Maneuvering ring of mine up.

Observer and plotter: Point of triangle up.

(g) Service Stripes. All enlisted men who have served faithfully in the Army, Navy, or Marine Corps for a period of three years, continuously or otherwise, will wear as a mark of distinction a service stripe of the corps, department, or arm of the service in which the service was rendered.

For each additional period of three years' faithful service, continuous or otherwise, an additional service stripe will be worn.

Whenever the three-year period covers service in two or more corps, departments, or arms of the service, the service stripe therefor will be of the color of the facing of the corps, department, or arm of the service in which the major portion of the period was served.

Service stripes will be worn diagonally, upon both sleeves of the dress coat, below the elbow, extending from seam to seam, the front end being the lower and about $3\frac{1}{2}$ inches from the end of the sleeve. In case of more than one stripe, they will be worn one above the other in the order in which they were earned, $\frac{1}{4}$ -inch space between stripes.

(h) Other Sleeve Insignia of Enlisted Men. Insignia for artificers, cooks, farriers, first-class privates (Engineers, Ordnance, Signal Corps, and Hospital Corps), horseshoers, mechanics, saddlers, and wagoners will be worn on both sleeves of the overcoat, and the dress, service, and fatigue coats, midway between the elbow and top of sleeve; insignia for privates (first class) and cooks, Quartermaster Corps, will be similarly worn; insignia for first-class privates of the Hospital Corps will be worn on the white coats also.

(i) Various Sleeve Insignia of Enlisted Men. The following insignia will be worn as indicated:

Artificer: Head of hammer up.

Chief musician: Bell of bugle to the front.

Chief trumpeter: Bell of bugle to the front.

Commissary sergeant (regimental): Cusps of crescent to the rear.

Cook: Crown of cap up.

Farrier: Head of horse to the front.

First-class privates, Ordnance Department: Flame of shell up.

First-class privates, Signal Corps (dress chevron): White flag to the front.

Horseshoer: Toe of shoe up.

Mechanic: Head of hammer up.

Mechanic—Artificer: Head of hammer up.

Mechanic—Farrier: Head of horse to the front.

Mechanic—Horseshoer: Toe of shoe up.

Mechanic—Saddler: Blade of knife up.

Quartermaster sergeant, master electrician, sergeant (first class), sergeant, corporal, and privates (first class), Quartermaster Corps: Hilt of saber to the front.

Principal musician: Bell of bugle to the front.

Saddler: Blade of knife up.

Sergeant of field music: Bell of bugle to the front.

Signal Corps: Dress chevrons to be worn with the white flag to the front.

Stable sergeant: Head of horse to the front.

Wagoner: One set of opposite spokes horizontal.

(j) Kinds of Chevrons and Other Insignia to be Worn with Various Uniforms. The different kinds of chevrons and other sleeve insignia for enlisted men will be worn with the various uniforms as follows:

| Kind of chevron or other insignia. | To be worn on— |
|---|--|
| Dress..... | Dress coat. |
| Olive-drab woolen..... | Olive-drab woolen coat, overcoat, and olive-drab shirt. |
| Olive-drab cotton..... | Olive-drab cotton and the fatigue coats, except on fatigue coats of Coast Artillery. |
| Olive-drab cotton on white background... | White coats (by noncommissioned officers and privates, first class, Hospital Corps). |
| Red material on blue denim background.. | Fatigue coat, Coast Artillery. |
| White material stitched in buff color..... | White coats (by cooks and bakers, Quartermaster Corps). |
| Blue denim material stitched in buff color.. | For all enlisted men of the Quartermaster Corps whose classification calls for mechanical or manual labor. |
| Blue denim material stitched in orange color traced in white. | For all enlisted men of the Signal Corps whose classification calls for mechanical or manual labor. |
| Green material on blue denim background. | Fatigue coat, Coast Artillery School Detachment. |

86. Rescinded.**87. Leggings.**

Officers will wear russet leather or pigskin leggings with the service uniform, except that, unless otherwise prescribed, mounted officers and other officers when mounted may wear russet-leather boots instead, and that in the field officers may wear canvas leggings or woolen puttees.

Enlisted men will wear the prescribed leggings with the service uniform.

88. Meat Can, Knife, Fork, and Spoon will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, these articles will be carried in the haversack when dismounted; when mounted, in the near-side saddlebag or offside pommel pocket.

89. Nose Bag or Feed Bag will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, the nose bag will be carried by officers on offside of the cante, and, when the blanket is carried, it will inclose the end of blanket roll on offside of the cante, as prescribed in the Cavalry Drill Regulations for enlisted men. The feed bag (grain bag inclosed) will be carried as a roll in the pommel coat straps and, with the new model equipments, on top of the pommel pockets.

The blanket will not be carried on the saddle by officers merely for purposes of inspection.

90. Oilskin Clothing (black), including hats and half-hip rubber boots, may be worn by officers and enlisted men of mine companies, mine planters, cable steamers, Quartermaster Corps, of companies, Coast Artillery Corps, on duty in the Coast Defenses of the Columbia, by troops in Alaska, and by officers and enlisted men on duty at the Sandy Hook Proving Ground. (C. U. R., No. 12, June 15, 1915.)

91. Overalls. Troops to whom overalls have been issued will wear them on stable duty instead of the fatigue uniform.

92. Overcoat.

(a) Blanket-lined overcoats will be issued to troops stationed in extremely cold regions when the necessity for such issue is certified by the post com-

mander, but only to men performing guard duty or other necessary outdoor duty when exposure to weather would jeopardize life or limb. These overcoats will not be charged to the enlisted men, but will remain the property of the United States.

(b) Olive-drab. The olive-drab overcoat will be worn over any uniform without change of headgear whenever prescribed. When off duty, the overcoat may be worn in cold or other inclement weather.

(c) The overcoat will be buttoned throughout whenever worn.

(d) When in the opinion of the commanding officer the climatic conditions make it advisable, officers may be permitted to wear, in the field only, a short double breasted overcoat of drab moleskin cloth lined with sheepskin and with a six-inch rolling sheepskin collar dyed beaver shade and provided with two outside lower pockets.

Although the wearing of this coat is permissible under the conditions named above, it should not be so construed by commanding officers as to result in a part of the officers of a regiment wearing, at formations under arms in the field, this short coat and others at the same time wearing the olive-drab overcoat [92 (b)]. All should wear it or none. The wearing of mixed uniforms at formations under arms is not permissible.

93. Overshoes may be worn by officers and enlisted men when not at formations and will be worn whenever prescribed by the commanding officer.

94. Picket Pin and Lariat will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, these articles, if new model, will be carried, the picket pin in picket-pin carrier (special) and the lariat, rolled, on top of the cante roll, fastened with coat straps; if old model, the picket pin, with lariat neatly coiled, will be fastened to the near cante ring.

95. Pistol. The pistol will be worn when equipped for field service by veterinarians and all officers, except chaplains and officers of the Medical Department. (See notes 2 and 3, p. 1888.) The pistol will be worn on the right hip. The pistol belt will be worn outside the coat or overcoat.

96. Poncho. To use the new pattern poncho as a rain protection, button the poncho together, commencing at the end provided with buttons, the length of the closed portion depending upon the height of the wearer, then pass the part so buttoned over the body and insert the head through the opening provided, the upper or unbuttoned part falling to the rear and forming a cape. If necessary, the cape thus formed may be secured by buttoning it to one of the rear buttons by means of the buttonhole in the center of the back thereof or by tying the gilling cord furnished with the poncho around the waist.

97. Ribbons.

(a) The sections of ribbons are a part of the uniform and will be worn as prescribed in this order.

(b) By Whom Worn. By those entitled to wear the corresponding badges or medals.

(c) When Worn. With the special evening dress, the dress, the mess jacket, the service, and the white uniforms.

[Note: The medal of honor, instead of the ribbon, is worn with the special evening dress and mess jacket.]

(d) How Worn. With the cotton service, the white uniform, and the white mess jacket, the ribbons, without space between them and without overlapping, will be sewed on a bar having a brooch-pin arrangement or eyelet shanks. In the latter case the bar will be secured to the coat in the same manner that the buttons are secured to the service coat. With the woolen service, the dress, the

blue mess jacket, and the special evening dress the ribbons may be sewed on the coat or on a bar as just described.

Ribbons will be worn on the left breast in a horizontal line about 4 inches below the middle point of the top of the shoulder.

In cases where the ribbons are sewed on the coat, enlisted men, in full dress uniform, wearing badges will pin them just above the ribbons, so as to exclude the ribbons from view. If the ribbons are not sewed on the coat, they will be removed.

With the special evening dress, the blue mess jacket, and the white mess jacket, ribbons will be worn on the left breast of the coat in a horizontal line about 4 inches below the middle point of the top of shoulder, the ribbon nearest the center of the body nearly touching the edge of the lapel. If necessary to have more than one line of ribbons, the other lines will be placed below and parallel to the first line, with a space of three-eighths inch between lines, the middle of each line being in the middle of the space between the edge of the lapel and the left side of the body.

With the dress, the white, and the service uniforms ribbons will be similarly worn except that the lines will begin nearer to the center of the body.

(e) Order in Which Worn. Ribbons will be worn in the following order, from right to left:

- (1) The medal of honor ribbon.
- (2) The certificate of merit ribbon.
- (3) The Philippine congressional medal ribbon.
- (4) The campaign ribbons in the order of the dates of the campaigns.
- (5) Army of Cuban Pacification ribbon.

(f) Not to be Worn by Officers Suspended from Command or Enlisted Men in Confinement. Ribbons will not be worn by officers suspended from rank and command, nor by enlisted men serving sentence of confinement.

(g) Not to be Worn on Shirt. Ribbons will not be worn on the olive-drab shirt.

98. Saber.

(a) Officers of the dismounted service and of the staff departments, and the noncommissioned officers of the dismounted service and staff departments armed with the saber, will not carry the saber in the field. Officers and enlisted men of the mounted service when acting as dismounted troops will not carry the saber. At other times the saber will be worn by all officers when on duty with troops under arms or side arms, and on the occasions stated in the "Tables of Occasions."

(b) When dismounted, the saber will be habitually worn guard to the rear, with the scabbard hooked. When worn with the overcoat, the belt will be inside and the saber outside the overcoat. When mounted, the scabbard will be worn attached to the near side of the saddle by saber straps passing through the pommel ring and the quarter ring of the saddle. With the new model equipment, when mounted, the scabbard will be worn in the saber carrier which is held in place by passing its attaching strap through the loop on the off cantle hinge; the depending billet buckles to the carrier strap; adjust so that saber shall swing in a vertical plane. The officer uses the saber carrier for either saber. It goes on the near side also.

(c) The proper saber knot, as indicated in the "Tables of Occasions," will always be worn with the saber.

(d) Upon social occasions when the saber is worn, it may be temporarily laid aside, but the belt and slings will not be removed.

(e) The adjutant will wear side arms when placing officers in arrest. (See par. 51 (b and c).)

99. Saber Knots.

(a) The dress saber knot will be attached to the saber when worn with the full dress, the dress, and the white uniform, and when worn by the officer of the day with the special evening dress or the mess jacket, as authorized in par. 27.

(b) The service saber knot will be attached to the saber when worn with the service uniform.

100. Saddlecloth. To be used by all officers when mounted in uniform, and to be worn over the saddle blanket or pad. (For saddlecloth insignia, see par. 83.)

101. Sashes. General officers above the grade of brigadier general will, with the full dress uniform, wear the sash across the body from right shoulder to the left side and not extended around the waist; brigadier generals will wear the sash in one thickness around the waist, so as to fit snugly over the belt.

102. Shirts.

(a) Olive Drab. The commanding officer may, when he considers it advisable, on account of climatic or other conditions, prescribe the wearing of the olive-drab shirt without the coat at certain drills. (See par. 111.) A belt will then be worn instead of suspenders. When the shirt is so worn, elastic or other arm bands will not be worn.

(b) When the olive-drab shirt is worn without the coat, except when the coat is only temporarily removed, the insignia of rank will be worn on the collar by officers, as prescribed in par. 82, and the chevrons will be worn on the sleeves of the shirt by noncommissioned officers as prescribed in par. 85 (c).

(c) The olive-drab shirt will be worn with the service uniform in the field.

(d) White Evening Dress. White evening dress shirts with plain stiff bosoms will be worn by officers with the special evening dress and the mess jacket.

103. Shoes.**OFFICERS.**

The russet leather shoes will conform in general style to the shoes issued by the Quartermaster Corps. The high shoes of polished black leather, black enamel, or patent leather, will have plain black leather or plain kid tops, with or without toe tips.

Full Dress and Dress Uniform (Dismounted). High shoes of polished black leather, black enamel, or patent leather.

Service Uniform. High russet leather shoe.

Special Evening Dress and Blue Mess Jacket. High or low shoes or pumps of black enamel or patent leather.

White Uniform. Low white canvas shoes.

ENLISTED MEN.

For All Occasions. Russet leather shoes, as prescribed, for all occasions.

The Gymnasium Shoe will be worn in gymnasium work. It may be worn in barracks and may, when prescribed by the commanding officer, be carried in the surplus kit and used as a camp shoe.

104. Shoulder Belts will be worn with the full dress uniform by all officers of the Signal Corps, including those detailed therein.

105. Shoulder Knots will be worn on the full dress coat, the special evening dress coat, and the blue and the white mess jackets, except that general officers will wear epaulets with the dismounted full dress, unless capes, waterproofs,

or overcoats are worn because of inclement weather, in which event the shoulder knots may be worn.

106. Shoulder Straps will be worn on the dress coat.

107. Socks. Black socks will be worn with the blue uniform dismounted and white socks with the white uniform.

108. Spurs will always be worn when boots are worn, whether mounted or dismounted. When mounted, with leggings or woolen puttees, spurs will be worn. Black straps will be worn with black boots and russet-leather straps with russet-leather boots and leggings when the latter are worn on mounted occasions.

109. Stable Frocks. Troops to whom stable frocks have been issued will wear them on stable duty instead of the fatigue uniform.

110. Suspenders may be worn, but they must not be visible.

111. Rescinded.

112. Tin Cup will be carried as prescribed in orders from the War Department and in authorized equipment manuals, whenever issued. When such orders and manuals are not issued for particular organizations or arms of the service, the tin cup will be carried in the haversack on dismounted duty and will be secured to the canteen strap on mounted duty.

113. Waist Belts issued by the Quartermaster Corps will be worn when the olive-drab shirt is worn without the coat or sweater (par. 102 (a)). They may be worn at other times, if so desired.

114. Waterproof Capes or Overcoats. Officers may wear waterproof capes or overcoats, as nearly as practicable the color of the service uniform, when on duty involving exposure to rainy or other inclement weather. Under similar conditions mounted officers and enlisted men may wear the slicker and dismounted officers and enlisted men the ponchos issued by the Quartermaster Corps.

Slickers, instead of ponchos, are issued to enlisted men of the Quartermaster Corps, both mounted and dismounted, and to enlisted men of the Hospital Corps detailed as ambulance drivers and ambulance orderlies (C. U. R. No. 7, Jan. 12, 1915.)

115. White Collars and Cuffs.

(a) Officers. With the full dress, the dress, and the white uniforms, and with the service uniform (except when in the field, at inspection in field equipment, drill, target practice, or on other duty involving physical exertion) officers will wear white cuffs and a plain white standing collar or white stock; the collar to show one-fourth inch above the collar of the coat.

With the special evening dress and the mess jacket, either the standing or turned-down collar may be worn.

(b) Enlisted Men. With the dress and the full dress uniform, and with the service uniform when worn on pass from garrison, enlisted men will wear a plain standing white collar; the collar to show one-fourth inch above the collar of the coat.

116. Wire Cutters will be carried as prescribed in orders from the War Department or in authorized equipment manuals. When not otherwise prescribed, they will be carried in the near side saddle bag or in the near side pommel pocket. (C. U. R. No. 5, Dec. 16, 1914.)

PART III.

UNIFORM OF THE UNITED STATES ARMY.

TABLES OF OCCASIONS.

OFFICERS.

SERVICE UNIFORM AND EQUIPMENT.

| Occasions. | By whom. | Articles. |
|--|--|--|
| 1. For habitual garrison wear until retreat, not under arms. | All officers, acting dental surgeons, and veterinarians. | <p>A.</p> <p>When dismounted:</p> <ol style="list-style-type: none"> 1. Service cap. See par. 65 (c). 2. Service coat. 3. Service breeches. 4. Russet-leather shoes (high). 5. Russet-leather or pigskin leggings. See par. 60 (a); also par. 87. 6. White collar or stock. } See par. 115 7. White cuffs. } (a). 8. Ribbons by those entitled thereto. (Marksmanship badges optional.) 9. Olive-drab woolen gloves, when prescribed (when not on duty the olive-drab woolen gloves or the regulation riding gloves may be worn). <p>B.</p> <p>When mounted:</p> <p>Same as A, omitting "9. Olive-drab woolen gloves," and adding:</p> <ol style="list-style-type: none"> 1. Regulation riding gloves (optional when not on duty). 2. Spurs, with russet-leather straps. <p>C.</p> <p>When dismounted:</p> <p>Same as A, adding:</p> <ol style="list-style-type: none"> 1. Garrison belt. 2. Saber, with service knot. <p>D.</p> <p>When mounted:</p> <p>Same as A, omitting "9. Olive-drab woolen gloves," etc., and adding:</p> <ol style="list-style-type: none"> 1. Regulation riding gloves. 2. Spurs, with russet-leather straps. 3. Garrison belt. 4. Saber, with service knot. <p>A.</p> <p>When dismounted:</p> <ol style="list-style-type: none"> 1. Service hat, with hat cord sewed on (peaked, 4 indentations). 2. Olive-drab shirt. 3. Service coat. 4. Service breeches. |
| 2. For habitual garrison duty, under arms. | All officers..... | |
| 3. For field duty | All officers, acting dental surgeons and veterinarians. | |

[NOTE: Chaplains when dismounted or mounted will not wear saber with saber knot, nor slings with belt.]

Tables of Occasions—Continued.

OFFICERS—Continued.

SERVICE UNIFORM AND EQUIPMENT—Continued.

| Occasions. | By whom. | Articles. |
|------------------------|---|--|
| | | A |
| 3. For field duty..... | { All officers, acting dental surgeons, and veterinarians. | 5. Russet-leather shoes (high). 6. Russet leather, pigskin, or canvas leggings, or woolen puttees. See par. 60; also par. 87. 7. Ribbons, by those entitled thereto (if coat is worn). 8. Olive-drab woolen gloves, when prescribed (optional, when not on duty). 9. Identification tag. 10. Haversack (containing meat can, knife, fork, and spoon). 11. Canteen (with canteen cover). 12. Cup. 13. First aid packet (with pouch). 14. Watch. 15. Notebook and pencils. See "C," below. |
| | | B. |
| | | When mounted: Same as A, omitting "8. Olive-drab woolen gloves," etc., and "10. Haversack (containing meat can, etc.)," and adding: |
| | | 1. Regulation riding gloves. 2. Spurs. 3. Saddle. 4. Halter (with old model equipment). 5. Bridle. 6. Saddle blanket. 7. Saddlecloth. 8. Saddlebags or pommel pockets (containing meat can, knife, fork, and spoon). 9. Surcingle or cooling strap. 10. Nosebag or feed bag. 11. Horse brush. 12. Currycomb. 13. Lariat. 14. Picket pin. 15. Ration bags (new model equip.). See "D," page following. |
| | | C. |
| 3. For field duty..... | { All officers except officers of the Medical Department and chaplains. | When dismounted: Add to A: <ol style="list-style-type: none"> 1. Pistol (with holster and 21 rounds of ammunition). 2. Pistol belt (to be worn over the coat).^a |

Tables of Occasions—Continued.

OFFICERS—Continued.

SERVICE UNIFORM AND EQUIPMENT—Continued.

| Occasions. | By whom. | Articles. |
|------------------------|---|--|
| 3. For field duty..... | { All officers except officers of the Medical Department and chaplains. | <p>{ 3. Field glass.¹ } See footnote 2, p. 1901. 4. Compass. } Note. Company officers and battalion commanders of infantry will carry whistles. For dispatch cases, see par. 71. D. When mounted: Add to B: 1. Pistol (with holster and 21 rounds of ammunition). 2. Pistol belt (to be worn over the coat).² 3. Field glass. } See footnote 2, p. 1901. 4. Compass. } 5. Saber (see par. 98a). Note. Medical officers on duty with the sanitary units of the mobile army will carry field glasses and compass.</p> |

¹ The field glasses issued to organizations by the Signal Corps are not issued for the personal use of officers, and will not be used in lieu of the officers' personal field glasses. This does not prohibit the use of high-power glasses by battery and machine-gun company commanders.

NOTES.

1. Except by the officer of the day, the service uniform will not be worn after retreat by officers in garrison, unless prescribed by the commanding officer for some particular duty, nor will it be worn off the post except as authorized in the Table of Occasions of the dress uniform (dismounted), occasion 3, p. 1889.

2. Whenever necessary for personal protection, the personnel of the Medical Department may carry pistols.

3. Veterinarians when in the field will carry pistols and ammunition.

4. The service hat will be worn with the service uniform for field duty and target practice. It will also be worn with the fatigue uniform and with stable frocks, except by enlisted men of the Coast Artillery Corps. It may be worn in garrison with the service uniform when waterproof capes, overcoats, slickers or ponchos are worn, or when, in the opinion of the post commander, exceptional or severe climatic conditions would make the wearing of the caps endanger the health of his command.

5. General officers, officers of the Staff Corps and Departments, and Cavalry officers will wear the officers' leather waist belt with magazine pocket and necessary leather slides—for first-aid packet pouch, for the canteen, and for the pistol holster. Officers of Infantry, Field Artillery, Engineers, Coast Artillery, and Signal Corps will wear the web pistol belt, model of 1912.

See note 2, p. 1897.

Tables of Occasions—Continued.

OFFICERS—Continued.

DRESS UNIFORM (DISMOUNTED).

[Not required for the Tropics.]

| Occasions. | By whom. | Articles. |
|--|---------------|--|
| 1. For ordinary wear after retreat (in warm weather the white mess jacket or white uniform may be worn instead; in other weather the blue mess jacket or the special evening dress may be worn instead). | All officers. | When not under arms: |
| 2. For social use before retreat (for functions before retreat the full dress may be prescribed). | | 1. Dress cap. ¹ |
| 3. When off the post, except that when riding or taking physical exercise, the service uniform may be worn instead. In warm weather the commanding officer may prescribe the cotton service uniform for wear when off the post before retreat, see notes 2 and 3, p. 1897. | | 2. Dress coat. |
| 4. When dismounted dress uniform is prescribed for enlisted men and on such other occasions as may be prescribed. | | 3. Dress trousers. |
| 5. As prescribed for White House, p. 1895. | | 4. White collar or stock. |
| | | 5. White cuffs. |
| | | 6. Black shoes (high top). |
| | | 7. Black socks. |
| | | 8. White gloves when prescribed. (They may be worn on nonofficial occasions if desired.) |
| | | 9. Ribbons by those entitled to wear them. (Marksmanship badges optional.) |
| | | When under arms (except chaplains): |
| | | Omit "when prescribed" after "8. White gloves;" add: |
| | | 1. Saber (with full-dress slings and dress knot). |
| | | 2. Belt (worn under coat). |
| | | 3. Aiguillettes by those authorized to wear them. |

DRESS UNIFORM (MOUNTED).

[Not required for the Tropics.]

| Occasions. | By whom. | Articles. |
|--|---------------|--|
| 1. When the mounted dress uniform is prescribed for enlisted men and on such other occasions as may be prescribed. | All officers. | When not under arms: |
| 2. When riding off the reservation it may be worn. | | 1. Dress cap. |
| 3. As prescribed for White House, p. 1895. | | 2. Dress coat. |
| | | 3. Dress breeches. |
| | | 4. Black boots. |
| | | 5. White collar or stock. |
| | | 6. White cuffs. |
| | | 7. White leather gloves. |
| | | 8. Spurs, with black straps. |
| | | 9. Ribbons by those entitled to wear them. (Marksmanship badges optional.) |
| | | When under arms, add (except chaplains): |
| | | 1. Saber (with full-dress slings and dress knot). |
| | | 2. Belt (worn under coat). |
| | | 3. Aiguillettes by those authorized to wear them. |

¹ The former "full dress cap" is designated in this order as the "dress cap," except in the case of acting dental surgeons and veterinarians, in which case

Tables of Occasions—Continued.

OFFICERS—Continued.

FULL DRESS UNIFORM (DISMOUNTED).

[Not required for the Tropics.]

| Occasions. | By whom. | Articles. |
|--|--|--|
| <ol style="list-style-type: none"> 1. State occasions at home or abroad. 2. When receiving the President of the United States. 3. When receiving or calling officially upon the President, sovereign, or member of the royal family of other countries. 4. Ceremonies and entertainments when it is desired to do special honor to the occasion. 5. When full dress, dismounted, is prescribed for enlisted men. 6. Social or official functions of a general nature, when prescribed. (If after retreat, the special evening dress will be prescribed instead, unless the occasion be one of special ceremony.) 7. As prescribed for White House, p. 1895. | <p>General officers when dismounted</p> <p>All other officers when dismounted.</p> | <ol style="list-style-type: none"> 1. Chapeau (or dress cap when shoulder knots are worn. See par. 72 (b)). 2. Full dress coat. 3. Full dress trousers. 4. Black shoes (high top). 5. Black socks. 6. White collar or stock. 7. White cuffs. 8. Saber, with dress knot. 9. Full dress belt for officers above the grade of brigadier general; belt of black webbing (with full dress slings), for brigadier generals, to be worn under the sash. 10. Plain white gloves (except white cotton). 11. Epaulets (shoulder knots may be worn when capes or overcoats are worn in inclement weather). 12. Sash. 13. Medals, badges, aiguillettes, and shoulder belts by those authorized to wear them. (Marksmanship badges optional.) <ol style="list-style-type: none"> 1. Dress cap. 2. Full dress coat. 3. Dress trousers (full dress trousers for officers of the staff corps and departments, except the Quartermaster, Engineer and Signal Corps). 4. Black shoes (high top). 5. Black socks. 6. White collar or stock. 7. White cuffs. 8. Saber, with dress knot.¹ 9. Full dress belt. 10. Plain white gloves (except Berlin). 11. Shoulder knots. 12. Medals, badges, aiguillettes, and shoulder belts by those authorized to wear them. (Marksmanship badges optional.) |

the "dress cap" is the same as the former "dress cap." See specifications issued by the Quartermaster General.

[Note: The dress uniform, mounted, may be prescribed for mounted officers on dismounted occasions.]

¹ Chaplains will not wear saber with dress knot, nor slings with full-dress belt.

Tables of Occasions—Continued.

OFFICERS—Continued.

FULL DRESS UNIFORM (MOUNTED).

[Not required for the Tropics.]

| Occasions. | By whom. | Articles. |
|---|---|---|
| <ol style="list-style-type: none"> 1. When full dress, mounted, is prescribed for enlisted men. 2. Social or official functions of a general nature when prescribed. (If after retreat, the special evening dress will be prescribed instead, unless the occasion be one of special ceremony.) 3. As prescribed for White House (p. 1895). On the following occasions when required that the officer be mounted: <ol style="list-style-type: none"> 1. State occasions at home or abroad. 2. When receiving the President of the United States. 3. When receiving or officially calling upon the President, sovereign, or member of the royal family of other countries. 4. Ceremonies and entertainments when it is desired to do special honor to the occasion. | <p>General officers...</p> <p>All other officers.</p> | <ol style="list-style-type: none"> 1. Dress cap. 2. Full dress coat. 3. Dress breeches. 4. Black boots. 5. White collar or stock. 6. White cuffs. 7. Saber, with dress knot. 8. Full dress belt for officers above the grade of brigadier general; belt of black webbing (with full dress slings) for brigadier generals, to be worn under the sash. 9. White leather gloves. 10. Shoulder knots. 11. Sash. 12. Spurs, with black straps. 13. Medals, badges, aiguillettes and shoulder belts by those entitled to wear them. (Marksmanship badges optional.) <ol style="list-style-type: none"> 1. Dress cap. 2. Full dress coat. 3. Dress breeches. 4. Black boots. 5. White collar or stock. 6. White cuffs. 7. Saber, with dress knot.² 8. Full dress belt. 9. White leather gloves. 10. Shoulder knots. 11. Spurs, with black straps. 12. Medals, badges, shoulder belts and aiguillettes by those entitled to wear them. (Marksmanship badges optional.) |

NOTES.

1. The full dress uniform, mounted, may be prescribed for mounted officers on dismounted occasions.

2. Chaplains will not wear saber with dress knot, nor slings with full dress belt.

Tables of Occasions—Continued.

OFFICERS—Continued.

SPECIAL EVENING DRESS.

[Not required for the Tropics.]

| Occasions. | By whom. | Articles. |
|--|-------------------|---|
| <ol style="list-style-type: none"> 1. Social or official functions of a general nature occurring in the evening. (If the occasion be one of special ceremony the full dress may be prescribed instead.) In warm weather the white uniform may be prescribed instead. 2. For private formal dinners and other private formal social functions occurring in the evening. (The mess jacket may be worn instead.) 3. For ordinary evening wear. | All officers..... | <ol style="list-style-type: none"> 1. Dress cap. 2. Special evening dress coat. 3. Special evening dress trousers by officers of the Infantry, Cavalry, and Artillery; dress trousers by officers of the Quartermaster, Engineer, and Signal Corps; full dress trousers by all other officers. 4. High or low shoes, or pumps, of black enamel or patent leather. 5. Black socks. 6. White evening dress shirt with standing or turned-down collar and plain gold shirt studs. See par. 102 (d). 7. White vest with small regulation buttons of gold or gilt. 8. Evening dress tie of black silk. 9. Plain white kid gloves (compulsory at dances; optional on other occasions). 10. Medal of honor by those entitled thereto. 11. Ribbons, except medal of honor ribbon, by those entitled thereto. 12. Aiguillettes, by those authorized to wear them (optional with general officers). |

Tables of Occasions—Continued.

OFFICERS—Continued.

BLUE MESS JACKET.

[This uniform is optional and can not be prescribed by the commanding officer.]

| Occasions. | By whom. | Articles. |
|---|--------------------|--|
| <p>In the United States:</p> <p>1. For private formal dinners and other private formal social functions occurring in the evening (the special evening dress may be worn, and in warm weather the white mess jacket).</p> <p>2. For ordinary evening wear (the dress uniform may be worn, and in warm weather the white mess jacket or the white uniform).</p> | All officers. | <p>1. Dress cap.</p> <p>2. Blue mess jacket.</p> <p>3. Dress trousers¹ by officers of Infantry, Cavalry, Artillery, Quartermaster, Engineer, and Signal Corps; full dress trousers by all other officers.</p> <p>4. High or low shoes, or pumps, of black enamel or patent leather.</p> <p>5. Black socks.</p> <p>6. White evening dress shirt with standing or turned-down collar and plain gold shirt studs. See par. 102 (d).</p> <p>7. White or blue vest, with small regulation buttons of gold or gilt.</p> <p>8. Evening dress tie of black silk.</p> <p>9. Plain white kid gloves (compulsory at dances; optional on other occasions).</p> <p>10. Medal of honor, by those entitled thereto.</p> <p>11. Ribbons, except medal of honor ribbon, by those entitled thereto.</p> <p>12. Aiguillettes, if desired by those authorized to wear them.</p> |

¹ The dress trousers worn with the mess jacket will have no pockets, side or hip, and will be cut high in the waist, without buckle in the back. These trousers may be worn with the full dress and the dress uniforms.

Tables of Occasions—Continued.

OFFICERS—Continued.

WHITE MESS JACKET.

[In the United States, including Alaska, this uniform is optional and can not be prescribed by the commanding officer.]

| Occasions. | By whom. | Articles. |
|---|-------------------|---|
| <p>In the Tropics:</p> <ol style="list-style-type: none"> 1. For private formal dinners and other private formal social functions occurring in the evening. 2. For evening functions, social or official, of a general nature. 3. For ordinary evening wear (the white uniform may be worn instead). <p>In the United States (optional):</p> <p>In warm weather for ordinary evening wear and for private formal dinners and other private formal social functions occurring in the evening.</p> | All officers..... | <ol style="list-style-type: none"> 1. White cap. 2. White mess jacket, with shoulder knots. 3. White trousers. 4. Low white canvas shoes. 5. White socks. 6. White evening dress shirt with standing or turned-down collar and plain gold shirt studs. See par. 102 (d). 7. White vest with small regulation buttons of gold or gilt. 8. Evening dress tie of black silk. 9. White gloves of lisle thread (compulsory at dances; optional on other occasions). 10. Medal of honor, by those entitled thereto. 11. Ribbons, except medal of honor ribbon, by those entitled thereto. 12. Aiguillettes, by those authorized to wear them (optional with general officers; other officers will wear them when directed by their commanders). |

WHITE UNIFORM.

[Not to be worn on duty with troops under arms.]

| | | |
|--|--|---|
| <p>In the Tropics:</p> <ol style="list-style-type: none"> 1. Until retreat, when prescribed by the commanding officer. 2. For ordinary wear after retreat (the white mess jacket may be worn instead). 3. For official occasions, under arms, after retreat, when prescribed by the commanding officer. <p>In the United States in warm weather (optional):</p> <ol style="list-style-type: none"> 1. For ordinary wear after retreat. 2. For social use before retreat. 3. When off the post. | All officers, acting dental surgeons, and veterinarians. | <p>Not under arms:</p> <ol style="list-style-type: none"> 1. White cap. 2. White coat. 3. White trousers. 4. Low white canvas shoes. 5. White socks. 6. White collar or stock. 7. White gloves of lisle thread at dances only. 8. Ribbons, by those entitled to wear them. <p>Under arms, add:</p> <ol style="list-style-type: none"> 1. Aiguillettes, by those authorized to wear them. 2. Saber, with dress knot.¹ 3. Belt (under coat) with full dress slings. 4. White gloves of lisle thread. |
|--|--|---|

¹ Chaplains will not wear saber with dress knot, nor slings with full dress belt.

Tables of Occasions—Continued.

OFFICERS—Continued.

WHITE HOUSE.

| Occasions. | Uniform. |
|---|---|
| (a) Official occasions. | |
| When calling by appointment upon the President of the United States. | Full dress, dismounted. |
| New Year's and other state receptions (until 6 p. m.). | Full dress, dismounted, for dismounted officers. Full dress, mounted, for officers of cavalry and field artillery; full dress, mounted or dismounted, for all other mounted officers, and retired officers of the mounted service. |
| State receptions (evening) ¹ | Full dress, dismounted. |
| State dinners ² | Full dress, dismounted. |
| (b) Social occasions. | |
| When calling by appointment on the President and wife of the President (until 6 p. m.). | Unless white uniform with side arms be indicated: Dress, dismounted, with side arms, for dismounted officers. |
| All other daytime functions, including luncheons, afternoon teas, garden parties, etc. | Dress, mounted, with side arms, for officers of cavalry and field artillery; dress mounted or dismounted, with side arms, for all other mounted officers and retired officers of the mounted service. |
| Unofficial dinners..... | } Special evening dress. Retired officers may wear the full dress, dismounted. |
| Evening musicale or dance..... | |

¹ State receptions (evening) at the White House are the customary New Year's reception and those known as the diplomatic, judicial, congressional, and Army and Navy receptions, or others of special formality such as the President may give in honor of a foreign or other distinguished personage.

² State dinners are those customary dinners given by the President, known as the diplomatic dinner, and others of special formality, to which officers of the Army may be invited strictly in their official capacity.

SCHEDULE OF UNIFORMS WHEN OFFICERS OF BOTH SERVICES APPEAR TOGETHER.

Throughout the military and naval service of the United States, whenever on occasions of ceremony officers of both services are required to appear together in uniform, officers of the Army will be governed by the following schedule:

Uniform A:

Army, full dress.

Navy, special full dress.

Marine Corps, special full dress.

Uniform B:

Army, dress.

Navy, service dress.

Marine Corps, undress.

Uniform C:

Army, special evening dress.

Navy, evening dress A.

Marine Corps, special full dress.

Whether the full dress, mounted or dismounted, or the dress, mounted or dismounted, shall be worn, will be determined by the nature of the occasion as set forth in the "Tables of Occasions."

Tables of Occasions—Continued.

ENLISTED MEN.

SERVICE UNIFORM.

| Occasions. | All enlisted men. | Articles. |
|---|-------------------|--|
| 1. For habitual garrison wear until retreat when not under arms. | When dismounted. | <p>A.</p> <ol style="list-style-type: none"> 1. Service cap. 2. Service coat. 3. Service breeches. 4. Russet leather shoes. 5. Leggings. 6. White collars (only when on pass from garrison; see par. 115 (b)). 7. Ribbons by those entitled thereto. (Marksmanship badges optional.) 8. Olive-drab woolen gloves, when prescribed (optional when not on duty). |
| | When mounted | <p>B.</p> <ol style="list-style-type: none"> Same as A, omitting "8. Olive-drab woolen gloves," etc., and adding: 1. Regulation riding gloves, when prescribed (optional when not on duty). 2. Spurs. |
| 2. For habitual garrison duty under arms. 3. For inspection and guard mount, when prescribed by the commanding officer. See occasion 2, p. 1898, and occasion 1, p. 1899. | When dismounted. | <p>C.</p> <ol style="list-style-type: none"> Same as A, adding: 1. Garrison belt. 2. Cartridge box. (When the new garrison belt is issued, it will be worn instead of the russet leather belt and cartridge box.) |
| | When mounted | <p>D.</p> <ol style="list-style-type: none"> Same as A, omitting "8. Olive-drab woolen gloves," and adding: 1. Regulation riding gloves, when prescribed. 2. Spurs. 3. Garrison belt. 4. Cartridge box. |
| 4. For all other ceremonies when climate or weather will not permit the use of the dress or full dress. | | |
| 5. When changing station by rail or water. | Dismounted... | Same as C. |

[Note: The new garrison belt for enlisted men of infantry is of olive-drab webbing with sliding ammunition pockets; and for cavalry, is of russet leather with sliding ammunition pockets and attachments of leather.]

Tables of Occasions—Continued.

ENLISTED MEN—Continued.

SERVICE UNIFORM—Continued.

| Occasions. | All enlisted men. | Articles. |
|-------------------------|-------------------|---|
| | | F. |
| | | 1. Service hat, with hat cord sewed on (peaked, 4 indentations). |
| | | 2. Olive-drab shirt. |
| | | 3. Service coat. |
| | | 4. Service breeches. |
| | | 5. Russet leather shoes. |
| | | 6. Leggings. |
| | | 7. Identification tag. |
| | | 8. Brassards, by those entitled to wear them. |
| | | 9. Ribbons by those entitled thereto. (Not to be worn on the olive-drab shirt.) |
| 6. For field duty. | When dis-mounted. | 10. Olive-drab woolen gloves, when prescribed (optional when not on duty). |
| | | 11. Field belt. |
| | | G. |
| | | Same as F, omitting "10. Olive-drab woolen gloves," and adding: |
| | When mounted | 1. Regulation riding gloves, when prescribed. |
| | | 2. Spurs. |

[Note: The personal equipment of enlisted men will be as prescribed in orders and regulations.]

NOTES.

1. Except by members of the guard, the service uniform will not be worn out of barracks after retreat by enlisted men in garrison, unless prescribed by the commanding officer for some particular duty, or authorized as stated in note 3, below.

2. There are two kinds of service uniforms, the woolen olive-drab and the cotton olive-drab. The woolen olive-drab uniform will be prescribed for habitual wear when the climate or weather does not require the cotton olive-drab.

3. The cotton olive-drab will be prescribed by commanding officers for soldiers on pass in warm weather and also for use in garrison in warm weather when out of barracks after retreat. The woolen olive-drab will not be worn by soldiers on pass from commands supplied with the dress uniform.

4. When under arms, every enlisted man will carry the arms pertaining to his grade and branch of service.

5. With dismounted service uniform, in garrison under arms and when changing station by rail or water, noncommissioned staff officers will wear belt and saber instead of belt and cartridge box.

6. With dismounted service uniform, in the field, noncommissioned staff officers will carry the pistol instead of the saber.

7. The service cap is not authorized for enlisted men in the Philippines; the service hat will be worn for field duty.

8. When troops are traveling by rail, the train commander may cause the arms and equipments not required for the necessary guard duty en route to be properly secured and stored in a property or baggage car. (Par. 393, Field Service Regulations, 1914.)

9. Trousers, cotton or woolen service, may be issued to and worn without leggings by such enlisted men as are on duty in offices, in the buildings in

which offices are situated, including enlisted men of the Hospital Corps while on duty in dispensaries. The trousers will be worn only during the time actually engaged on such office duty.

10. The service hat will be worn with the service uniform for field duty and target practice. It will also be worn with the fatigue uniform and with stable frocks, except by enlisted men of the Coast Artillery Corps. It may be worn in garrison with the service uniform when waterproof capes, overcoats, slickers, or ponchos are worn or when, in the opinion of the post commander, exceptional or severe climatic conditions would make the wearing of the caps endanger the health of his command.

Tables of Occasions—Continued.

ENLISTED MEN—Continued.

DRESS UNIFORM.

[Not required for the Tropics.]

| Occasions. | All enlisted men. | Articles. |
|--|-------------------|---|
| 1. For retreat roll call; for habitual garrison wear after retreat, and when on pass from commands supplied with the dress uniform (in warm weather the commanding officer will prescribe the cotton olive-drab instead). See notes 2 and 3, p. 1897. | Dismounted... | <p>A.</p> <p>Not under arms:</p> <ol style="list-style-type: none"> 1. Dress cap. 2. Dress coat. 3. Dress trousers. 4. Russet-leather shoes. 5. White collar. 6. Ribbons by those entitled to wear them. (Marksmanship badges optional.) |
| 2. For parade and other ceremonies (except inspection and guard mounting, and then if prescribed by the commanding officer), when weather and climate permit. (The full dress uniform may be prescribed instead.) (See occasions 3 and 4, p. 1896.) | | <p>B.</p> <p>Under arms with side arms, add to A:</p> <ol style="list-style-type: none"> 1. White gloves or olive-drab woolen gloves, as prescribed by the commanding officer. 2. Garrison belt. 3. Cartridge box. (When the garrison belt is issued it will be worn instead of the russet-leather belt and the cartridge box.) |
| | Mounted... .. | <p>C.</p> <p>Not under arms:</p> <ol style="list-style-type: none"> 1. Dress cap. 2. Dress coat. 3. Dress trousers. 4. Russet-leather shoes. 5. White collar. 6. Leggings. 7. Regulation riding gloves. 8. Ribbons by those entitled to wear them. (Marksmanship badges optional.) 9. Spurs. |
| | | <p>D.</p> <p>Under arms or with side arms, add to C:</p> <ol style="list-style-type: none"> 1. Garrison belt. 2. Cartridge box. (As the garrison belt is issued it will be worn instead of the russet-leather belt and the cartridge box.) |

Tables of Occasions—Continued.

ENLISTED MEN—Continued.

FULL DRESS UNIFORM.

[Not required for the Tropics.]

| Occasions. | All enlisted men. | Articles. |
|---|--|--|
| <p>1. For parade and all other ceremonies in garrison (except inspection and guard mounting, and then if prescribed by the commanding officer) when climate and weather permit. (The dress uniform may be prescribed instead.) (See occasions 3 and 4, p. 1896.)</p> <p>2. For all ceremonies other than garrison, when prescribed by the commanding officer.</p> | <p>Dismounted...</p> <p>Mounted.....</p> | <p>A.</p> <ol style="list-style-type: none"> 1. Dress cap. 2. Dress coat. 3. Dress trousers. 4. Russet-leather shoes. 5. White collar. 6. Medals and badges by those entitled to wear them. (Marksmanship badges optional.) 7. Breast cord. 8. White gloves or olive-drab woolen, as prescribed by the commanding officer. 9. Garrison belt. 10. Cartridge box. (When the garrison belt is issued it will be worn instead of the russet-leather belt and cartridge box.) <p>B.</p> <p>Same as A, omitting "8. White gloves or olive-drab woolen gloves," and adding:</p> <ol style="list-style-type: none"> 1. Leggings. 2. Regulation riding gloves. 3. Spurs. |

WHITE UNIFORM.

| Occasions. | By what enlisted men worn. | Articles. |
|---|---|--|
| <p>1. When working in kitchen.</p> <p>2. In wards, dispensaries, post-mortem rooms, operating rooms, and mess rooms, also by Hospital Corps men while on duty assisting dental surgeons.</p> <p>3. When working in kitchen or bakery.</p> | <p>Cooks.....</p> <p>Members of the Hospital Corps.</p> <p>Cooks and bakers of the Quartermaster Corps.</p> | <ol style="list-style-type: none"> 1. White coat (for members of the Hospital Corps, gilt collar ornaments same as those of the dress coat). 2. White trousers. 3. Russet-leather shoes. <p>White cotton cap, apron, coat, and trousers, furnished by the Quartermaster Corps, with chevrons of grade only.</p> |

Tables of Occasions—Continued.

ENLISTED MEN—Continued.

FATIGUE UNIFORM.

| Occasions. | By what enlisted men worn. | Articles. |
|---|--|--|
| 1. On fatigue, at stables and at mountain battery drills involving packing and unpacking, at work as garrison prisoners, or on any other duty which would render the uniform dirty or unsightly. (Mounted troops to whom stable frocks and overalls have been issued will wear them on stable duty instead of the fatigue uniform.) | All enlisted men, except of the Coast Artillery. | <ul style="list-style-type: none"> 1. Fatigue coat. 2. Fatigue trousers. 3. Service hat. 4. Russet-leather shoes. |
| 2. On fatigue, at work or drill at emplacements, and at work as garrison prisoners. (Fatigue clothing will not be worn by enlisted men at drill in range towers or plotting rooms.) | Enlisted men of the Coast Artillery and of the aviation section Signal Corps. | <ul style="list-style-type: none"> 1. Fatigue coat. 2. Fatigue trousers. 3. Blue denim hat. 4. Russet-leather shoes. 5. Leather gloves by those whose work requires it. |
| 3. On all mechanical and manual work. | All enlisted men of the the Quartermaster Corps whose classification calls for mechanical or manual work, and enlisted men of the aviation section Signal Corps. | As prescribed for the Coast Artillery. |

[Note: Noncommissioned officers in charge of working parties will not wear the fatigue uniform unless their duties be such as to make it necessary.]

PART IV.

LIST OF ARMS AND EQUIPMENTS TO BE IN POSSESSION OF OFFICERS.

For the purpose of inspection the whole equipment may be required.
General, Lieutenant General, and Chief of Staff. Such as they may desire.
All Other Officers—

DISMOUNTED OFFICERS.

A.

Arms. Saber, pistol, and ammunition.

B.

Personal equipment—

- | | |
|---|--|
| 1. Bedding roll (canvas). ¹ | 14. Pencils. |
| 2. Blanket. | 15. Pistol belt. ² |
| 3. Canteen, with strap. | 16. Pistol holster. |
| 4. Clothing roll (canvas). ¹ | 17. Saber belts (full dress and garrison). |
| 5. Compass. ³ | 18. Saber knots (dress and service). |
| 6. Field glass. ³ | 19. Saber scabbard. |
| 7. First-aid packet and pouch. | 20. Shelter tent, mounted, complete. |
| 8. Fork. | 21. Spoon. |
| 9. Haversack and pack carrier. | 22. Tin cup. |
| 10. Identification tag. | 23. Watch. |
| 11. Knife. | 24. Whistle, by all company officers and battalion commanders of infantry. ⁴ |
| 12. Meat can. | |
| 13. Notebook. | |

¹ The bedding roll adopted by the Quartermaster Corps or any other canvas roll may be used as a combination bedding-clothing roll.

² Field glasses and compasses, by officers serving with troops and all others when their duties may require their use. For exceptions, in case of medical officers and chaplains, see page 1902.

³ General officers, officers of the Staff Corps and Departments, and Cavalry officers will wear the officers' leather waist belt with magazine pocket and necessary leather slides for first-aid packet pouch, for the canteen, and for the pistol holster. Officers of Infantry, Field Artillery, Engineers, Coast Artillery, and Signal Corps will wear the web pistol belt, model of 1912.

⁴ Three types of whistles of different tone are furnished by the Quartermaster Corps, as follows:

The "Siren" for the Battalion Group, consisting of major, battalion adjutant, and battalion sergeant major of the Infantry and Cavalry arms.

The "Kinglet" for the Company Commander Group, consisting of captain and two musicians.

The "Thunderer" for the Platoon Leader Group, consisting of lieutenants and sergeants.

NOTE.

The bedding and clothing rolls adopted by the Quartermaster Corps may be purchased from the Depot Quartermaster, Twenty-sixth Street and Grays Ferry Road, Philadelphia, Pa., at the prices specified in the Annual Price List of Clothing and Equipage.

MOUNTED OFFICERS.

Arms. Same as A, except that the articles mentioned are not prescribed for chaplains.

Medical officers and dental surgeons will not be required to provide themselves with pistols and ammunition, but they may carry same when necessary for personal protection.

Personal Equipment. Same as B, omitting "9. Haversacks and pack carrier," and adding—

1. Dispatch case, by staff officers and those acting as such, whose duty may require them to use a dispatch case. (See par. 71.)
2. Saber straps or saber carrier. (See par. 98 (b).)
3. Shoulder belts, by officers of the Signal Corps, including those detailed therein.
4. Spurs (with russet and black leather straps).

Chaplains will not be required to provide themselves with compass, field glass, pistol belt, saber knot and saber straps, or carrier.

Medical officers and dental surgeons will not be required to provide themselves with field glass, compass, and pistol, but medical officers on duty with sanitary units in the field will carry field glass and compass. (See note 2, p. 1888.)

Horse equipments—

| New Model. | Old Model. |
|--|--|
| 1. Bridle. | 1. Bridle. |
| 2. Cooling strap. | 2. Bridle, watering (issued only with curb bridle, M. 1902). |
| 3. Carrier strap. | 3. Currycomb. |
| 4. Currycomb. | 4. Feed bag. |
| 5. Feed bag. | 5. Grain bag. |
| 6. Grain bag. | 6. Halter, complete. |
| 7. Halter, stable. | 7. Horse brush. |
| 8. Horse brush. | 8. Horse cover (blanket lined, when required). |
| 9. Horse cover (blanket lined, when required). | 9. Lariat. |
| 10. Lariat. | 10. Lariat strap. |
| 11. Picket pin. | 11. Link. |
| 12. Picket pin carrier, special. | 12. Picket pin. |
| 13. Pommel pockets, officer's. | 13. Saddle (McClellan or Whitman). |
| 14. Ration bags. | 14. Saddlebags. |
| 15. Saddle, officer's. | 15. Saddle blanket. |
| 16. Saddle blanket. | 16. Saddlecloths (2), officer's (with insignia). |
| 17. Saddlecloths (2), officer's (with insignia). | 17. Surcingle. |

NOTES.

1. For articles that officers may draw from the Ordnance Department for their official use, see A. R., 1522 and G. O. 24 W. D. 1914. Dispatch cases are issued as indicated in par. 71.

2. Officers below the grade of major, required to be mounted, will be furnished with horse equipments by the Ordnance Department. (A. R., 1520.)

INFANTRY DRILL REGULATIONS

FOR

AUTOMATIC MACHINE RIFLE, CALIBER .30

MODEL OF 1909

**PARAGRAPHS 97 TO 145, INCLUSIVE, HAVE BEEN LEFT OUT,
AS THEY PERTAIN ONLY TO CAVALRY.**

MACHINE-GUN DRILL REGULATIONS, 1914.

1. It is presumed that members of a machine-gun organization are primarily cavalrymen and infantrymen and have been instructed as such. Subjects covered by the drill regulations of the particular arm or by authorized manuals have been omitted from the text, except in cases where the importance of the subject renders repetition advisable.

2. All members of a machine-gun organization will receive instruction in all that pertains to the machine gun and its equipment.

3. These regulations refer to the automatic machine rifle, caliber .30, model of 1909.

4. The term "machine-gun organization" refers to both mounted and dismounted units. Where the regulations are applicable to Cavalry only or to Infantry only, it will be indicated as Machine-Gun Troop; Machine-Gun Company; Machine-Gun Platoon, Cavalry; or Machine-Gun Platoon, Infantry.

SIGNALS.

5. Signals used by machine-gun organizations will be those prescribed in the drill regulations of the particular arm, field service regulations and other manuals of instruction governing the arm.

Prescribed signals are limited to such as are essential as a substitute for the voice under conditions which render the voice inadequate.

Signals described in these regulations as peculiar to the employment of machine guns are prescribed for use only under the conditions described above.

(C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

6. **Action Front (Right, Left, or Rear).** Strike three or four blows with the clenched fist in the direction in which action is desired.

7. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

8. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

9. **Close.** Extend the arm horizontally to the right and bring the hand repeatedly to the point of the shoulder.

10. **Extend.** Sweep the arm, fully extended, slowly and horizontally across the body.

11. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

12. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

13. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

14. Rescinded. (C. C. I. and C. D. R. A. M. R. No. 1, Sept. 11, 1916.)

THE SQUAD.

15. Soldiers are grouped into squads for the purpose of making units for the operation and service of machine guns in battle and to facilitate their control and movement.

16. Men must be taught the necessity not only of remaining with the squad to which they belong, but, what is of greater importance, of keeping the gun sufficiently manned to do efficient work at all times.

17. The squad dismounted is formed and maneuvered as prescribed for the squad in the drill regulations of the arm to which it belongs. Four members of the squad constitute the gun squad; one is designated as gunner, who carries the rifle and gunner's pouch; one as loader, who carries ammunition; and one as tripod carrier. The fourth member of the squad assists in the operation of the rifle, keeps it supplied with ammunition, and performs such other duties as may be assigned to him.

18. The rifle is operated by the gunner and the loader, the former being preferably a noncommissioned officer or experienced private.

19. When not assembled, the rifle and tripod are handled in the most convenient manner.

TO PREPARE TO FIRE.

20. Being in any formation: 1. **Action Front (Right, Left, or Rear).**

The rifle is set up in the position designated by the squad leader by the gunner and tripod carrier. With the tripod at its maximum height, the gunner sits on the trail seat; at other elevations he takes the most suitable position. The loader places his ammunition boxes within convenient reach and takes such position on the right of the gun as will enable him to readily perform his duties. The disposition of the loads carried by the other members of the squad, the duties to be performed, and the position to be occupied by each will be as directed by the squad leader, who takes position so as to best direct the fire of his gun. Sights are set by the gunner and the gun loaded at command **LOAD**, or at first designation of the target. In order to reduce exposure to hostile fire, no more men than are absolutely necessary should be kept at the gun.

21. This formation of the squad, with the gun in readiness to fire, is termed the "firing formation."

TO LOAD.

22. **Load.** The gunner cocks the rifle; the loader raises the feed piece high enough to release the actuator and inserts a feed strip, being careful to depress the outer end so that the feed strip will properly enter the feed guides. He also steadies the piece by placing the left hand over the rear sight movable base.

23. The cocking handle will always be set at "Safe" except when actually firing.

24. After the first command for loading, the loader, unless otherwise directed, will keep the rifle loaded.

TO UNLOAD.

25. **Unload.** In order to remove a partially exhausted feed strip, the gunner sees that the rifle is cocked and steadies it if necessary. The loader raises the feed piece as in loading, and when the pawls are disengaged withdraws the strip and replaces it in the ammunition box.

When the feed strip is clear of the guides, the gunner, holding the cocking handle, pulls the trigger and allows the actuator to move slowly forward in order to release the tension on the actuator spring. The actuator should not be allowed to snap forward by the action of the spring alone.

26. When operating the rifle alone the gunner performs the operations prescribed for the loader.

TO CHANGE THE BARREL.

27. The gunner unscrews the barrel-locking screw and rotates the locking nut. The loader removes the barrel, the gunner assisting, if necessary, by inserting the screw-driver end of the dismantling wrench between the barrel and receiver. The loader mounts the new barrel, pushing it home; the gunner locks the locking nut and screws up the locking screw.

28. The command change barrel (feed piece, firing pin, or any other part) should be frequently given during drill.

TO SUSPEND FIRING.

29. **Suspend Firing.** The gunner removes his finger from the trigger and sets the cocking handle at "Safe." If the feed strip is nearly exhausted, the loader inserts a full one. All remain in position.

TO CEASE FIRING.

30. **Cease Firing.** The gunner sets the cocking handle at "Safe" and the piece is unloaded. The gunner lowers the sight leaf and replaces tools in the gunner's pouch. The loader replaces the feed strips in box; other members of the squad assist when so directed.

31. At any preparatory command for movement, Cease Firing is executed, the gun is dismounted from tripod, and all loads are prepared for carrying.

FIRINGS.**CLASSIFICATION OF FIRE.**

32. Machine-gun fire is classified and subdivided as follows:

- | | | |
|--|---|---------------------|
| 1. According to the manner in which a target is covered with fire. | { | a. Fixed. |
| | | b. Distributed. |
| | | c. Searching. |
| | | d. Combined sights. |
| 2. According to its use— | { | a. Ranging. |
| | | b. For effect. |

DEFINITIONS AND USE.

33. **Fixed fire** is that in which the gun is directed and fire delivered at a small target, or at a single aiming point on a large target.

Distributed fire is that in which the fire is distributed along a line, a number of different aiming points being used. These points must be selected close enough together to insure the target being covered with fire.

Searching fire is that in which the fire of the gun is distributed in the direction of depth.

Combined sights are used for the same purpose as searching fire, i.e., to secure distribution in the direction of depth. For this fire two or more guns must be employed, and such differences made in the elevation of the guns or each pair of guns that their beaten zones will overlap and a greater total depth of beaten zone be thus secured.

Ranging fire has for its object the determination or verification of the firing data when no range-finding instrument is available.

Fire for effect has for its object the infliction of losses upon the enemy.

APPLICATION OF FIRE.

34. In battle the question as to whether or not a certain target is to be taken under fire is a tactical one, and must be decided according to the conditions of the combat and the particular mission assigned to the machine-gun organization.

35. The tactical employment of the guns and selection of targets are discussed in these regulations. The decision having been made to take a certain objective or target under fire, it remains for the machine-gun commander to determine how best to apply the fire power of his guns to accomplish the desired result.

36. To secure the greatest moral and material effects, the burst of fire from the guns must be sudden and unexpected and continued without interruption until the desired effect is produced.

37. "Ranging fire," therefore, must not be employed unless it is certain that the ultimate results of the fire will be materially increased by the opportunity thus afforded for a more perfect adjustment of the fire.

This implies that ranging fire should not be attempted against targets which, by moving, could disappear from view in the interval between ranging fire and fire for effect, nor should it be attempted when the guns themselves are under fire.

In these cases fire for effect should be opened at once and any adjustment, during the natural pauses in the fire, left to the platoon leaders and those directly concerned with the control of fire.

FIRE DIRECTION AND FIRE CONTROL.

38. The captain, through his officers and noncommissioned officers, directs and controls the fire of the organization.

The following paragraphs set forth, in a general way, the functions and duties of the officers, noncommissioned officers, and gunners.

39. The captain—

1. Selects and designates the target, allotting to each platoon its sector.
2. Causes the range to be measured, or, if instrumental range finders are not available, calls upon the platoon commanders for an estimate of the range, and takes a mean of the estimates furnished him.
3. Decides what kind of fire is to be employed and how many guns are to be used. He also decides whether separate aiming points are to be used for each gun or platoon or whether a single aiming point is to be used for all guns.

40. The platoon commander—

1. If called upon for an estimate of the range, causes the range to be estimated by two or more members of his platoon best qualified in the estimation of distances and announces the mean of their estimates to the captain.
2. Allots to each gun its sector and puts into execution the commands or directions of the captain, having first taken such precautions to insure correct sight setting and clear description of the target as the situation permits or requires; thereafter gives such additional commands or directions as are necessary to exact compliance with the captain's will; he corrects the sight setting when necessary; he designates an aiming point when the target can not be seen; he keeps on the alert for signals from the captain; replaces casualties at the guns; keeps a careful check on ammunition so that he can report at any time the amount available for immediate use.
41. If a platoon be detached and acting alone, the platoon commander exercises the functions outlined above for the captain.

42. Supernumerary enlisted men assist the captain in the observation of fire and perform such other duties as he may direct.

43. In the platoon organization the sergeant assists the platoon commander.

44. The squad leader—

1. Repeats to the gunner such firing data, orders, and commands as may be given and sees that they are properly executed.

2. Observes the effect of fire of his gun and makes such corrections in the sight setting and in the number of shots fired at each aiming point as are necessary to make the fire more effective. He constantly endeavors to carry out the will of his superior officers and keeps on the alert for commands and signals.

3. Keeps the gun properly manned by details from his own squad; keeps check on the ammunition, so as to be prepared at all times to report the amount remaining on hand available for immediate use, and sees that the immediate supply of ammunition is so placed that the action of the gun will not be delayed for lack of ammunition.

45. The gunner—

1. Keeps his gun in proper working order and obeys implicitly the orders of the squad leader.

METHOD OF INSTRUCTION.

46. The importance of maintaining fire discipline and securing implicit obedience to the commands of the captain or other officer directing or controlling the fire of machine guns in battle is so great that a portion of each day's drill or training will be devoted to instruction in the firings.

47. Firing instruction in the squad must have for its object the attainment of proficiency in the mechanical operation and manipulation of the piece and the development of fire discipline.

48. Firing instruction with the gun squads combined must follow this instruction in the squad, and has for its object the instruction of officers and noncommissioned officers in fire control and in the application of fire, as well as in the development of fire discipline.

49. Feed strips loaded with dummy cartridges should always be used for drill and instruction, loading being simulated only when such cartridges are not available.

When ammunition is available, instruction should frequently be held with ball cartridges.

50. In battle, targets ordinarily will remain exposed to view in the open but a short time; therefore great skill in the service of the piece and a high order of fire discipline are required to deliver quickly an effective fire upon such targets.

51. The squad is practiced in directing the gun quickly upon a suddenly appearing target, in following its movements, and in keeping up an effective fire upon it.

52. Targets moving at various angles to the front and at different rates of speed should be frequently selected; mounted detachments or vehicles appearing on the terrain may be utilized for targets.

53. Every means should be utilized in the arrangement of targets to secure different ranges and different degrees of visibility in order that the maximum amount of instruction may be imparted in picking up and describing them, in range finding, and, in fact, in all that goes with the actual operation and service of the guns in action.

54. Silhouettes arranged in lines of different lengths should be placed in positions that will be at different angles to the front of the position selected for the gun or guns used in this instruction.

55. For indoor practice the ingenuity of the instructor must be called upon for the preparation and arrangement of various miniature targets to represent those ordinarily met with in battle.

THE GUN SQUAD.

56. The squad leader should have—

1. Such perfect knowledge of his gun that he can determine at once the cause of the failure of any part to function.

2. A sufficient knowledge of the ballistic properties of the machine gun to enable him to obtain the greatest effect from its fire.

3. A knowledge of the influence of ground—

(a) With reference to the position of his gun.

(b) With reference to the position of the objective.

4. A quick apprehension of his target and of opportunities to inflict heavy losses.

57. The gunner occupies the most important position in the gun squad in so far as accurate delivery of fire is concerned. All men of the organization will be instructed in the duties of this position. The gunner should be selected from the men showing the greatest aptitude and attaining the greatest proficiency at machine-gun target practice.

Firing alone will not determine the qualifications for this post. He should be able—

1. To know instinctively when his gun is not correctly adjusted.

2. To load the piece in any position, without the assistance of the loader.

3. To manipulate the rear and telescopic sights rapidly and accurately.

4. To aim quickly and accurately.

Before firing, the gunner must—

1. Make sure that the barrel is clear.

2. See that the regulator is properly set.

3. Oil the mechanism.

4. Test the mechanism by rapidly opening and closing the breech several times to insure that it works freely and smoothly.

58. All members of the gun squad must be so instructed that each is qualified to perform the duties of each position.

COMMUNICATION AND EXECUTION OF FIRING DATA.

59. The term "firing data" is used to designate the complete information that the gunner must have before opening fire. Firing data are communicated in the following manner:

1. The target, and, if necessary, the particular aiming point on the target.

2. Elevation and deflection.

3. Kind of fire to be used.

4. Number of cartridges or strips to be used.

In action the precision with which firing data must be announced will depend upon the proficiency of the personnel.

60. In order to insure uniformity of instruction throughout the organization, it may be advisable to form the noncommissioned officers into a squad, with the captain or one of the lieutenants as squad leader, and conduct the exercises until the idea and purpose of the instruction are so thoroughly understood that

each noncommissioned officer can impart instruction in an intelligent, proper and uniform manner to the members of his squad.

61. Examples of the communication of firing data by the squad leader to the gunner are as follows:

1. Target. That machine gun at 12 o'clock, or such and such portion of that infantry line, at 2 o'clock, or aiming point (such an object).

2. Battle sight, or 800 (900, 1,000).

3. Right (left) one (or so many).

4. Fix, or distribute, or search.

5. One (or so many) strips.

6. Commence firing.

62. The squad leader, in his description of the target or aiming point and in his designation of the portion to be covered by the gunner in firing, while being as concise as possible, must assure himself that the gunner understands his directions thoroughly.

63. The squad leader should be equipped with field glasses to aid him in his definition of the target, and the gunner has the telescopic sight, which he should use, if necessary, to follow the leader's description and pick out his aiming point.

64. The following commands or appropriate signals given during pauses in the firing may be used to communicate changes in the firing data:

To increase or decrease the elevation 100 (or such number of) yards: **UP: 100** (or such number). **DOWN: 100** (or such number).

If the command up or down be given without any number added, the gunner raises or lowers the point of strike of the bullets by use of the elevating gear and does not change the sight setting, but selects his point or points of aim above or below the target.

To change the deflection to the right or left any number of points:

Right: One (or such number).

Left: One (or such number).

If the command right or left be given without any number added, the gunner moves the point of strike of the bullets to the right or left by traversing and does not change the sight setting, but selects his point of aim farther to the right or left.

To change the kind of fire, the appropriate command, fix, distribute or search, is given.

If a complete change of targets be desired, the command suspend firing should be given and appropriate data for the new target announced.

THE GUN SQUADS COMBINED.

65. Previous to taking the firing formation, firing data may be communicated to the platoon leaders, and when practicable to squad leaders, they having preceded the guns for this purpose.

66. The firing data announced by the captain will designate the target for each platoon and the range and deflection, the kind of fire and the number of rounds being left to the discretion of the platoon commanders.

67. The command commence firing is given by the captain when all guns are ready unless he has previously commanded fire when ready.

68. To facilitate observation of the effect of fire, the right gun only of each group with the same aiming point, should fire at command. The fire of each other gun of the group should be delayed for a few seconds after the opening of fire by the gun on its right.

THE PACKER.

69. The object of this instruction is detailed training in—

- (a) Setting up and fitting the aparejo, as prescribed in the handbook of the Automatic Machine Rifle, Caliber 30, Model of 1909.
- (b) Care of equipment.
- (c) Care of pack animal.
- (d) Harnessing and unharnessing.

CARE OF EQUIPMENT.

70. The leather parts of the equipment should be exposed to the sun as little as possible and when wet should be dried in the shade.

71. Immediately after the equipment is removed from the animal, canvas parts should be scraped free from all adhering substances, with a dull but smooth-edged knife. Especially must constant attention be given to the cleanliness and pliability of the canvas of the corona, crupper and cincha, and of the dock piece. The canvas side of the corona and crupper should not be exposed to the sun for the purpose of drying.

72. Woolen parts should be rubbed between the hands or hung up and beaten with switches or wands to remove dust, mud and hair, and to make them soft and pliable. They should be exposed frequently to the sun, completely unfolded. Blankets should be washed in tepid water at least once a month.

73. Metal parts must be kept free from dust, dirt, sweat and hair. Those issued with coats of paint or lacquer are to be maintained in that condition. Bright parts should be polished. The tongues, rollers and keepers of buckles must work freely, to which end the straps must be unbuckled in cleaning.

DISPOSITION OF THE EQUIPMENT.

74. The aparejo with crupper, sobrejalma and pack frame attached rests on its boots; crupper double forward; the cincha passed over the frame as in unharnessing; the blanket is folded and placed on the cincha, folded edge to the front; the corona, folded, canvas side in, is placed on the blanket, folded edge to the front. When exposed to the weather, the aparejos must be covered with the rigging cover. The bridle and blinder are hung on pegs or laid across the corona. Loads should be kept with the pack harness to which they pertain. All articles should be plainly marked with the number of the animal to which they are fitted.

75. In camp the aparejos of each platoon should be in line parallel to and in rear of the line of tents, the center of the aparejos being in the center of the space allotted to the platoon. Aparejos may be similarly kept at the picket line.

The aparejos should be raised from the ground. If suitable material can not be obtained, they may be placed on ammunition boxes. Bridles and blinders should be placed on the corona before the packs are covered with the rigging cover.

The rifle should be kept in the case and when practicable under cover.

76. It is important that the men be trained to place the equipment as prescribed, for in field service, mules must frequently be saddled in the darkness and it is imperative that an unvarying uniform method of placing the equipment be adopted in order to avoid confusion and delay.

CARE OF THE PACK ANIMAL.

77. In order that injuries and sickness may be avoided or promptly discovered and cured, the animals are carefully inspected by their drivers immediately after they are unharnessed, and the results are reported to squad leaders, who will inspect to see that this duty is efficiently performed. Such correction or treatment as is practicable is applied at once, and difficult or serious cases are reported to the stable sergeant.

78. Report should be made of abrasions, lumps, bunches, swellings, rope burns, discharges from eyes, nose and mouth, loss of shoes, failure to feed properly, cases of fatigue—in short everything indicating the existence of disease or injury in need of correction.

79. Bunches under the aparejo are caused by the sudden relief of excessive pressure on that part of the body. To determine the location of the fault in the aparejo, the face of the bunch is wet with water, the aparejo is placed in its correct seat without corona or blanket and with the crupper turned forward, is gently rocked from side to side. Upon removal, a damp spot on its surface will indicate where a portion of the filling should be carefully removed without disturbing the remainder. The bunch will disappear on the next day's travel; if not traveling, a bunched animal should be loaded and exercised; one or two hours is sufficient.

80. Sores and abrasions may be caused by the presence of foreign substances, such as burs or gravel, and by inequalities or wrinkles in corona, blanket or cincha. Sores under the crupper and dock piece result from the aparejo riding too far forward or because the boots are too close to the animal's body or do not carry horizontal or parallel to the axis of the animal. Abrasions of the withers or loins indicate that the saddle bars are not horizontal or that they are not parallel to the axis of the animal or that the arches are too broad or too narrow.

Abrasions are treated by the temporary removal of the surfaces in contact and by the application of antiseptic, cooling and healing powders and lotions.

81. In general, swellings are caused by pressure and sores by friction. They can be avoided only by correct setting up of the aparejo, its proper fitting, and its modification to conform to changes in the condition of the animal. Very tight cinching instead of correcting bad adjustment causes swellings, pain, fatigue and excessive sweating, and makes the animal unruly and hard to manage in its effort to get rid of the load.

HARNESSING AND UNHARNESSING.

82. The blanket, after being well shaken, will be folded into six thicknesses, as follows: Hold it well up by the two corners the short way up and down; double it lengthwise (so the fold will come across the "U" and "S"), the folded corner (middle of blanket) in the left hand; take the folded corner between the thumb and second finger of the right hand, thumb pointing to the left; slip the left hand down the folded edge two-thirds its length and seize it with the thumb and second finger; raise the hands to the height of the shoulders, the blanket between them extended; bring the hands together, the double fold falling outward; keeping the folded corner between the thumb and second finger of the right hand, slip the first finger of the right hand between the folds and seize the double folded corner; turn the left (disengaged) corner to the left and seize it and the other double fold with the left hand and stretch and even the folds; raise the blanket and place it between the chin and breast; slip the hands down halfway, the first two fingers of each hand outside (in front), the other fingers and thumb inside (behind), seize the

blanket with the thumbs and first two fingers, let the part under the chin fall forward; hold the blanket, arms extended, even the lower edges, seize the middle points between the thumbs and forefingers and flit the outside part over the right arm; the blanket is thus held before placing it on the pack animal.

The blanket when folded is like a flattened S instead of like a flattened spiral G and wrinkles can be more easily detected.

TO HARNESS.

83. All men are instructed in the duties of both near and off packers. In harnessing and unharnessing they work in pairs, one on each side of the pack animal.

A quiet, well-trained animal is assigned to two recruits, each of whom should be supervised at first by a thoroughly instructed man. The instructor causes an animal to be harnessed and packed and points out the names of the different parts of the pack outfit and explains their use. He then has the pack and harness taken off and placed in rear of the animal.

84. The pack outfit being in position, the instructor causes the recruits to stand to heel, and commands:

1. **By detail, harness.**

Upon the completion of each detail the recruits remain in place.

2. **BRIDLE.** The near packer seizes the blinder and bridle, placing the former over his arm; with the reins in the right hand and the bit in the left, he approaches the mule from the near side, slips the reins over the head, letting them rest on the neck, reaches under and engages the snap in the right cheek-piece ring, inserts the bit in the mule's mouth, and engages the snap in the left cheek-piece ring.

The bit should hang so as to touch but not draw up the corners of the mouth.

3. **BLINDER.** The near packer takes hold of the halter with the left hand, grasps the edge of the blinder near one end with the right hand; carries it well over the animal's neck to the off side, tail down; brings the blinder well to the front over the ears and places it over the eyes, the tail on top of the neck. The blinder should not be raised too high in passing it over the neck as the animal may duck from it.

A pack mule is blinded during harnessing and packing and until trained during unpacking and unharnessing. To teach it not to move when blinded the blinder must always be removed before requiring it to change position.

4. **CORONA.** The off packer seizes the corona at the ends of its center seam and throwing the half over his arm, as explained for the blanket in paragraph 82, places it on the mule, still keeping hold of the middle points; slides it once or twice from front to rear to smooth the hair, being careful to raise it in bringing it forward.

5. **BLANKET.** The off packer on the near side places the folded blanket on the corona, upper folded edge to the rear, in a manner similar to that prescribed for putting on the corona. He then passes to the off side and with the assistance of the near packer on the near side smooths and evens the blanket.

6. **SADDLE.** Both packers, each working on his own side, grasp the aparejo by the lower corners, raising it high enough to clear the rump and set it on the back a little in rear of its proper position.

7. **CRUPPER.** The near packer takes hold of the crupper with both hands; the left hand on lower edge, fingers under; the right hand on upper edge, palm down; the off packer takes hold similarly, hands reversed; both raise crupper well up, reverse it, and turn it down over the croup. The quicker the action the

more easily the crupper is turned. The near packer raises the animal's tail and places the dock piece well under it, taking care that no hairs are caught. Both then place the breast against crupper to hold it in place and set the aparejo forward into position, taking care to keep it straight, the near packer with the right hand on the center of the aparejo and his left on rear corner, and the off packer with left hand on the center of aparejo and his right hand on the rear corner. The off packer goes to the side of the mule, pulls the gas pipe end of the cincha toward him, and guiding it down the middle passes it under the belly to the near packer. He then steps to the shoulder, faces to the rear, and places his right hand between the corona and withers and his left hand on the rear corner of the aparejo. The near packer seizes the end of the cincha at its corner and passes the cincha strap through the cincha eye from above, brings it up, and passes it through the rendering ring from above and again through the cincha eye to the right of the other part of the strap. He then grasps the cincha strap near the cincha eye in his left hand and places the right hand on the rear corner of the aparejo.

8. **CINCHA.** Both packers hold the aparejo forward in place, taking care not to raise the front of the aparejo. The near packer pulls the cincha strap taut with his left hand, and calls Set. At this the off packer passes in rear and observes whether the aparejo is straight; if not, it is correctly adjusted. He then takes hold of the cincha strap on the right side of the near packer and places his right knee against the boot. The near packer raises his left foot to the boot and both pull together until the cincha eye is at the edge of the boot, with the cincha in the center of the aparejo, after which the off packer returns to the off side. The near packer passes the cincha strap through the finger loop from above, assisted by the off packer if necessary, and secures it. He then removes the blinder and passes it over his left shoulder with the tail under the right arm.

85. To harness without detail: **HARNESS.**

TO UNHARNESS.

86. 1. By detail, unharness.

2. **BLINDER.** (Par. 84-3.)

3. **UNSADDLE.** The near packer loosens the cincha strap and folds his end of the cincha over the pack frame. Both then push the aparejo slightly to the rear. The near packer places his left hand on the upper edge of the crupper, his right on the lower edge; the off packer takes a corresponding position, hands reversed; both together raise the crupper and turn it forward over the cincha; take hold of the aparejo as in saddling, pass it backward over the rump and lower it carefully to its place in rear.

4. **BLANKET AND CORONA.** The off packer on the near side, grasping the front and rear edges of the blanket at the middle points, removes it; allows it to fall into a fold between his hands and places it along the near side of the corona; grasps the corona at the middle points of its front and rear edges, removes blanket and corona, and places both on the aparejo, corona on top.

5. **UNBRIDLE.** The near packer removes the blinder and unbridles, and places blinder and bridle on the corona.

87. To unharness without detail: **UNHARNESS.**

PACKING AND UNPACKING.

88. The mule being harnessed and in front of his load, the instructor commands: 1. **PACK.** At this command each packer procures a hanger containing the side loads and hangs it on the hanger hooks of the frame. The load-

holding-down clip is adjusted so that when the clasp is passed through the staple on the lower side bar of the frame the clip will be drawn taut and held so by the keeper.

The weight of both hangers should come upon the aparejo at the same time in order to avoid a possible turning of the aparejo. The top load, if any, is then put in place and fastened with the straps provided.

89. Unpack. The top and side loads are removed in reverse order from that in which they were placed in position.

TO PREPARE THE RIFLE FOR ACTION.

90. In active service the guns will rarely be unpacked at the actual firing position. The necessity of approaching a position under cover will seldom permit taking the animals to the selected position, and ordinarily they will be taken only as far forward as cover can be found for them. This must, however, be as close to the position as possible. From this point to the firing position the gun, its accessories and ammunition must be moved by hand.

91. In the following instruction, designed to teach the mechanism of preparing the gun for action and moving it into the firing position, full advantage must be taken of whatever cover the terrain affords for unpacking the gun and moving it forward. Varied ground must be sought for this instruction and the position of the enemy must always be assumed.

The animals to be unpacked, the amount of ammunition, etc. to be moved to the firing position should always be designated.

92. At command (pars. 114 and 159) the squad halts. The gunner withdraws the rifle from the case. The loader removes ammunition boxes and case with spare barrel; the tripod carrier removes the tripod, with such assistance as may be necessary. The remaining members of the squad remove ammunition and such of the loads of the other animals as may have been indicated by the squad leader. The squad leader assembles the squad in front of the led animals.

93. No exact method can be prescribed for the advance to the firing position, as the method to be adopted will be governed by the conditions surrounding each problem.

The squad leader should always lead his squad and be the first to arrive at the firing position.

94. Having selected the position in which the gun is to be set up, the squad leader commands: **ACTION FRONT.**

95. If while mules are loaded, the command action front be given, the gun, in the absence of instructions, is placed in the firing formation 5 yards to the front and slightly to the right of the gun animal.

96. Action right (left or rear) are similarly executed.

CAVALRY UNITS.

Paragraphs 97 to 145 pertain to cavalry units only and are not included.

INFANTRY UNITS.

THE SQUAD.

FORMATION OF SQUAD.

146. The composition of the squad is as follows:

Squad leader.

The gun squad—the gunner, Nos. 1 (loader), 2 (tripod carrier) and 3.

The drivers—Nos. 4, 5 and 6.

The ammunition squad—Nos. 7 and 8.

The habitual formation is in column.

The squad leader is the leader of his squad; he is 3 paces in front of its center. Nos. 1, 2 and 3 and the gunner in line from right to left follow the squad leader at 3 paces distance. Nos. 7 and 8 are each 40 inches, respectively, in rear of the gunner and No. 1. No. 4 follows No. 7 at one horse length distance. No. 5 follows No. 4 and No. 6 follows No. 5 one horse length in rear of the gun mule in front.

The mules carrying the equipment of the gun squad are formed in column, one horse length in rear of the squad, the distance between mules being about 1 pace. Each mule is led by one of the drivers. In case there are more mules than drivers, the necessary men are detailed to lead them. (See Pl. III.)

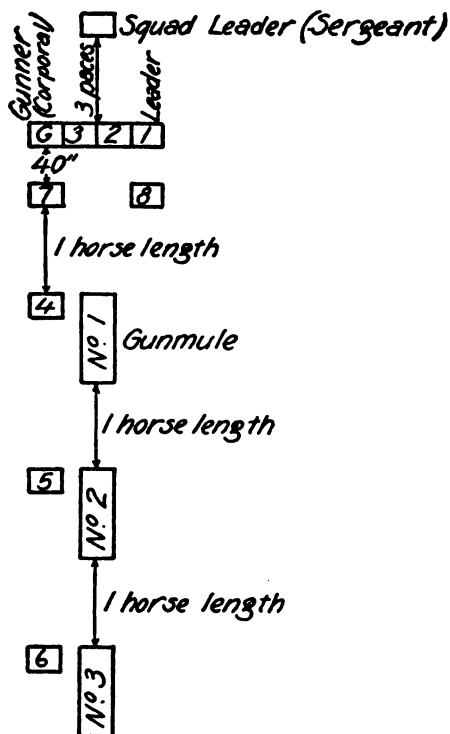


PLATE III
The Gun-squad with packs
 Par. 146

Whatever the number of men left in the squad, after the details of men to lead the mules have been made, they retain the formation of, and maneuver as an infantry squad of reduced numbers.

147. The mules of the gun squad are numbered from front to rear 1, 2 and 3 and are led by numbers 4, 5 and 6, respectively.

LEADING THE MULE.

148. The mule when packed is led and maneuvered by means of the bridle. When leading the mule, the soldier takes position on his near side holding the reins near the bit in the right hand and the loop of the reins in the left hand.

To gather the mule, the right hand is raised slightly until it touches his lower jaw. The mule must always be gathered before moving, before halting, and before changing gait or direction.

The mule must never be faced or threatened by the man leading him. He must be taught by quiet and gentle treatment to effect all changes of gait and direction evenly. He should not be turned short but on the arc of a circle of 1 yard radius. He should be led with a loose rein and urged on, if he lags, from the rear.

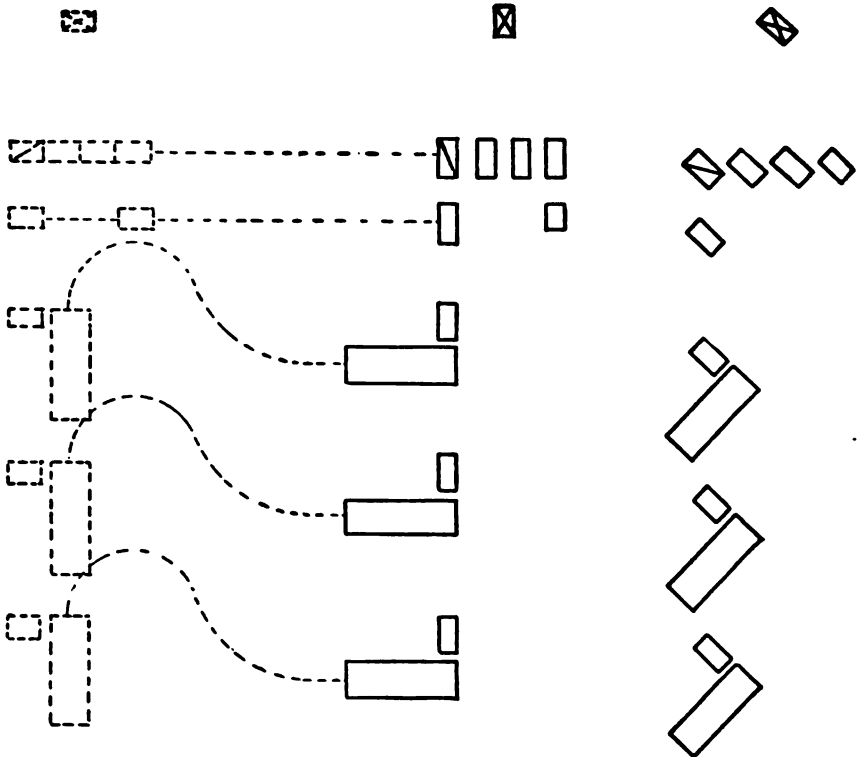


PLATE IV
By the right flank
Par. 151

PLATE V
Right oblique
Par. 151

TO HARNESS AND PACK BY SQUAD.

149. The squad is marched by the squad leader to the stables. After designating the men who are to lead mules, the squad leader commands: 1. **HARNESS AND PACK.**

At this command the aparejos are brought from the saddle room and lined up at about 4 paces interval in numerical order, the gun pack on the right.

Each aparejo, its accessories and packs are arranged as prescribed in paragraph 74.

The squad leader inspects the rigging and packs and sees that all articles are properly arranged and directs the men detailed to lead mules to bring the mules to the packs.

The mules are lined up about 4 paces in front of their proper packs and are

saddled and packed by the members of the squad, working in pairs, as described in paragraphs 84 and 88.

The squad leader superintends the harnessing and packing and, after tasks are completed, inspects each animal to see that its aparejo and packs are properly adjusted and secured.

TO FORM THE SQUAD.

150. The animals being packed, the squad leader places himself 3 paces in front of the place in which he desires the squad to form and commands: **FALL IN.**

The squad takes the formation prescribed in paragraph 146.

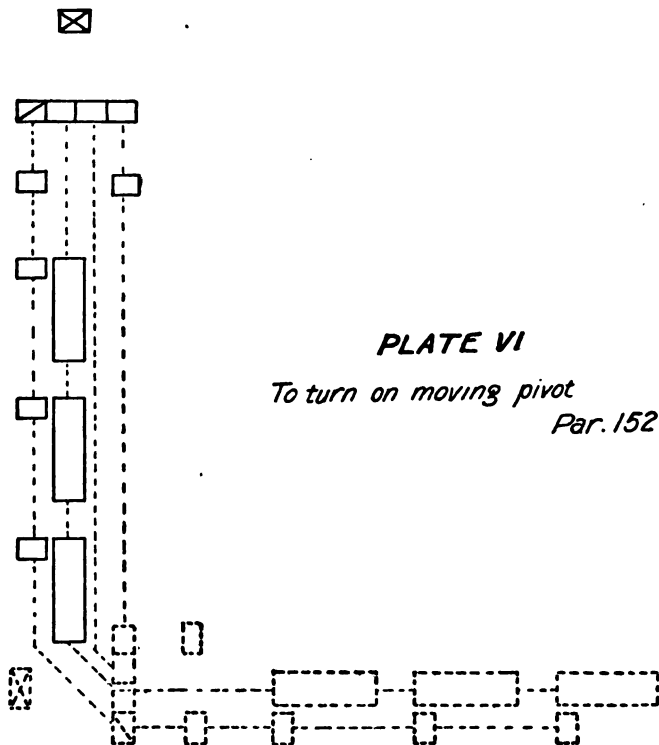


PLATE VI

*To turn on moving pivot
Par. 152*

MOVEMENTS AND FORMATIONS.

151. The squad with piece packed is marched to the front, to the flank, to the right or left oblique, is halted and turns on a moving pivot by the commands prescribed in the Schools of the Soldier and Squad, Infantry Drill Regulations.

The squad executes the movement as therein prescribed, the mules being led so as to conform to the movement and preserve their distances and proper order. (Pls. IV and V.)

TO TURN ON A FIXED PIVOT.

152. 1. **Squad right, 2. MARCH.** The squad executes the movement as prescribed for the front rank of an infantry squad (par. 119, I. D. R.).

The mules are led so as to conform to the movement; each following the one in lead at its prescribed distance. (Pl. VI.)

TO TURN AND HALT.

153. 1. Squad right (left), 2. MARCH, 3. Squad, 4. HALT.

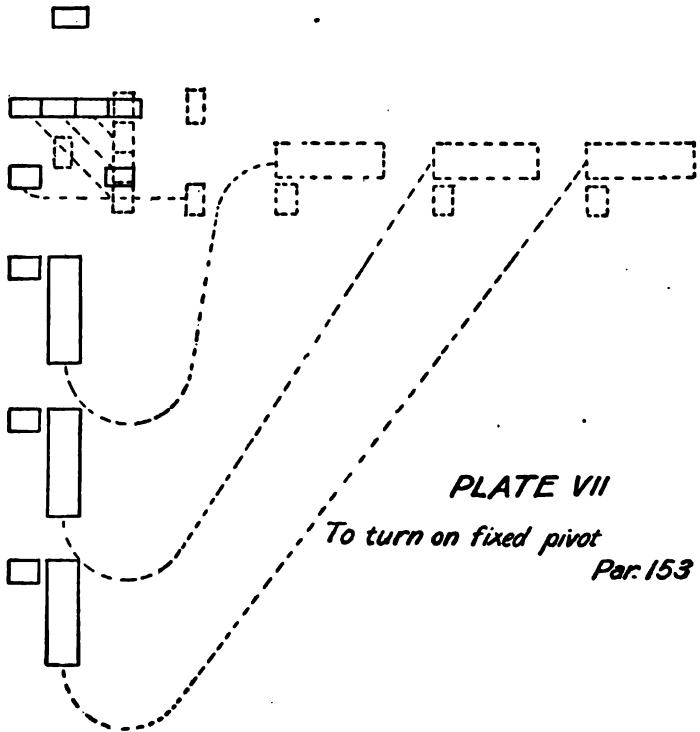
The squad executes the movement as prescribed in paragraph 120, Infantry Drill Regulations.

The gun mule is led by the left flank, about the length of the mule, and then to the "right about" to its position in rear of the squad. The other mules are led so as to conform to the movement of the gun mule. (Pl. VII.)

TO MARCH TO THE REAR.

154. 1. To the rear, 2. MARCH.

Each mule is turned to the right about and moved straight to the rear.



The squad executes To the rear, March, as explained in paragraph 72, Infantry Drill Regulations, and by shortening the step gradually gains a distance of 2 paces from the rear mule. If executed from a halt, the command 1. **About face**, 2. **Forward**, 3. **MARCH**, is given.

The squad faces about and steps off in time to follow at a distance of 2 paces from the rear mule.

155. This movement is used only for moving short distances to the rear.

TO TURN ABOUT.

156. 1. Squad right (or left) about, 2. MARCH.

The squad executes Squad right (left) about, followed by the mules.

157. For route marches, and whenever possible, the mules may be linked.

TO LINK MULES.

1. Link. The gun mules are always led. The rear mules are linked by means of the reins as follows:

No. 2 mule is linked to the rear hook on the off side of the gun mule frame.

No. 3 mule is linked to the rear hook of frame on the near side of No. 2 mule, etc.

After linking the mules, their leaders "fall in" with the squad or may be required to march in rear of the mules to better observe the riding of the packs.

TO UNLINK.

158. Unlink. The mules are unlinked by their leaders and normal distances are gradually regained.

TO PREPARE FOR ACTION.**159. 1. PREPARE FOR ACTION.**

At this command the squad halts, if not already halted, and the guns and accessories are removed as prescribed in paragraph 92.

The mules having been linked as described in paragraph 157 are left under cover in charge of the leader of No. 1 mule. The squad leader, carrying the spare-parts case, or loading tool, assembles the squad and moves it forward to the firing position by the commands and in such formation as are best suited to conditions. (I. D. R., par. 212.)

160. As the members of the squad become familiar with their duties, the commands "Prepare for action," "Squad column," or "As skirmishers" (so many paces), "Follow me," may follow one another in rapid succession.

161. Having selected the position in which the gun is to be set up, the squad leader commands **ACTION FRONT** (right, left).

The gun is set up and the squad takes the firing formation as described in paragraph 20.

TO PACK.

162. Being in the firing formation, to pack, the squad leader commands: **1. PACK.**

The rifle is prepared as in paragraph 31.

163. If the mules are close at hand, they are brought to the firing position by the man in charge at the command pack, or signal to come forward.

164. When the mules arrive at the firing position, the gunner, tripod carrier and loader repack the gun mule.

The other mules are repacked by the remaining members of the squad working in pairs.

165. If the mules are not to be brought to the firing position, the squad is first moved to the position of the mules or to a position to which the mules can be brought, and the rifle and equipment repacked as above described.

TO UNPACK AND UNHARNESS.

166. The squad is marched to the place of unpacking and unharnessing and upon arrival thereat the squad leader commands: **1. UNPACK AND UNHARNESS.**

The squad halts. The mules are formed in line on the gun mule at 4-pace intervals, gun mule on the right.

The packs are removed and placed in their proper place of storage.

The mules are unsaddled and the rigging is put in its place. The squad leader inspects the animals for abrasions or other injuries; sees that the corona and crupper are scraped, if necessary, or gives such other instructions as may be needed with reference to the equipment.

The squad is then formed and marched to the barracks.

THE COMPANY.

167. The machine gun company is divided into platoons of two gun squads each.

168. The number of squads organized depends upon the number of machine guns assigned to the company.

169. The captain is 15 yards in advance of the leader of the directing platoon, which in line is normally the first platoon. Each platoon leader is one horse length in front of the leader of his directing squad, which in line is habitually his left squad.

The agents of communication and range finder sergeant, boot to boot, ride one horse length in rear of the captain. Scouts, cooks and other additional men may be assigned to squads or go where directed by the captain.

In line the squads are side by side without interval, each squad being formed in column.

170. In firing formation the captain is 12 yards in rear of the center of the line occupied by the guns. Platoon leaders are 2 yards in rear of the guns, opposite the center of their platoons.

Squad leaders are at the guns. During actual firing all are dismounted, and officers and noncommissioned officers take such positions as will best enable them to maintain efficiency of fire.

171. The company, without packs, is formed as prescribed in Infantry Drill Regulations.

172. In active service, both on the march and in action, the necessary security for the guns and animals is provided and all service of communication usually performed by members of the machine gun company.

173. In case the number of men available is in excess of the number needed for the gun squads, these men are assigned to the squads as extra men.

174. In case the company becomes reduced in numbers, squads are equalized by transfers from squad to squad.

175. No squad will contain less than four men.

176. When the company is so reduced in numbers as to make it impossible to assign at least four men to a squad, one or more squads are broken up and the men are assigned to the remaining squads.

177. The platoon and squad leaders are permanently assigned by the captain.

178. At the formation of the company the gun platoons and their squads are numbered consecutively from right to left, and these designations do not change.

179. In case the number of machine guns assigned to a company or detachment is not more than two, the company or detachment is organized, as above prescribed, into one gun platoon of two gun squads and is led and maneuvered as prescribed herein for a company.

180. The lieutenants and noncommissioned officers, in order of rank, are assigned as platoon leaders as follows:

1. Gun platoon, No. 1.
2. Gun platoon, No. 2.
3. Gun platoon, No. 3.

181. Noncommissioned officers next in rank are assigned as squad leaders. If sergeants still remain unassigned, they are assigned to the gun platoons.

During battle these assignments are not changed except that, when a platoon leader is disabled, his duties will be assumed by the senior noncommissioned officer remaining on duty with said platoon, who will continue to exercise these functions until the captain makes a permanent assignment of a leader. Other casualties are replaced under the supervision of the platoon leader.

182. The first sergeant, when not commanding a platoon, is posted on the right of the range finder sergeant. In action, if not commanding a platoon, he accompanies the captain.

The quartermaster sergeant, when present, is assigned according to his rank as sergeant.

The artificer, cooks and extra men are assigned to squads.

Orderlies accompany the captain or are posted at his discretion.

183. The company, without its special equipment, is maneuvered and drilled as an infantry company.

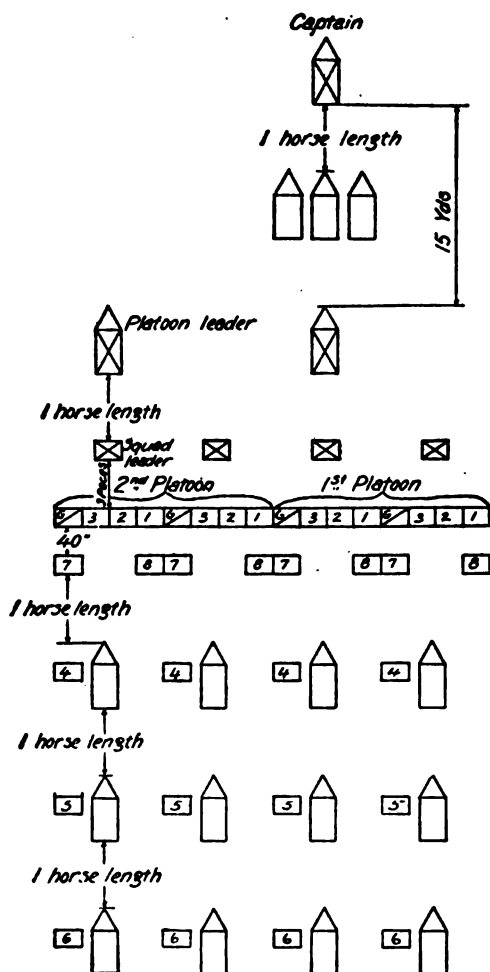


PLATE VIII
Company in Line
Par. 184



The company must be drilled and exercised in the movements prescribed in Infantry Drill Regulations up to and including the School of the Company.

184. The platoons are first formed by their leaders and at the command form company are conducted to their positions.

In maneuvering a company the squads of a platoon are never separated.

The posts of officers and noncommissioned officers are shown in Plate VIII.

In case the squads are depleted in strength or the number of mules assigned to each squad is such that the detail of men to lead them reduces the front of the squad to less than four files, each squad occupies the same front and maneuvers in the same manner as though it had a front of four files.

TO DISMISS THE COMPANY.

185. The captain directs the platoon leaders: **DISMISS YOUR PLATOONS.** The gun platoons are conducted to the stables by the platoon leaders. The mules are unpacked and unharnessed by squad.

MOVEMENTS AND FORMATIONS.

186. The alignments are executed as prescribed in Infantry Drill Regulations. The men leading the mules dress toward the designated flank, keep the mules straight and correct their intervals and distances.

187. The company harnesses, unharnesses, packs, unpacks, advances, marches by the flank, to the rear and obliquely by the same commands and means prescribed for the squad, prefixing the word "company" to the command where necessary.

188. In the execution of all movements platoon or squad leaders repeat the commands of the captain or give the necessary commands applicable to their respective platoons or squads.

189. Marching in column, or obliquely, the guide of the leading element is, without indication, the guide of the movement.

The guide is responsible that the direction and rate of march is maintained.

Unless otherwise announced, the guide of the company or platoon in line is right.

190. The rests are executed, and attention resumed, according to the principles laid down in the School of the Soldier, Infantry Drill Regulations. The men leading mules remain on the left of and close to their mules so as to keep them in place.

MOVEMENTS ON THE FIXED PIVOT.

191. The company being in line, to turn the company: 1. **Company right (left)**, 2. **MARCH**, 3. **Company**, 4. **HALT**, or 3. **Forward**, 4. **MARCH**, executed as prescribed in paragraph 176, Infantry Drill Regulations. The mules are led so as to conform to the movement.

192. Being in line, to form column of squads: 1. **Squads right (left)**, 2. **MARCH**, executed as prescribed in paragraph 178, Infantry Drill Regulations. The squads execute **Squads Right** at the command and follow successively in their proper places in column.

MOVEMENTS ON THE MOVING PIVOT.

193. Being in line, to change directions: 1. **Right (left) turn**, 2. **MARCH**, 3. **Forward**, 4. **MARCH**, executed as prescribed in paragraph 179, Infantry Drill Regulations. The mules are led so as to conform to the movement.

194. Being in line, to form column of platoons: 1. **Platoons right turn**, 2. **MARCH**, executed by each platoon as prescribed above for the company. The gun platoons execute the movement at the command of their leaders and follow successively in column at a distance of 2 paces from the rear mules of the preceding platoon.

195. Being in column of platoons or squads, to change direction: 1. **Column right (left)**, 2. **MARCH**, executed as prescribed in paragraphs 180 and 181, Infantry Drill Regulations.

196. Being in line, to form column of squads and change direction: 1. **Squads right (left), Column right (left)**, 2. **MARCH**, or, 1. **Right (left) by squads**, 2. **MARCH**, executed as prescribed in paragraph 183, Infantry Drill Regulations. The mules are led so as to conform to the movement.

197. Being in column of platoons, to form column of squads: 1. **Right (left) by squad**, 2. **MARCH**.

The leading platoon executes the movement as above described for the company. The rear platoons execute the movement successively at the command of their leaders in time to follow in their proper places in column.

ON-RIGHT (LEFT) INTO LINE.

198. Being in column of squads or platoons, to form line on right (or left): 1. **On right (left) into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**, executed as prescribed in paragraph 187, Infantry Drill Regulations.

FRONT INTO LINE.

199. Being in column of squads or platoons, to form line to the front: 1. **Right (left) front into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**, executed as prescribed in paragraph 188, Infantry Drill Regulations.

200. Being in column of squads, to form column of platoons: 1. **Platoons right (left) front into line**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**, executed as prescribed in paragraph 189, Infantry Drill Regulations, except that the rear gun platoons continue the march and are halted at the command of their platoon leaders when they have closed to their proper distance from the preceding platoon.

RIGHT (LEFT) INTO LINE.

201. Being in column of platoons or squads, to form line to the right or left: 1. **Line to the right (left)**, 2. **MARCH**, 3. **Company**, 4. **HALT**, 5. **FRONT**.

If in column of platoons, the commander of the leading platoon commands: **RIGHT TURN**. The other platoon leaders command: **FORWARD**, if at a halt. At the second command the leading platoon turns to the right on a moving pivot. The command **HALT** is given when it has advanced the desired distance in the new direction; it halts; its commander then commands: **LEFT DRESS**. The leaders of the rear platoons command: 1. **Right turn**, in time to add, 2. **MARCH**, when at a distance equal to the front of the platoon from the right flank of the preceding platoon. Each platoon is halted on the line by its leader, who then commands **Left dress**. All dress on the platoon first in line.

FACING OR MARCHING TO THE REAR.

202. The company in any formation may be faced and marched to the rear for a short distance by the commands: 1. **Squads right (left) about**, 2. **MARCH**, or, 1. **About**, 2. **FACE**, 3. **Forward**, 4. **MARCH**.

The squads execute the movement as prescribed in paragraphs 154 and 155. Before any further movement is executed the company must be again faced to its original front.

MOVEMENTS WITH INFANTRY.

203. The foregoing movements and formations are used when maneuvering with infantry and whenever compact formations are desired.

In the various formations of the regiment the company is posted as shown

in Plate IV, Infantry Drill Regulations, or as directed by the colonel. (See par. 329, I. D. R.) When marching in review, the habitual formation of the company is a column of platoons.

EXTENDED INTERVALS.

204. Being in column of squads, to form line with extended intervals to the right or left; 1. **Squads right (left)**, 2. **MARCH**, executed simultaneously by each squad.

205. Being in column of squads, to form line of platoons with extended intervals: 1. **Platoons column right (left)**, 2. **MARCH**, executed simultaneously by each platoon.

206. Line with extended intervals or line of platoons with extended intervals may be formed to the front or on the right or left from column of squads to the principles for forming line to the front or on right or left as follows: 1. **Right (left) front into line with extended intervals**, or, 1. **Right into line with extended intervals**, 2. **MARCH**.

207. Being in line with extended intervals, to march in column of squads to the right or left: 1. **Squads right (left)**, 2. **MARCH**, or if in line of platoons with extended intervals, 1. **Platoons column right (left)**, 2. **MARCH**.

ROUTE STEP AND AT EASE.

208. The company is marched at route step and at ease and resumes attention by the commands and in the manner prescribed in paragraphs 190 and 193, Infantry Drill Regulations.

ROUTE COLUMN.

209. The habitual column of route is with the mules in double column and the men of each platoon in column of squads.

Being in column platoons, to form route column: 1. **Route column**, 2. **MARCH**.

The mules are retained in double column by their leaders. The men of each gun platoon execute right by squad in time to follow in their proper place in the column.

210. Being in route column, to form column of platoons: 1. **Column of platoons**, 2. **MARCH**. The men of each platoon execute left front into line in double time.

211. Being in route column, to form column of squads: 1. **Column of Squads**, 2. **MARCH**. The men of the gun platoons execute left front into line in double time. The gun platoons then execute successively, at the commands of their leaders, Right by Squad as prescribed in paragraph 199.

212. When economy of road space is not material, the column of squads may be employed in route marches.

TO PREPARE FOR ACTION.

213. In leading the company to the place selected for unpacking the mules, such formation is adopted as will admit of the most advantageous use of natural cover.

At a point where the mules are unpacked the captain determines the necessity for and strength of the detail to remain with the mules and where they are to be located; the number and strength of the patrols to be sent to the front and flanks, if any; the amount of ammunition and number of heavy intrenching tools to be taken forward; and the manner in which the ammunition supply is to be renewed; and gives his instructions accordingly, assign-

ing additional men to special tasks or as additional members to other squads. He then commands, **PREPARE FOR ACTION**.

At this command each squad prepares for action, and assembles as prescribed in paragraph 159. The company is then moved forward in a formation suitable to conditions. (I. D. R., par. 212.)

TO MAKE CAMP.

214. Upon arriving at the camp site, the picket line, picket pins and sledges are unpacked and the picket line put down in the position designated by the captain. He designates the place for the line of riggings and loads and commands: **UNPACK AND UNHARNESS**.

As the mules are unharnessed they are led to and tied on the picket line. Each squad leader supervises the unpacking and unharnessing of his squad and upon its completion assembles his squad.

The company is then assembled and tents are pitched by the commands and in the manner prescribed in Infantry Drill Regulations (par. 792 et seq.).

Details are then made to complete the camp.

TO BREAK CAMP.

215. The animals are watered, fed, groomed, harnessed, and the individual packs of the men made up and deposited at such place as may be designated for the formation of the company.

216. The ordinary duties incident to the breaking of camp, such as loading the wagon, policing, etc., are performed by men not needed to care for animals.

217. The animals are packed at the last minute which will insure the company being in its proper place at the hour appointed for marching.

218. The regulations regarding camp sanitation, prescribed in Infantry Drill Regulations (pars. 661 to 677) and other manuals treating of this subject, are to be strictly observed in the camp of the machine-gun company.

CEREMONIES.

COMPANY INSPECTION.

219. Being in line at a halt, all officers and men dismounted: 1. **Open ranks**, 2. **MARCH**.

At the command of March the front rank executes Right Dress; the rear rank of each squad marches backward four steps, halts, and executes Right Dress. The mules are reined back until the gun mules are four steps in rear of the line of the rear rank, the other mules having the same distance from the preceding mule of its squad. All leaders of mules dress to the right.

The captain aligns the front rank, rear rank, and mules, takes post 3 paces in front of the right guide, facing to the left, and commands: 1. **FRONT**, 2. **PREPARE FOR INSPECTION**.

Each gun, tripod, spare parts and loading case is removed from the packs. Each gun is mounted on its tripod, pointing straight to the front, two paces immediately in front of the center of the squad to which it belongs. The cases and pouches pertaining to each gun are placed on the ground to the left of it and opened so that all contents are visible. The leaders of the gun platoons supervise the arrangement of the equipment in their platoons. All resume the attention. The platoon leaders carry saber.

The captain returns saber and inspects the platoon leaders, after which they face about, order saber, and stand at ease. Upon the completion of the inspection they carry saber, face about, and order saber. The captain may direct the platoon leaders to accompany or assist him, in which case they return saber and, at the close of the inspection, resume their posts in front of the company, draw and carry sabers.

The inspection of the company proceeds as prescribed in paragraph 745, Infantry Drill Regulations.

When inspecting the gun platoons, the gun is inspected first in its position.

As soon as the piece and spare parts of each squad are inspected, they are repacked.

Men armed with pistol execute inspection arms as the inspector approaches.

220. If the inspection is to include an examination of the equipment, the captain causes the mules to stand fast, close ranks and take intervals (par. 109, I. D. R.).

The mules are led to the flank so as to maintain their proper relative positions with their squads.

The captain then commands: 1. **UNSLING EQUIPMENT**, 2. **OPEN PACKS**, executed by the men as prescribed in paragraph 747, Infantry Drill Regulations.

Squad leaders of the squads designate men to relieve those holding the mules a sufficient length of time to allow the latter to unsling and arrange their equipment in the places that would be occupied by them if in ranks.

After the men have arranged their packs as prescribed, the mules are unpacked and their packs arranged as follows:

The hangers are removed and arranged in line to the right and left of each mule and opposite its head. The top loads are removed and arranged in an orderly manner to the right of the hangers. Ammunition boxes are removed from the hangers and opened, unless otherwise directed. If desired the mules may be unsaddled, the aparejo being placed in rear of the mules to which they pertain.

The captain passes along the ranks and then inspects the mules' equipment. The inspection completed, he returns to the right of the company and commands **CLOSE PACKS**.

The men close their packs as prescribed in paragraph 747, Infantry Drill Regulations, and then repack the mules. The mules being packed, the men form in rear of their own packs. The captain commands **SLING EQUIPMENT**.

The equipments are slung and belts fastened.

The captain then causes the company to assemble.

The mules are led to the flank and take their proper positions in rear of their squads.

221. Should the inspector be other than the captain, the latter, after the company has completed its preparation for inspection, commands: **REST**, and takes post in front of the right guide of the company on the same line as the platoon leaders.

222. When the inspector approaches, the captain faces to the left, brings the company to attention, faces to the front, and salutes. The salute acknowledged, the captain carries saber.

The inspection proceeds as before; the captain returns saber and accompanies the inspector as soon as the latter passes him.

223. Should the company be inspected with the regiment, the captain carries saber, but does not salute upon the approach of the inspector.

MUSTER.

224. The inspection preceding muster is conducted as above prescribed for the company. The company is then mustered as prescribed in paragraph 756, Infantry Drill Regulations.

TACTICAL EMPLOYMENT OF MACHINE GUNS.**INTRODUCTION.**

225. Machine guns are not a fourth arm. Their proper rôle on the field of battle is supplementary and auxiliary to rifle fire.

226. The maneuvering and handling of machine guns on the field of battle must have for its one and only object the utilization of their fire power to its full effect.

227. Proper and commensurate results from the employment of machine guns can not be looked for except when the training and instruction in the working and manipulation of the guns have been thorough and complete. Neither can commensurate results be expected unless these weapons receive proper tactical employment.

228. All officers should familiarize themselves with their uses, for it is only by proper coördination and the utilization of their full fire power, in conjunction with the fighting power of his main command, that a commander can obtain the maximum results. A true knowledge of their capabilities and limitations is therefore essential to all commanders.

229. The difficulties of control in action will require that great latitude be given the machine-gun commanders. A thorough understanding of the commander's plan of action and an intimate knowledge of the principles of combat of all arms, is essential to the machine-gun commander in order that in any given situation he will be able to contribute to the general success.

230. Careful study, participation in combat exercises and maneuvers with the regiment and other units, and the execution of combat exercises, in which the presence of other arms is assumed, must form a great part of the training of machine gun organizations.

231. Any officer or intelligent enlisted man who has been properly instructed can master the details of drill, mechanism and firing, but it is only by proper study and from experience gained in combat, either real or assumed, that a machine-gun commander can hope to learn how to handle his guns correctly in the field.

232. The essential characteristics of machine-gun fire as compared with collective rifle fire are: Its volume, due to the mechanical action of the guns; its density, due to the compactness and small dimensions of the cone of dispersion; the facility with which fire can be opened, directed and controlled; and its nerve-racking rattle which gives to it a moral effect greater than that of collective rifle fire.

233. The machine gun is light in weight, easily handled and can be carried into action by hand. Extra men are required to supply it with ammunition and to observe the effects of its fire.

The machine gun represents a concentrated mass of rifle fire that can be used from a contracted front in a short time, against a given target, to produce a desired result.

234. The machine gun does not require a larger target than the rifleman, but annihilating effects are produced better and more quickly upon dense and compact targets. The amount of ammunition required to produce a particular result will increase very rapidly as the density of the target decreases.

235. The compactness of the cone of dispersion makes it profitable to employ their fire in preference to rifle fire at long and distant ranges when artillery is not available and when the situation demands that targets at these ranges be taken under fire.

236. Machine guns can not, on account of their limited ammunition supply, keep up an uninterrupted fire action.

237. The decisive moments of an action are the times of all others for their use. Their great fire power must be economized for these moments.

238. Being weapons of "emergency" or "opportunity," their use is determined by the opportunities that arise during the progress of an engagement in which full advantage may be taken of the special characteristics of their fire power.

239. The task to be assigned to the machine-gun organization in any particular engagement is governed by the opportunities that are likely to arise in which the fire power of the guns may be most effectively employed. The character of the battle or pending engagement, whether offensive or defensive; the general tactical principles applicable thereto; the part to be played therein by the regiment or force to which attached; the terrain and its adaptability for the use of the guns; and the state of the ammunition supply, are the principal factors that determine the proper employment of the machine-gun organization.

240. The machine-gun organization should generally be employed as a whole. If necessity demands, it may be divided into platoons, but guns should never be employed singly except under exceptional circumstances.

241. In general, when the results desired can be obtained without the fire of machine guns, this fire should be reserved.

242. When guns are available, it may be advantageous to attach them to convoys; to troops detailed to guard and protect lines of communication; to defend bridgeheads, blockhouses, etc.

243. Supports will be provided for machine guns when necessary. Their flank protection is ordinarily secured by combat patrols. (Pars. 396, 397, 398 and 399, I. D. R., and par. 609, Cavalry Service Regulations.) Communication between the combat patrols and the machine guns will be maintained by scouts specially assigned to this duty from the machine-gun personnel.

244. In irregular operations, special care and precaution must be taken for their protection on the march. They are particularly vulnerable on the march in close country.

245. Their use must be governed by the object of the expedition and the character and weapons of the enemy. When in position their fire is well adapted to stop fanatical rushes and is terrifying and paralyzing in effect against semicivilized people.

246. Machine guns are also of great use in street fighting, in quelling riots and in dispersing mobs.

247. Because of the extended front of modern battle lines it will often be the case that only mounted troops can reach decisive points quickly enough to seize favorable opportunities, in which the machine guns attached to the cavalry will play an important rôle.

Machine guns with cavalry must, therefore, have the mobility of cavalry.

248. Their action, particularly with the independent cavalry, is fire action with the aim of increasing the offensive and defensive power of mounted troops and of facilitating with the execution of their tactical mission. Normally, their fire will be used to augment the fire of dismounted troops, but occasions will frequently arise when their fire will take the place of the dismounted fire action of the cavalry, thereby leaving the latter free to utilize its mounted action.

249. Promptness in grasping the situation, good judgment in placing the guns, and accuracy in determining ranges must be developed in officers and enlisted men.

250. With the cavalry, machine guns take an important part in pursuing the retreating enemy or in covering a withdrawal. In supporting artillery they should operate on its exposed flank. Their use against artillery is exceptional and only when artillery is limbering or unlimbering, or when a position can be reached at close range against the flank.

251. In the approach march of cavalry against cavalry, the machine-gun detachment must take up positions as quickly as possible to support the deployment.

252. During the cavalry battle, machine-gun fire on the portion of the enemy's cavalry against which the decisive charge is to be delivered may throw it into confusion.

253. During mounted attacks against the flank of dismounted troops or artillery, well-chosen opportunities for machine-gun fire from the front may hold the enemy in place and prevent his changing position to face the attacking cavalry.

254. In the execution of the important missions intrusted to the cavalry, there will be great opportunities for the machine guns not only in the frontal attack but in operations against the flank or in rear of the hostile lines.

255. After a successful assault, the machine guns should be advanced as rapidly as possible to assist in repelling counter attacks or to join in the pursuit. The fire of the guns at this time is particularly effective and should be utilized up to extreme ranges in order to prevent the reorganization of the enemy's forces and to create further confusion in his ranks.

256. If the assault be not successful, the machine gun must be in position to cover the withdrawal.

257. To open the way for independent cavalry, to assist the cavalry of the advance guard to seize important points, to be held by the chief as a fire reserve, ready to support threatened points and to aid dismounted troops in gaining superiority of fire, are the principal missions of machine guns.

258. No definite position in the regiment for the machine guns on other than ordinary marches can be prescribed, as this will depend upon the possible use to be made of them. Their position must, however, be such that, without interfering with the maneuvering of the regiment, the guns will be ready to carry out the tasks assigned to them.

MACHINE GUNS WITH THE ADVANCE GUARD.

259. The machine guns attached to the advance guard may be utilized most effectively to force the enemy to deploy at a distance, thus delaying his advance long enough to allow the infantry to come up, to gain and hold important ground, to cover the deployment of the main body, and in general, to carry out the aggressive mission usually assigned to an advance guard.

260. As a rule, therefore, the machine guns of the advance guard should be ordered into action early and later withdrawn, to be held in readiness for further employment as soon as sufficient troops are deployed to make their use during the early stages of the action unprofitable.

261. At long ranges observation of the effect of fire and the target will ordinarily not be such as to warrant the use of machine guns to combat the defender's long-range rifle or machine-gun fire. The machine-gun organization, therefore, will seldom be justified in going into action or opening fire at ranges greater than 1,500 yards.

DEFENSE.

262. In defense it will often be necessary to strengthen the firing line at threatened points, to support a counter attack, to prevent flanking movements, to resist the final charge, or to cover a withdrawal. This demands the development at certain points of a highly concentrated volume of fire in the shortest possible time.

The development of this kind of fire is the function of machine guns. Positions in the line of defense should be prepared and cover constructed whenever the time permits, in order that the attack, in whatever direction it may develop, may be met with the maximum fire power of the guns. Ranges to prominent points should be measured.

263. The area to be covered by fire should be determined and such positions selected as will enable the guns to command narrow approaches, cover dead spaces, and bring cross fire to bear on ground in front of trenches and other important defensive works. This is particularly the case when night attacks are expected. Concealment and cover from rifle and shrapnel fire should be constructed when possible. Secondary positions should also be selected and prepared for use in case the original positions become untenable.

While the guns should be in position at the beginning of an action, their fire should be reserved until stages when the targets are most vulnerable.

264. It must be remembered that while in attack an intense fire distributed along the enemy's front, irrespective of hits, will generally prevent him from rising to take aim and fire, and thus permit the advance of our firing line, it is only by means of hits and casualties produced that an attack can be stopped. To paralyze the attack by large losses in a minimum time by sudden overwhelming and unexpected fire is the principal function of machine guns in the defense. Such losses and such effect can be produced only when the targets are large and vulnerable, as in the last stages of the attack.

DELAYING AND REAR-GUARD ACTIONS.

265. In a "delaying action" the machine-gun organization should be assigned a position where it will be able to concentrate its long-range fire on the closed bodies of the enemy, force his early deployment, and cover the withdrawal. Machine guns attached to the rear guard should be employed in the same general manner.

In these actions, owing to the volume of fire which they are capable of developing from a narrow front and the ease with which they can be withdrawn from action, machine guns should find one of their most valuable employments.

WITHDRAWAL FROM ACTION.

266. In a "withdrawal from action" the machine-gun organization should be employed in the same general manner as in delaying and rear-guard actions.

RECONNAISSANCE.

267. The machine gun being a weapon of opportunity, the occasions for its fire will arise quickly and pass as quickly; its effect therefore must be immediate and decisive. Time occupied in the search for technical and tactical advantages must not delay the action.

A good eye for ground and skill in making use of cover are all-important and every position should be reconnoitered previous to its selection and occupation.

268. The duty of locating the enemy and securing information concerning him devolves in general upon other troops. A machine-gun commander

must, however, obtain for himself such special information as is needed to insure the proper posting and the effective employment of the guns to carry out the task assigned to them.

He must know what and where the targets are, where there are suitable fire positions, and the best means offered by the terrain for approach thereto.

269. From knowledge gained through his preliminary reconnaissance with the detachment commander, the machine-gun commander may be able to at once select positions for his guns and conduct them into position. If not, additional reconnaissance must be made by him and his subordinates, assisted by enlisted men specially trained as scouts, who should be well mounted and equipped with field glasses.

270. When an action is imminent, the scouts may be from 700 to 1,000 yards in advance of the command, with which they retain communication by signal or otherwise. They will discover and report:

- (a) The position of the enemy.
- (b) The position of friendly troops.
- (c) Good firing positions.
- (d) Routes for the advance of the guns under cover.

271. As soon as the position is selected, the scouts should fall back on the flanks, keeping in constant communication with the "combat patrols" and giving timely warning of the approach of hostile patrols or of movements of the enemy threatening the flanks.

272. Scouts should always operate in pairs or greater numbers.

273. If assigned to the reserve or on defense, reconnaissance must also be made and firing data obtained for use in case the guns are put into action.

274. Patrols preceding the guns should never go into the proposed positions unless ordered to do so, as they are likely to expose themselves and thus betray the position. They should approach the position close enough to assure themselves that it is not occupied by the enemy.

275. The time and place for preparing for action and moving the guns forward by hand will depend upon the terrain and the state of the engagement. As a general rule the guns should remain in pack and be transported as close to the contemplated position as cover from view and fire of the enemy will permit.

SELECTION OF A POSITION.

276. Before a position is selected and occupied by the guns it must be reconnoitered by the machine-gun commander in person.

277. It is only when moving to the rear in delaying or rear-guard actions, when the machine-gun commander's position is with the guns, that a subordinate may be sent to select a position.

278. In selecting a position the attainment of the greatest fire effect and the tactical requirements of the task assigned must govern.

279. The following are, in general, the features to be sought in the selection of a position:

In attack, when supporting the advance of the attacking line, effective range (1,500 yards or less); a clear view of the enemy's position; sufficient height above or distance from the flank of the firing line so as not to endanger or obstruct its advance; facility for moving forward to within close range (600 yards) of the enemy's position.

In defense, an extended clear field of fire on which a good fire effect is possible up to within the shortest range; a firing line at right angles to the line of fire; cover obstructing the enemy's view; good communications laterally and to the rear.

In delaying or rear-guard actions, short ranges will not be used ordinarily, and the position selected should allow for the development of the greatest fire effect at ranges from 600 to 1,500 yards or more.

280. Positions close to objects, the range of which is known to the enemy, are to be avoided. Those near prominent objects, as they aid the enemy to find the range, are to be avoided. A position in front of a dark background, or ground covered with suitable growth, will make it difficult for the enemy to find the range. Every kind of mask to hinder observation by the enemy should be used.

281. In delaying or rear-guard actions positions covering the exit of defiles, bridges, fords or any obstacle which causes the enemy to assume a narrow, deep formation, should be selected.

One carefully planned ambush will often do more to delay an enemy than the most stubborn stand.

OCCUPATION OF A POSITION.

282. The requirements of the situation will demand that frequently the gun detachments, and at times the guns, be kept under cover and in readiness in rear of or near the actual firing positions until the opportune moment for opening fire arrives. This will usually be the case in the attack and also in defense when time does not permit of the deliberate preparation of firing positions.

283. For this purpose the squads should be held in line of squad columns or line of skirmishers covering the front to be occupied by the guns.

284. Whenever time is available, artificial cover for the guns should be constructed.

285. The machine-gun commander will give such necessary instructions or commands for taking the firing formation, occupying the position and opening fire as the situation demands.

Particular effort must be made to take positions under cover and to surprise the enemy by a sudden opening of fire.

If the guns must go into action without delay, the commander must endeavor to surprise the enemy by the rapidity with which he takes the firing formation and opens fire.

286. The position of each gun is selected by the squad leader with due regard to fire effect and cover. The interval between the guns will depend upon the available front and the kind of fire, artillery or infantry, to which the guns are to be subjected. If liable to come under artillery fire, the interval should, in general, be such as to insure that no two guns are included in the burst of a single shrapnel. This interval can be taken to be not less than 20 yards. The greater the interval the more difficult the central control. On the other hand, the closer together the guns are placed the greater their vulnerability.

COMMUNICATION.

287. During the action communication is maintained between the machine-gun commander and the detachment commander by messengers or signals. Communication must be maintained also with the noncommissioned officer in charge of the led animals. Signals are used whenever practicable.

MANEUVER OF THE GUNS DURING ACTION.

288. In attack, no opportunity should be lost for advancing the guns from one position to another, in order to reach a position within close range of the enemy by the time the attacking line is ready to deliver the assault.

The final position selected for the guns should be such that in case the assault

is successful the guns may be advanced rapidly to assist in holding it or to join the troops sent in pursuit; or, in case of repulse or counter attack, that the guns can cover the reorganization of the firing line.

289. The advance of the guns should be subsequent to that of the attacking line which they are supporting.

Constant endeavor should be made to maintain close relation with the advancing firing line, and opportune moments seized for the advance of the guns under cover of its fire.

290. The advance should preferably be made on the flank, and successive positions for the gun selected with the one object of aiding the advancing line.

291. Whatever cover is afforded by the natural features of the terrain must be taken advantage of in advancing the guns. Exposed places must be crossed at a run and in a sufficiently extended formation to minimize losses.

292. In the defense, after occupying a position once assigned, the further maneuver of the guns will generally be determined and prescribed by the commander of the force to which attached.

293. In rear guard or delaying actions, the movement of the guns must conform to that of the troops to which attached.

A subordinate officer and men with the necessary engineering tools should be sent to the rear for the purpose of selecting and preparing positions for the guns.

The amount of resistance that is to be made at each of the successive positions is determined by the orders of the rear guard or other commander.

Care should be exercised that the guns do not become so involved in any position as to prevent their withdrawal.

OPENING AND CONDUCTING THE FIRE.

294. The decision to open fire must not be made hastily. In advance guard, rear guard and delaying actions, when the object sought is to delay the advance of the enemy, fire should generally be opened as early as possible.

295. In all cases it must be remembered that the effectiveness of machine-gun fire, like that of rifle fire, is dependent mainly upon the range.

296. Firing over the heads of our own troops is an admissible procedure, but should be resorted to only when the terrain is such as to give the guns sufficient height above them and the conditions and circumstances of the action demand it.

297. When machine guns are employed to support a cavalry charge, the concealment of the guns in the fire position is of minor importance. The chief object to aim at is to keep the guns hidden until such moment as they can be brought into action suddenly from a position whence the fire of every gun can be concentrated on the enemy just before the moment of impact.

To effect this the machine-gun commander must act with promptitude and decision and clearly understand the cavalry commander's plan of action.

When this fire becomes masked by the advance, the machine-gun commander must be on the alert for opportunities to fire on the enemy's supports and reserves.

298. Tactical importance must govern in the choice of a target. In the attack that part of the enemy's line against which the attacking line is advancing will usually be the proper target. The opening and duration of the fire, in this case, must be governed entirely by the opportunities offered for helping the attacking line. As long as the line is able to advance by means of its own force or fire power, the fire of the guns should be withheld. As the advance of the line becomes more difficult, opportunities for the use of the guns will present themselves. The proper moment for opening fire can be determined only by

close observation of the advancing line. Active preparations in the attacking line to move forward or the beginning of the advance by rushes will generally indicate the proper moment for opening fire.

299. The decision to open fire must not be made dependent upon the possibility of securing hits, the suppression of the enemy's fire being equally important. The enemy's firing line, whatever its vulnerability, must be covered with as great a volume of fire as possible and firing continued until the attacking line has established itself in its advanced position. Fire should then be suspended until another favorable opportunity presents itself.

300. When the attacking line has reached the position from which the assault is to be delivered, the maximum fire power of the guns must be joined to that of the attacking line in the preparation for the assault. Here again close observation of the attacking line is necessary to determine the proper moment for opening fire.

301. During the assault, if the position of the gun is such that fire can be delivered without endangering the attacking troops, this should be done, the elevation being increased as the assaulting line advances so as to cover the ground in rear of the enemy's position.

302. When the guns are assigned a task in the defense, the time for opening fire must be governed entirely by the possibility of making hits and definitely stopping the advance.

303. The advance of the enemy to the assault must always be the signal for opening fire with the maximum fire power of the guns. Previous to this time when deciding upon opening fire, the probable losses that will be inflicted upon the enemy must be weighed against the probability of the guns being disabled by the enemy's artillery before the assault is attempted, in case the position of the guns is disclosed.

304. When the tactical requirements of the situation do not define a target consideration will be given to those targets which promise a large percentage of hits. Large, deep, broad and dense targets should then be selected, if visible.

305. It must be borne constantly in mind that the ammunition supply is limited. When, however, it is decided to open fire upon a target for the purpose of obtaining a particular result, the necessary ammunition must be expended without hesitation.

"Fire of insufficient effect weakens the moral element of one's own troops while strengthening that of the enemy."

306. Losses inflicted upon the enemy are all the more demoralizing in effect if produced in a brief period. In most cases, therefore, it will be advisable to open fire from all the guns simultaneously.

307. A change of targets is made only when the guns have been successful in their firing at the former target. Frequent changes of target weaken the fire effect and are therefore to be avoided.

308. It will not be possible to avoid on all occasions the distribution of fire over several objectives; but the distribution of the fire must not degenerate into a useless, ineffective division.

THE LED ANIMALS.

309. When the organization is engaged the led animals are left under cover. They are held in any suitable formation, provided they are enabled to leave their position quickly.

310. The noncommissioned officer in charge must remain in constant communication with the organization and follow its movements as closely as possible, even though he has received no orders to that effect, and he must keep

in constant readiness to move forward and transport the guns and ammunition.

311. Whenever necessary the security of the led animals must be provided for by the posting of small combat patrols or covering detachments.

AMMUNITION SUPPLY.

312. Before going into action such additional ammunition as the pack animals can carry is added to their loads.

313. The ammunition carried with the guns and in the combat train will ordinarily be sufficient for one day's fighting. After the animals are unloaded and the organization prepares for action, the necessary men and animals may be sent back to the combat train to secure ammunition.

314. Immediately after an engagement or as soon as possible after the arrival of the refilled combat wagons of the regiment steps must be taken to replace the ammunition expended in action.

CONSTRUCTION OF COVER.

315. When using natural cover or constructing artificial cover it should be borne in mind that the angle of fall of rifle fire distant 900 yards is about 1 degree and that the angle of fall of shrapnel is about 7 degrees. To secure defilade these angles should be exceeded. The trenches described in paragraphs 484 et seq., Infantry Drill Regulations, are appropriate and adaptable for the use of the gun squads.

316. When the regiment intrenches, positions in the line of defense are assigned to the guns by the regimental commander. The members of the machine-gun organization construct and develop trenches according to the time available and the amount of protection deemed necessary.

317. Special care must be taken in the selection of profile and in the construction of loopholes that the foreground can be swept by the fire of the guns and that the field of fire conforms to that contemplated in the instructions of the regimental commander.

318. It is most important that the location of the machine guns in the line of defense be concealed. For this reason all possible means should be taken for the concealment of their trenches, and profiles that, in the general line of defense, would be distinguished readily by the enemy should be avoided.

It may be necessary to construct hasty cover for the guns in the attack or when the machine-gun organization has been assigned some special mission.

319. If natural cover is available for the other men, only such cover is constructed as is necessary for the guns and the men connected with their service.

**REGULATIONS PRESCRIBING
STANDARD FOR
FIELD FIRING AND THE PROFICIENCY
TEST**

UNITED STATES ARMY

1911

FIELD FIRING AND THE PROFICIENCY TEST

JUDGING THE RESULTS OF FIELD-FIRING EXERCISES, INCLUDING

METHOD OF ARRIVING AT STANDARD OF PROFICIENCY IN THE ANNUAL PROFICIENCY TEST.

1. Field-firing exercises are usually arranged as tactical schemes representing a fraction or episode of a combat, and hence should be judged from two standpoints. They are judged in the first instance by the tactician, who has in view the adequacy of the reconnaissance, the dispositions made as a result of the reconnaissance, and the promptness with which they are conceived and executed; the use of cover, the maintenance of fire discipline, fire control, and fire direction; and, in general, whether or not the execution of the exercise was in conformity with the tactical idea involved. In the second instance they are judged by the ballistician, who determines what result in hits and distribution should have been obtained under the circumstances. He then counts the hits and figures hit, makes note of the time consumed in firing, and compares these results with what they should have been, and, should this comparison prove unfavorable, he seeks for the cause of failure.

THE STANDARD OF COMPARISON AND INFLUENCES MODIFYING IT.

2. Owing to different well-known causes, the variations in the trajectory are such that in a series of shots fired at a target no two shots will strike in the same spot, the hits being arranged in a certain diagram called the "shot group," the size of which varies with the skill of those firing. Good shots will make a small group and poor shots a large one. A computation of the hits to be expected from riflemen of a given class is based upon the science of probabilities, which teaches that the distribution of shots in the diagram of hits, apparently regardless of any rule, is in fact in conformity to a law which does not exhibit itself until after the delivery of a large number of shots.

3. If, therefore, the dimensions of the shot group pertaining to riflemen of a certain class or grade are measured for the different ranges, a large number of hits being considered, the mean dispersion or measure of the strip containing the best 50 per cent of the hits will provide a basis for computing the probable number of hits to be expected from shots of this class at any range at targets of a given size.

4. Through an extended series of firings at the Musketry School measures have been found for the dispersions of good shots and average shots from 200 to 1,000 yards, inclusive, and these are shown in Table I. Good shots are taken as including experts and sharpshooters in the proportion of 1 to 4, and average shots as including shots of all grades as these are found in an average well-instructed command.

5. For use in connection with Table I, a table of probability factors is given under the heading "Table II," and a statement of dimensions and vulnerable areas of the various types of field targets is given under Table III. The dispersions set forth in the tables are those obtained on targets selected for their visibility. In addition to this the ranges were accurately known and the firing was conducted under circumstances tending to give somewhat better shot groups than those which would be obtained either in field firing or in service firing. In all the firings upon the results of which Table I is based, the aiming point used was the lowest point of the vertical diameter of the bull's-eye, and the assumption is made that in field firing or in service firing the aiming point will be the middle point of the bottom line of the figure, or otherwise the lowest element of the objective selected as an aiming point. The experimental firing at the School of Musketry indicates that the average battle sight corresponds to a sight setting of 436 yards. This firing also indicated that the average reading on the leaf sight was approximately 50 yards short of the actual range. The mean temperature at the School of Musketry is about 60° F. and the target range is about 400 feet above sea level. Where other conditions prevail, these results will of course be modified. In the appended tables of percentages of hits to be expected at various ranges, those which are computed for misplaced centers of impact due to aiming at the bottom of the figure are based upon the above consideration—i.e., that the battle sight corresponds to a range of 436 yards, and that the leaf sight, if set at a reading corresponding exactly with the range, will place the center of impact about 50 yards short of the aiming point.

6. **Examples of Use of Tables.** What percentage of hits would be obtained by "average" shots on a wall 5 feet high and 3 feet wide at a range of 1,000 yards with the correct elevation? From Table I the mean vertical dispersion of average shots at 1,000 yards is found to be 8.29 feet. If the height of the target is now divided by this mean vertical dispersion, the "probability factor" is obtained thus: $5 \div 8.29 = 0.603$. Look in Table II for the probability factor 0.603, and, by interpolation, it is found to correspond to a percentage of 31.55. That is to say, a target of infinite width and 5 feet high, if fired at by average shots, with the correct elevation, would receive 31.55 per cent of hits. The target is not of infinite width, however, and it now becomes necessary to compute the percentage of this 31.55 per cent of hits that would be received on the target's 3 feet of width. This is arrived at in a manner similar to the computation of the vertical probabilities. From Table I is found the mean lateral dispersion of average shots at 1,000 yards—7.37 feet. The width of the target is divided by this figure, the quotient being the probability factor, thus: $3 \div 7.37 = 0.407$. The probability factor, 0.407 (see Table II), corresponds to a percentage of 21.65. That is to say, a target of infinite height and 3 feet wide would receive 21.65 per cent of hits under the conditions named. If this result to be expected on a strip 3 feet wide (21.65 per cent) be now multiplied by the result to be expected on a strip 5 feet high (31.55 per cent), the product will be the percentage of hits to be expected on a target 5 feet high by 3 feet wide by average shots at 1,000 yards with the correct elevation—i.e., with the center of impact at the center of the target. Thus, $21.65 \times 31.55 = 6.83$ per cent, which is the desired result.

7. To find the percentage of hits on a target composed of a number of silhouettes, the same process is employed, the final figure being obtained by finding the ratio of the surface of the exposed figures to that of the rectangle that incloses them.

Example. With the correct elevation, what percentage of hits will be obtained by average shots on a line of 10 kneeling figures occupying a front of 10 yards;

range 500 yards? The rectangle inclosing the line of figures is 42 inches high by 360 inches wide, on which, according to the example above noted, there would be obtained 42.5 per cent of hits. The surface of this rectangle contains 15,120 square inches, while the surface of the 10 figures contains only 6,550 square inches (see Table III), which is 43.3 per cent of the surface of the rectangle. As the vulnerable surface is only 43.3 per cent, then the hits to be expected on this surface are 43.3 per cent of 42.5 per cent, or 18.40 per cent. The percentage of hits determines the accuracy of the firing. Thus, as in the above firing, there should have been 18.40 per cent of hits. Had a firing line obtained only 15 per cent of hits in this firing, then their percentage of accuracy would have been 15/18.4, or 81.5 per cent.

8. Having found the percentage of accuracy attained by any unit in any exercise, it next becomes necessary, if this percentage be low, to determine the causes of inaccuracy.

9. The effect of invisibility or a low degree of visibility of targets in diminishing the effects of fire is very marked, and is due in the first place to the difficulty of pointing out obscure targets, and in the second place to the difficulty in aiming accurately at a faintly outlined object. In cases where figures are not conspicuous enough to serve in themselves as aiming points, auxiliary aiming points must be selected and designated to the firing line. This is a difficult procedure, requiring good training and perfect understanding between officers and men. More time is required in such cases, and when different elements of an objective possess different degrees of visibility the distribution is likely to be affected, the greater visibility of some of the figures serving to attract the aim of the marksmen. Assuming a perfect performance so far as target designation and understanding are concerned, there is still loss in effect below computed results, due to varying degrees of visibility of figure targets, in that usually a less well-defined aiming point is presented and the dispersion of the individual is thereby increased. In certain lights figure targets may be plainly seen, and under opposite conditions as to light and background the outlines are barely distinguishable from the surroundings. Between these two extremes of high and low visibility there is some latitude. An effort has been made to establish a measure of this loss in effect, and after certain experimental firings and taking all things into account, it is estimated that the maximum loss of accuracy expressed in percentage of hits considered to be admissible with troops who have been given suitable visual training is 25 per cent. This figure is a maximum, and the loss will usually be less, the amount to be assigned being a matter of judgment.

10. In addition to that which is due to low visibility, loss of accuracy may be due to wild firing which may result from—

1. Nervous excitement, firing without looking through the sights.
2. Not firing at the designated objective.
3. Firing faster than is consistent with accuracy (faster than ordered).
4. Not setting sight as ordered.

All of which may be attributed to poor fire discipline or control, or both. It may also be caused by—

5. Vague and indefinite instructions concerning the location and extent of the objective.

6. Hurried, indistinct, or ambiguous orders for firing.
7. Incorrect estimation of the range.

All of which may be attributed to poor fire direction. Of all these factors the one that is most potent in the reduction of accuracy is the error in the estimation of ranges.

11. The effect of incorrect estimates may be computed within a close approximation by finding the ratio between the error and the mean longitudinal dis-

person for that range. Having found this ratio, the reduction in accuracy is found in Table V.

12. Example. Average shots fire at a range of 900 yards, but use an elevation of 1,000 yards. What effect will this error have on their hits? From the table of dispersions it is found that the mean longitudinal dispersion of average shots at 1,000 yards is 105.89 yards. The error in range is 100 yards. The ratio of the error to the mean dispersion is $100 \div 105.89$, or 0.944. This 0.944 is the density factor and corresponds to a density (see Table V) of 0.445. That is to say, this firing would have resulted in but 44.5 per cent of the hits that would have been obtained had the correct elevation been used. In seeking for causes of loss of accuracy one should first look for the error in estimating the range, and if this does not fully account for the reduction, then one must look to lack of proficiency in fire discipline, control, and direction for the answer.

13. Having disposed of the accuracy of the fire, distribution is next taken up. What is sought is an evenly distributed fire. When the fire is evenly distributed, the number of figures struck depends on the ratio of the number of hits to the number of figures in the target. Having found this ratio, the percentage of figures that should have been struck can be read directly from the "Table of distribution," hereto appended.

14. Example (see Table IV). On a target consisting of 100 figures there are 50 hits on 26 figures. What is the percentage of distribution? The ratio of hits to targets is $50/100$ or 0.50. From the table the factor 0.5 corresponds to a percentage of 39.4 figures that should have been struck. That is to say, 39 per cent of 100 figures or 39 figures should have been struck. As only 26 figures were struck, however, then the percentage of distribution is $26/39$ or 66 per cent.

15. An even distribution of fire is usually obtained by allotting certain definite sectors of the target to each subdivision of the firing line. The company commander designates the sectors for each platoon; the platoon commanders, the sectors for each section, etc. Ambiguity in giving instructions as to distribution will cause a falling off in the percentage of figures struck, as will also an indifferent control or execution of these instructions. An equally distributed fire is especially difficult of attainment when firing at a group in which some of the targets stand out in bold relief and others are obscure or partially hidden. Men instinctively fire at the targets they can see. Failure to attain a proper distribution under such circumstances usually indicates a lack of good fire discipline and control, provided the commander of the firing line has issued lucid orders.

16. Next in order comes the matter of time. The time required for the execution of an exercise includes several operations other than the actual delivery of fire. They are:

1. Making a preliminary reconnaissance for the purpose of locating the targets.
2. Selecting a position from which the most effective fire may be brought to bear upon the target.
3. Finding the range to the target.
4. Placing the organization in the position selected.
5. Pointing out the target to subordinate commanders and indicating to them the sectors that are to be covered by the fire of their subdivisions.
6. Pointing out the targets to the individuals of the firing line.
7. Giving the preliminary commands for firing.
8. Setting sights.
9. Assuming a position for aiming at the designated objective.

No fixed standard of time can be set down for each or any of these operations. It will vary somewhat with each exercise, depending upon the nature of the terrain, the range, and the degree of visibility of the targets.

17. There remains the question of the actual time required to execute the fire, since it is not absolutely the number of hits made, but it is the number of hits made in a unit of time which must be the basis of judgment. Von Rohne states: "In field firing it is less a matter of obtaining large percentages of hits than of an absolute large number of hits in a unit of time." There is necessarily a limit to rapidity of fire which if exceeded will result in some loss in accuracy. This rate of effective fire depends upon a number of factors:

1. It will be faster for trained than for untrained troops.
2. A company on a peace footing will have a greater rapidity of effective fire than one on a war footing.
3. It will be faster at a large than at a small target.
4. It will be faster at a target which stands out in bold relief than at one which is vague in outline and whose color blends with a neutral background.
5. The physical condition and the morale of untrained troops has a marked influence on the rapidity of effective fire.
6. The aiming position also has its effect—one can fire faster from an easy position than from a cramped one.
7. It will be faster at short range than at long range.
8. It will be faster at the beginning of an action than after firing has continued for some time.

18. There is some variety of opinion as to the rates of fire which are consistent with accuracy, and it is obvious that in proposing a standard of performance no more can be done than to present an approximation to which there must be exceptions. The standard rates of fire proposed below are based upon experience and observation at the Musketry School. When firing a single clip the rate of fire is obviously faster than when two or more clips are fired.

| Range. | |
|-----------------|--------------|
| 10 per minute: | |
| | 200 yards. |
| | 300 yards. |
| | 400 yards. |
| 7.5 per minute: | |
| | 500 yards. |
| | 600 yards. |
| | 700 yards. |
| 5 per minute: | |
| | 800 yards. |
| | 900 yards. |
| | 1,000 yards. |

This rate includes the time required for recharging the magazine, which is taken to be 10 seconds. Should the rate of fire at any range fall very much below the rate given, it may be said that a proper use has not been made of the element of time; and should this rate be very much in excess of the standard given, it may be concluded that there has been some loss in accuracy. The rates given should not exclude higher rates of fire in the case of large and very conspicuous targets, such as dense skirmish lines, bodies of cavalry, or batteries of artillery. In no case at ordinary targets, even at the longest range given above, should the rate of fire fall below 5 shots per minute. A lower rate it has been found can not improve the accuracy of the fire in detachment firing, and on the other hand the rate of 10 shots per minute can not be exceeded by the average soldier without a loss in accuracy. A high rate of fire may easily degenerate into unaimed fire.

THE CRITIQUE.

19. In order to be of instructional value every firing exercise should be followed by a critique delivered by a superior officer based upon the conduct of the exercise and the results obtained in accuracy, distribution, and time.

20. In field-firing exercises over unknown ground, the accuracy to be expected from average shots, assuming an error of 5 per cent to have been made in the estimation of the range, is considered to be a proper standard of proficiency in case the performance has been good in other respects.

21. It is not admissible, however, merely to say that a command or a detachment is proficient, or deficient, or to characterize a firing exercise as "Good," "Satisfactory," or "Poor." If no more than this be said no one will know what faults have been committed, or how they should be corrected. The critique should begin with a statement of the exercise, including a description of the targets—kind, number, location, front covered, or intervals between figures, the actual range, the estimated range, the time required for firing—and the computed percentage of hits to be expected by average shots under good leaders, and also by good shots under the same circumstances. This should be followed by a brief outline of the tactical idea involved in the proper execution of the exercise, and this in turn is followed by comments on the manner in which the idea was actually carried out.

22. The accuracy obtained as shown in the actual number of hits made in the exercise should be compared with that to be expected from average and good shots under favorable conditions, and in case of deficiency the reasons therefor should be stated.

23. The same course should be followed with the results obtained in distribution and time which should be taken up in turn.

24. The operations which precede the actual firing and to which particular reference is made in paragraph 16 may be spoken of as the preparation. This phase of a firing exercise has a somewhat remote bearing on the actual results obtained in firing, but must receive some consideration. Assuming correct tactical procedure, the chief element for consideration is the matter of time, and in judging the time consumed prior to opening fire one must consider all the difficulties that have been encountered and then determine whether or not there has been an unreasonable delay which would not have occurred had the leadership been good and the organization properly trained.

25. This part of the critique might be worded, "The preparation was completed with reasonable celerity," or "The preparation consumed 12 minutes. This is considered too long and is mainly due to:

"1. Lack of familiarity with range-finding methods.

"2. Lack of training in describing objectives.

"3. Inadequate reconnaissance resulting in several changes of position before the firing line was so placed that the targets could be seen."

"Further training in these subjects would tend toward greater promptness in opening fire."

26. It will usually be sufficient merely to comment on minor errors committed in the course of the preparation, but in case of serious and unnecessary delays in opening fire, which in combat would give an active enemy a decided advantage, weight should be given in proportion to the fault committed. It should be borne in mind, however, that in passing judgment as to proficiency or deficiency the actual results obtained in firing by a detachment or organization must remain the chief basis, however much this judgment may need to be modified through faults committed in the preparation.

JUDGMENT OF PROFICIENCY TEST AND STANDARD OF PROFICIENCY THEREFOR.

27. The three courses in firing prescribed in paragraph 352, Provisional Small Arms Firing Manual, are designed not so much to illustrate possible phases or situations in action, as is the case in the arrangement of field-firing exercises, as to provide a firing exercise the conduct of which makes for the company or troop a test not only of the ability to shoot, but of the ability to make this skill effective through the means of fire discipline, fire control, and fire direction. As this test is required to be held on Class A ranges the question of distances can not be made to enter as an unknown factor to any great extent. In other respects the arrangement being the same, the basis of judgment and rules provided for field firing may be applied to the results obtained with the three courses in firing. The standard of proficiency settled upon will also be applicable, subject to the exception that the percentage of error allowed in field firing is not admissible.

28. A special requirement is imposed, however, in the case of the three courses in firing in that besides determining the question of proficiency or deficiency, a rating of "Good," "Very good," or "Excellent" is called for according to the results obtained in the case of any organization attaining proficiency.

29. To carry out this provision the four principal factors named may be taken as the basis of judgment as in all field firing exercises, and of these accuracy or the percentage of hits obtained should be given the first consideration.

30. Should a company in firing one of the three prescribed courses obtain a percentage equal or superior to that to be expected from good shots using a sight setting corresponding to the range as computed from tables, then the organization should be given a rating of "Excellent" provided the distribution has not fallen much below what it should be as indicated in Table IV and the rate of fire has not fallen much below the rates given in paragraph 18.

31. Should the organization firing make a percentage of hits about equal to that which is to be expected from average shots using the exact elevation as computed from Tables I, II, and III, then it should be entitled to be classed as "Proficient" and given a rating of "Good" provided the distribution is in close accordance with the hits made as in Table IV, and if the time of execution of the fire agrees closely with rates laid down in paragraph 18. In this case, as ranges will be known very closely, the error of 5 per cent conceded in paragraph 20 is not admissible.

32. In the general case of field firing advantage will appear when the ground surface enables the shot strike to be seen, as, by observation of this effect, errors in elevation may be corrected. The proficiency test being held over ground which is familiar to the organization commander, large errors in elevation are not to be expected. Consequently, the advantage that might be obtained by one organization over another due to differences in surface condition is not apt to be sufficiently important to justify a modification of the standard of proficiency.

33. Should the results obtained in accuracy, distribution, and time of execution of the fire be considerably in excess of that which would justify a rating of "Good," and should they fall somewhat short of being "Excellent" as specified above, a rating "Very good" should be given.

34. Should the results obtained in accuracy in any firing course be very much below the results computed for average shots, the organization should be declared "Deficient" unless it appears that conditions as to visibility have been

sufficient to account for this shortcoming. As an aid to judgment in such a matter reference is made to the statement of percentage of reduction given in paragraph 9. This percentage given represents the maximum reduction in effect due to lack of visibility. With this as a guide each case should be judged on its merits according to conditions as to visibility existing at the time, care being taken that excessive allowances be not made on this account.

35. In other cases a due consideration of the effects of invisibility may be sufficient to justify an increase in rating over that which is indicated by the actual results obtained considered alone.

36. Finally, consideration should be given to the time occupied in the preparation and to the correctness of the procedure followed. As to the weight to be given in the final conclusion to the factor of preparation, no rule can be stated more specific than that given in paragraph 26, and this should be sufficient.

37. The purpose of all field firing exercises, and of those firing exercises designated as tests, is through definite and intelligent criticism to eradicate faulty procedure and bring about an improvement in musketry. With this as a guiding principle, and with a known standard of comparison, and rules of application as given herein, it may be expected that fair and impartial judgments may be reached according to the intent of paragraph 355, Small-Arms Firing Manual.

38. The appended tables numbered from 1 to 6, inclusive, are for general use in connection with this subject; the tables numbered from 7 to 22, inclusive, are for special use in connection with the proficiency test. The data shown in the latter tables have been computed with reference to the particular conditions of the three courses in firing and the ordinary computations are thus avoided. By reference to the proper tables the accuracy of good and average shots at various ranges and on different field targets may readily be found, the intervals between targets being uniform. For the sake of comparison, tables showing the results to be expected with the center of impact properly placed are also given.

39. The effect of errors in the estimation of ranges on the accuracy of the fire may be read directly from the charts shown in plates 1 and 2, the critique being thus facilitated in that the loss in effect will not have to be computed in each case. These charts are graphic presentations of results computed from the table of density factors, plate 1 being for "good" shots, and plate 2 being for "average" shots. At the left-hand edge of the chart is a vertical scale of ranges in yards, with a least reading of 20 yards. At the top of the chart is a horizontal scale of errors in yards, with a least reading of 2 yards. The diagonal curves on the face of the chart represent percentages of accuracy that would be obtained with given errors in the estimation of the range. These percentages are based on the amount that would have been obtained had the correct elevation been used—i.e., this amount is considered the maximum, or 100 per cent. An example will best illustrate the use of the chart. Good shots are firing at 700 yards with an elevation corresponding to 800 yards. What percentage of effect would they obtain? As "good" shots are being considered, reference would be made to plate 1. As the true range is 700, and the range used is 800, the error is obviously 100 yards. Then follow the horizontal line, cutting the range scale at 800, to the right until it intersects the vertical line which cuts the error scale at 100. The curve which passes through this point of intersection is the 50 per cent curve, and is numbered 50. Therefore, under the conditions noted, there would be obtained 50 per cent of the hits that would have been obtained had the correct elevation been used. Had this firing been executed on a line of 30 prone figures with an interval of 1 yard from edge to edge, the percentage of hits to be expected with the exact elevation

would be 4.84 per cent (see Table X). Therefore with an error of 100 yards there could be expected but 50 per cent of this amount ($0.0484 \times 0.50 = 0.0242$), or 2.42 per cent of hits.

TABLE I.
COLLECTIVE DISPERSIONS.
[Mean (50 per cent.) zones.]

| Range. | Average shots. | | | Good shots. | | |
|------------------|----------------|--------------|--------------------|--------------|--------------|--------------------|
| | Vertical. | Lateral. | Longi- tudinal. | Vertical. | Lateral. | Longi- tudinal. |
| | <i>Feet.</i> | <i>Feet.</i> | <i>Yards.</i> | <i>Feet.</i> | <i>Feet.</i> | <i>Yards.</i> |
| 50 yards..... | 0.55 | 0.50 | ..... | 0.47 | 0.45 | ..... |
| 100 yards..... | 1.07 | 0.97 | ..... | 0.91 | 0.87 | ..... |
| 150 yards..... | 1.57 | 1.39 | ..... | 1.33 | 1.25 | ..... |
| 200 yards..... | 2.03 | 1.77 | 398.21 | 1.72 | 1.59 | 337.40 |
| 250 yards..... | 2.46 | 2.11 | ..... | 2.09 | 1.90 | ..... |
| 300 yards..... | 2.87 | 2.41 | 348.79 | 2.44 | 2.17 | 296.50 |
| 350 yards..... | 3.24 | 2.68 | ..... | 2.75 | 2.41 | ..... |
| 400 yards..... | 3.59 | 2.90 | 282.04 | 3.05 | 2.61 | 239.62 |
| 450 yards..... | 3.90 | 3.08 | ..... | 3.32 | 2.77 | ..... |
| 500 yards..... | 4.21 | 3.26 | 219.91 | 3.58 | 2.93 | 187.01 |
| 550 yards..... | 4.53 | 3.49 | ..... | 3.85 | 3.14 | ..... |
| 600 yards..... | 4.88 | 3.75 | 185.37 | 4.12 | 3.38 | 156.51 |
| 650 yards..... | 5.24 | 4.06 | ..... | 4.45 | 3.65 | ..... |
| 700 yards..... | 5.62 | 4.40 | 156.66 | 4.78 | 3.96 | 133.25 |
| 750 yards..... | 6.02 | 4.79 | ..... | 5.12 | 4.31 | ..... |
| 800 yards..... | 6.44 | 5.23 | 135.28 | 5.47 | 4.71 | 114.91 |
| 850 yards..... | 6.87 | 5.70 | ..... | 5.84 | 5.13 | ..... |
| 900 yards..... | 7.33 | 6.21 | 118.57 | 6.29 | 5.33 | 101.86 |
| 950 yards..... | 7.80 | 6.77 | ..... | 6.63 | 6.09 | ..... |
| 1,000 yards..... | 8.29 | 7.37 | 105.89 | 7.03 | 6.63 | 90.05 |

TABLE II.
PROBABILITY FACTORS.

| Fac- tor. | Per cent. | Fac- tor. | Per cent. | Fac- tor. | Per cent. | Fac- tor. | Per cent. | Fac- tor. | Per cent. | Fac- tor. | Per cent. |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 0.02 | 1.1 | 0.52 | 27.4 | 1.02 | 50.9 | 1.52 | 69.5 | 2.02 | 82.7 | 2.55 | 91.5 |
| 0.04 | 2.2 | 0.54 | 28.4 | 1.04 | 51.7 | 1.54 | 70.1 | 2.04 | 83.1 | 2.60 | 92.1 |
| 0.06 | 3.2 | 0.56 | 29.4 | 1.06 | 52.5 | 1.56 | 70.7 | 2.06 | 83.5 | 2.65 | 92.6 |
| 0.08 | 4.3 | 0.58 | 30.4 | 1.08 | 53.4 | 1.58 | 71.3 | 2.08 | 83.9 | 2.70 | 93.1 |
| 0.10 | 5.4 | 0.60 | 31.4 | 1.10 | 54.2 | 1.60 | 71.9 | 2.10 | 84.3 | 2.75 | 93.6 |
| 0.12 | 6.5 | 0.62 | 32.4 | 1.12 | 55.0 | 1.62 | 72.6 | 2.12 | 84.7 | 2.80 | 94.1 |
| 0.14 | 7.5 | 0.64 | 33.4 | 1.14 | 55.8 | 1.64 | 73.1 | 2.14 | 85.1 | 2.85 | 94.5 |
| 0.16 | 8.6 | 0.66 | 34.4 | 1.16 | 56.6 | 1.66 | 73.7 | 2.16 | 85.5 | 2.90 | 95.0 |
| 0.18 | 9.7 | 0.68 | 35.4 | 1.18 | 57.4 | 1.68 | 74.3 | 2.18 | 85.9 | 2.95 | 95.3 |
| 0.20 | 10.7 | 0.70 | 36.3 | 1.20 | 58.2 | 1.70 | 74.9 | 2.20 | 86.2 | 3.00 | 95.7 |
| 0.22 | 11.8 | 0.72 | 37.3 | 1.22 | 58.9 | 1.72 | 75.4 | 2.22 | 86.6 | 3.05 | 96.0 |
| 0.24 | 12.9 | 0.74 | 38.2 | 1.24 | 59.7 | 1.74 | 75.9 | 2.24 | 86.9 | 3.10 | 96.4 |
| 0.26 | 13.9 | 0.76 | 39.2 | 1.26 | 60.5 | 1.76 | 76.5 | 2.26 | 87.3 | 3.15 | 96.6 |
| 0.28 | 15.0 | 0.78 | 40.1 | 1.28 | 61.2 | 1.78 | 77.0 | 2.28 | 87.6 | 3.20 | 96.9 |
| 0.30 | 16.0 | 0.80 | 41.1 | 1.30 | 61.9 | 1.80 | 77.5 | 2.30 | 87.9 | 3.25 | 97.2 |
| 0.32 | 17.1 | 0.82 | 42.0 | 1.32 | 62.7 | 1.82 | 78.0 | 2.32 | 88.2 | 3.30 | 97.4 |
| 0.34 | 18.1 | 0.84 | 42.9 | 1.34 | 63.4 | 1.84 | 78.5 | 2.34 | 88.5 | 3.35 | 97.6 |
| 0.36 | 19.2 | 0.86 | 43.8 | 1.36 | 64.1 | 1.86 | 79.0 | 2.36 | 88.9 | 3.40 | 97.8 |
| 0.38 | 20.2 | 0.88 | 44.7 | 1.38 | 64.8 | 1.88 | 79.5 | 2.38 | 89.2 | 3.45 | 98.0 |
| 0.40 | 21.3 | 0.90 | 45.6 | 1.40 | 65.5 | 1.90 | 80.0 | 2.40 | 89.5 | 3.50 | 98.2 |
| 0.42 | 22.3 | 0.92 | 46.5 | 1.42 | 66.2 | 1.92 | 80.5 | 2.42 | 89.7 | 3.60 | 98.5 |
| 0.44 | 23.3 | 0.94 | 47.4 | 1.44 | 66.9 | 1.94 | 80.9 | 2.44 | 90.0 | 3.70 | 98.7 |
| 0.46 | 24.4 | 0.96 | 48.3 | 1.46 | 67.5 | 1.96 | 81.4 | 2.46 | 90.3 | 3.80 | 98.9 |
| 0.48 | 25.4 | 0.98 | 49.1 | 1.48 | 68.2 | 1.98 | 81.8 | 2.48 | 90.6 | 3.90 | 99.2 |
| 0.50 | 26.4 | 1.00 | 50.0 | 1.50 | 68.8 | 2.00 | 82.3 | 2.50 | 90.8 | 4.00 | 99.3 |

TABLE III.
VULNERABLE AREAS AND DIMENSIONS OF FIELD TARGETS.

| Kind of target. | Height. | Width. | Vulnerable areas. | | | Vulnerable area compared with area of rectangle inclosing target. |
|-------------------|----------------------|----------------------|-------------------|--------------|---------------|---|
| | | | Square inches. | Square feet. | Square yards. | |
| Prone (F)..... | <i>Inches.</i> 22 | <i>Inches.</i> 26 | 337 | 2.34027 | 0.26003 | <i>Per cent.</i> 58.90 |
| Kneeling (E)..... | 42 | 26 | 655 | 4.54861 | 0.50540 | 59.97 |
| Standing (Q)..... | 68 | 24 | 833 | 5.78472 | 0.64274 | 51.04 |
| Horseman (R)..... | 96 | 50 | 2,456 | 17.01388 | 1.89506 | 51.16 |

TABLE IV.
TABLE FOR COMPUTING DISTRIBUTION.

| H. | D. | H. | D. | H. | D. | H. | D. | H. | D. |
|------|------|------|------|------|------|------|------|-------|-------|
| 0.01 | 1.0 | 0.41 | 33.6 | 0.81 | 55.5 | 1.42 | 75.8 | 2.55 | 92.2 |
| 0.02 | 2.0 | 0.42 | 34.3 | 0.82 | 56.0 | 1.44 | 76.3 | 2.60 | 92.6 |
| 0.03 | 3.0 | 0.43 | 34.9 | 0.83 | 56.4 | 1.46 | 76.8 | ..... | ..... |
| 0.04 | 3.9 | 0.44 | 35.6 | 0.84 | 56.8 | 1.48 | 77.2 | 2.65 | 92.9 |
| 0.05 | 4.9 | 0.45 | 36.2 | 0.85 | 57.3 | 1.50 | 77.7 | 2.70 | 93.3 |
| 0.06 | 5.8 | 0.46 | 36.9 | 0.86 | 57.7 | 1.52 | 78.1 | ..... | ..... |
| 0.07 | 6.8 | 0.47 | 37.5 | 0.87 | 58.1 | 1.54 | 78.6 | 2.75 | 93.6 |
| 0.08 | 7.7 | 0.48 | 38.1 | 0.88 | 58.5 | 1.56 | 79.0 | 2.80 | 93.9 |
| 0.09 | 8.6 | 0.49 | 38.7 | 0.89 | 58.9 | 1.58 | 79.4 | ..... | ..... |
| 0.10 | 9.5 | 0.50 | 39.4 | 0.90 | 59.3 | 1.60 | 79.8 | 2.85 | 94.2 |
| | | | | | | | | 2.90 | 94.5 |
| 0.11 | 10.6 | 0.51 | 40.0 | 0.91 | 59.8 | 1.62 | 80.2 | ..... | ..... |
| 0.12 | 11.3 | 0.52 | 40.5 | 0.92 | 60.2 | 1.64 | 80.6 | 2.95 | 94.8 |
| 0.13 | 12.2 | 0.53 | 41.1 | 0.93 | 60.6 | 1.66 | 81.0 | 3.00 | 95.0 |
| 0.14 | 13.1 | 0.54 | 41.7 | 0.94 | 60.9 | 1.68 | 81.4 | ..... | ..... |
| 0.15 | 13.9 | 0.55 | 42.3 | 0.95 | 61.3 | 1.70 | 81.7 | 3.25 | 96.4 |
| 0.16 | 14.8 | 0.56 | 42.9 | 0.96 | 61.7 | 1.72 | 82.1 | 3.50 | 97.8 |
| 0.17 | 15.6 | 0.57 | 43.4 | 0.97 | 62.1 | 1.74 | 82.4 | ..... | ..... |
| 0.18 | 16.5 | 0.58 | 44.0 | 0.98 | 62.5 | 1.76 | 82.8 | 3.75 | 93.8 |
| 0.19 | 17.3 | 0.59 | 44.6 | 0.99 | 62.8 | 1.78 | 83.1 | 4.00 | 98.7 |
| 0.20 | 18.1 | 0.60 | 45.1 | 1.00 | 63.2 | 1.80 | 83.5 | ..... | ..... |
| | | | | | | | | 4.50 | 99.0 |
| 0.21 | 18.9 | 0.61 | 45.7 | 1.02 | 63.9 | 1.82 | 83.8 | 5.00 | 99.3 |
| 0.22 | 19.7 | 0.62 | 46.2 | 1.04 | 64.7 | 1.84 | 84.1 | ..... | ..... |
| 0.23 | 20.5 | 0.63 | 46.7 | 1.06 | 65.4 | 1.86 | 84.4 | 5.50 | 99.5 |
| 0.24 | 21.3 | 0.64 | 47.2 | 1.08 | 66.0 | 1.88 | 84.7 | 6.00 | 99.8 |
| 0.25 | 22.1 | 0.65 | 47.8 | 1.10 | 66.7 | 1.90 | 85.0 | ..... | ..... |
| 0.26 | 22.9 | 0.66 | 48.3 | 1.12 | 67.4 | 1.92 | 85.3 | ..... | ..... |
| 0.27 | 23.7 | 0.67 | 48.9 | 1.14 | 68.0 | 1.94 | 85.6 | ..... | ..... |
| 0.28 | 24.4 | 0.68 | 49.4 | 1.16 | 68.6 | 1.96 | 85.9 | ..... | ..... |
| 0.29 | 25.2 | 0.69 | 49.8 | 1.18 | 69.3 | 1.98 | 86.2 | ..... | ..... |
| 0.30 | 26.0 | 0.70 | 50.3 | 1.20 | 69.9 | 2.00 | 86.5 | ..... | ..... |
| 0.31 | 26.7 | 0.71 | 50.8 | 1.22 | 70.5 | 2.05 | 87.1 | ..... | ..... |
| 0.32 | 27.4 | 0.72 | 51.3 | 1.24 | 71.1 | 2.10 | 87.7 | ..... | ..... |
| 0.33 | 28.1 | 0.73 | 51.8 | 1.26 | 71.6 | 2.15 | 88.4 | ..... | ..... |
| 0.34 | 28.8 | 0.74 | 52.3 | 1.28 | 72.2 | 2.20 | 88.9 | ..... | ..... |
| 0.35 | 29.5 | 0.75 | 52.8 | 1.30 | 72.7 | 2.25 | 89.5 | ..... | ..... |
| 0.36 | 30.2 | 0.76 | 53.2 | 1.32 | 73.3 | 2.30 | 90.0 | ..... | ..... |
| 0.37 | 30.9 | 0.77 | 53.7 | 1.34 | 73.8 | 2.35 | 90.4 | ..... | ..... |
| 0.38 | 31.6 | 0.78 | 54.2 | 1.36 | 74.3 | 2.40 | 90.9 | ..... | ..... |
| 0.39 | 32.3 | 0.79 | 54.6 | 1.38 | 74.8 | 2.45 | 91.4 | ..... | ..... |
| 0.40 | 32.9 | 0.80 | 55.0 | 1.40 | 75.3 | 2.50 | 91.8 | ..... | ..... |

If every figure in the target is hit H times on the average, then from the Table, D per cent. of the figures will be hit.

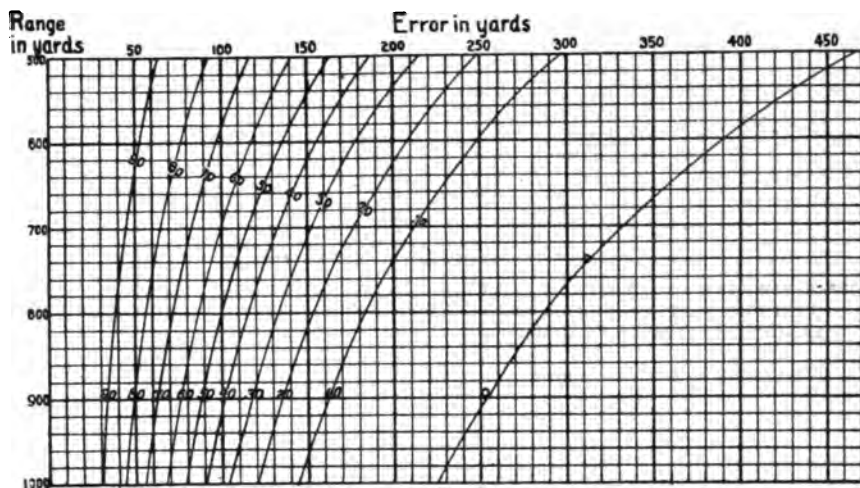


PLATE I.

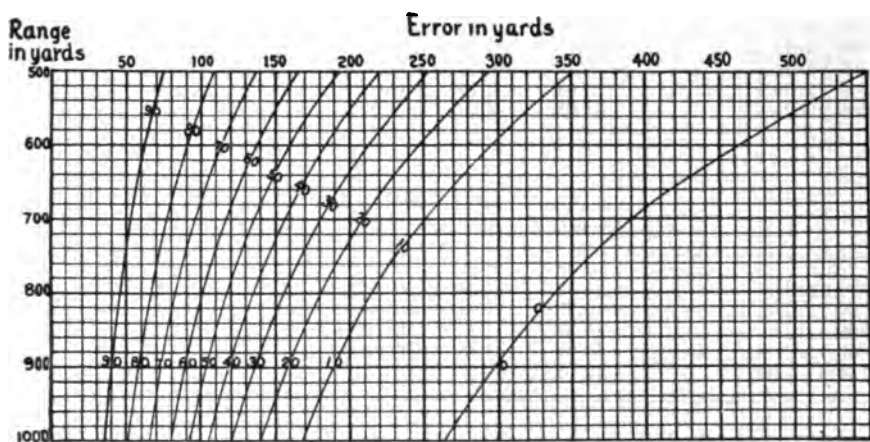


PLATE II

TABLE V.
DENSITY FACTORS.

| F. | D. | F. | D. | F. | D. |
|-----|-------|-----|-------|-----|-------|
| 0.0 | 1.000 | 1.0 | 0.402 | 2.0 | 0.026 |
| 0.1 | 0.991 | 1.1 | 0.334 | 2.1 | 0.019 |
| 0.2 | 0.964 | 1.2 | 0.270 | 2.2 | 0.012 |
| 0.3 | 0.921 | 1.3 | 0.216 | 2.3 | 0.008 |
| 0.4 | 0.864 | 1.4 | 0.168 | 2.4 | 0.006 |
| 0.5 | 0.796 | 1.5 | 0.130 | 2.5 | 0.003 |
| 0.6 | 0.720 | 1.6 | 0.098 | | |
| 0.7 | 0.640 | 1.7 | 0.072 | | |
| 0.8 | 0.559 | 1.8 | 0.052 | | |
| 0.9 | 0.479 | 1.9 | 0.038 | | |

TABLE VI.

DISPLACEMENT OF THE CENTER OF IMPACT DUE TO AIMING AT THE BOTTOM OF THE TARGET WITH THE BATTLE SIGHT OR USING AN ELEVATION CORRESPONDING TO THE EXACT RANGE WITH THE LEAF SIGHT.

[Centers of impact are shown as above (+) or below (-) the point of aim.]

BATTLE SIGHT.

[Corresponds to range 436 yards.]

| Range. | Center of impact. | | Range. | Center of impact. | |
|----------------|-------------------|-------|----------------|-------------------|-------|
| | Inches. | Feet. | | Inches. | Feet. |
| 200 yards..... | +17.04 | +1.42 | 250 yards..... | +16.44 | +1.37 |
| 300 yards..... | +15.84 | +1.32 | 350 yards..... | +10.98 | +0.91 |
| 400 yards..... | + 6.12 | +0.51 | 450 yards..... | - 3.78 | -0.31 |
| 500 yards..... | -13.68 | -1.14 | 550 yards..... | -24.78 | -2.06 |
| 600 yards..... | -37.08 | -3.09 | | | |

LEAF SIGHT.

[Approximately 50 yards short at all ranges.]

| | | | | | |
|------------------|--------|-------|----------------|--------|-------|
| 600 yards..... | -14.87 | -1.24 | 550 yards..... | -12.80 | -1.07 |
| 700 yards..... | -19.98 | -1.67 | 650 yards..... | -17.42 | -1.45 |
| 800 yards..... | -26.81 | -2.23 | 750 yards..... | -23.40 | -1.95 |
| 900 yards..... | -34.60 | -2.88 | 850 yards..... | -30.66 | -2.55 |
| 1,000 yards..... | -44.05 | -3.67 | 950 yards..... | -39.30 | -3.27 |

TABLE VII.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE BATTLE SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT MISPLACED BY AIMING AT LOWER EDGE OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|----------------------|-------------------|-------|-------|-------|------|------|------|------|------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1..... | 18.54 | 14.03 | 10.96 | 9.14 | 7.06 | 6.07 | 4.53 | 3.14 | 1.93 |
| 2..... | 17.09 | 14.71 | 12.78 | 11.47 | 9.24 | 8.27 | 6.45 | 4.58 | 2.93 |
| 3..... | 15.04 | 13.08 | 11.52 | 10.54 | 8.64 | 7.87 | 6.25 | 4.53 | 2.96 |
| 4..... | 14.19 | 12.34 | 10.87 | 9.94 | 8.15 | 7.43 | 5.90 | 4.31 | 2.83 |
| 5..... | 13.72 | 11.93 | 10.51 | 9.61 | 7.88 | 7.18 | 5.70 | 4.16 | 2.74 |
| 6..... | 13.43 | 11.68 | 10.28 | 9.41 | 7.71 | 7.03 | 5.58 | 4.08 | 2.68 |
| 7..... | 13.23 | 11.50 | 10.13 | 9.27 | 7.60 | 6.92 | 5.50 | 4.01 | 2.64 |
| 8..... | 13.07 | 11.36 | 10.01 | 9.15 | 7.50 | 6.84 | 5.43 | 3.96 | 2.61 |
| 9..... | 12.97 | 11.28 | 9.93 | 9.09 | 7.45 | 6.79 | 5.39 | 3.94 | 2.59 |
| 10..... | 12.87 | 11.20 | 9.86 | 9.02 | 7.39 | 6.74 | 5.35 | 3.91 | 2.57 |
| 11..... | 12.81 | 11.14 | 9.81 | 8.97 | 7.35 | 6.70 | 5.32 | 3.89 | 2.56 |
| 12..... | 12.75 | 11.08 | 9.76 | 8.93 | 7.32 | 6.67 | 5.30 | 3.87 | 2.54 |
| 13..... | 12.69 | 11.03 | 9.72 | 8.89 | 7.29 | 6.64 | 5.27 | 3.85 | 2.53 |
| 14..... | 12.65 | 11.00 | 9.69 | 8.86 | 7.27 | 6.62 | 5.26 | 3.84 | 2.53 |
| 15..... | 12.62 | 10.97 | 9.66 | 8.84 | 7.25 | 6.60 | 5.24 | 3.83 | 2.52 |
| 16..... | 12.58 | 10.94 | 9.64 | 8.82 | 7.23 | 6.59 | 5.23 | 3.82 | 2.51 |
| 17..... | 12.56 | 10.92 | 9.62 | 8.80 | 7.21 | 6.57 | 5.22 | 3.81 | 2.51 |
| 18..... | 12.54 | 10.90 | 9.60 | 8.78 | 7.20 | 6.56 | 5.21 | 3.80 | 2.50 |
| 19..... | 12.51 | 10.88 | 9.58 | 8.77 | 7.19 | 6.55 | 5.20 | 3.80 | 2.50 |
| 20..... | 12.49 | 10.86 | 9.57 | 8.75 | 7.17 | 6.54 | 5.19 | 3.79 | 2.49 |
| 21..... | 12.47 | 10.85 | 9.55 | 8.74 | 7.16 | 6.53 | 5.18 | 3.78 | 2.49 |
| 22..... | 12.46 | 10.83 | 9.54 | 8.73 | 7.15 | 6.52 | 5.18 | 3.78 | 2.49 |
| 23..... | 12.44 | 10.82 | 9.53 | 8.72 | 7.15 | 6.51 | 5.17 | 3.78 | 2.48 |
| 24..... | 12.43 | 10.81 | 9.52 | 8.71 | 7.14 | 6.50 | 5.16 | 3.77 | 2.48 |
| 25..... | 12.42 | 10.80 | 9.51 | 8.70 | 7.13 | 6.50 | 5.16 | 3.77 | 2.48 |
| 26..... | 12.41 | 10.79 | 9.50 | 8.69 | 7.13 | 6.49 | 5.16 | 3.77 | 2.48 |
| 27..... | 12.39 | 10.78 | 9.49 | 8.68 | 7.12 | 6.49 | 5.15 | 3.76 | 2.47 |
| 28..... | 12.38 | 10.77 | 9.48 | 8.68 | 7.11 | 6.48 | 5.14 | 3.76 | 2.47 |
| 29..... | 12.38 | 10.76 | 9.48 | 8.67 | 7.11 | 6.48 | 5.14 | 3.76 | 2.47 |
| 30..... | 12.37 | 10.76 | 9.47 | 8.67 | 7.10 | 6.47 | 5.14 | 3.75 | 2.47 |
| 31..... | 12.36 | 10.75 | 9.47 | 8.66 | 7.10 | 6.47 | 5.14 | 3.75 | 2.47 |
| 32..... | 12.35 | 10.74 | 9.46 | 8.66 | 7.10 | 6.47 | 5.13 | 3.75 | 2.47 |
| 33..... | 12.35 | 10.74 | 9.46 | 8.65 | 7.09 | 6.46 | 5.13 | 3.75 | 2.46 |
| 34..... | 12.34 | 10.73 | 9.45 | 8.65 | 7.09 | 6.46 | 5.13 | 3.75 | 2.46 |
| 35..... | 12.33 | 10.73 | 9.45 | 8.64 | 7.08 | 6.46 | 5.12 | 3.74 | 2.46 |
| 36..... | 12.33 | 10.72 | 9.44 | 8.64 | 7.08 | 6.45 | 5.12 | 3.74 | 2.46 |
| 37..... | 12.32 | 10.72 | 9.44 | 8.63 | 7.08 | 6.45 | 5.12 | 3.74 | 2.46 |
| 38..... | 12.32 | 10.71 | 9.43 | 8.63 | 7.08 | 6.45 | 5.12 | 3.74 | 2.46 |
| 39..... | 12.31 | 10.71 | 9.43 | 8.63 | 7.07 | 6.45 | 5.12 | 3.74 | 2.46 |
| 40..... | 12.31 | 10.70 | 9.43 | 8.62 | 7.07 | 6.44 | 5.11 | 3.74 | 2.46 |
| 50..... | 12.27 | 10.67 | 9.40 | 8.60 | 7.05 | 6.42 | 5.10 | 3.72 | 2.45 |
| 60..... | 12.25 | 10.65 | 9.38 | 8.58 | 7.04 | 6.41 | 5.09 | 3.72 | 2.45 |
| 70..... | 12.23 | 10.64 | 9.37 | 8.57 | 7.02 | 6.40 | 5.08 | 3.71 | 2.44 |
| 80..... | 12.22 | 10.63 | 9.36 | 8.56 | 7.02 | 6.40 | 5.08 | 3.71 | 2.44 |
| 90..... | 12.21 | 10.62 | 9.35 | 8.56 | 7.01 | 6.39 | 5.07 | 3.71 | 2.44 |
| 100..... | 12.20 | 10.61 | 9.34 | 8.55 | 7.01 | 6.39 | 5.07 | 3.70 | 2.44 |
| Infinite number..... | 12.13 | 10.55 | 9.29 | 8.50 | 6.97 | 6.35 | 5.04 | 3.68 | 2.42 |

TABLE VIII.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE BATTLE SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|----------------------|-------------------|-------|-------|-------|-------|------|------|------|------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1..... | 19.82 | 14.52 | 12.17 | 9.14 | 7.86 | 6.83 | 5.97 | 5.25 | 4.58 |
| 2..... | 18.28 | 15.23 | 13.16 | 11.47 | 10.29 | 9.29 | 8.50 | 7.65 | 6.97 |
| 3..... | 16.08 | 13.54 | 11.85 | 10.54 | 9.62 | 8.85 | 8.24 | 7.56 | 7.04 |
| 4..... | 15.17 | 12.77 | 11.18 | 9.94 | 9.07 | 8.35 | 7.77 | 7.20 | 6.73 |
| 5..... | 14.67 | 12.35 | 10.82 | 9.61 | 8.78 | 8.08 | 7.52 | 6.96 | 6.51 |
| 6..... | 14.36 | 12.09 | 10.58 | 9.41 | 8.59 | 7.88 | 7.36 | 6.81 | 6.37 |
| 7..... | 14.14 | 11.91 | 10.43 | 9.27 | 8.46 | 7.79 | 7.25 | 6.71 | 6.28 |
| 8..... | 13.97 | 11.76 | 10.30 | 9.15 | 8.36 | 7.69 | 7.16 | 6.63 | 6.20 |
| 9..... | 13.87 | 11.67 | 10.22 | 9.09 | 8.29 | 7.63 | 7.10 | 6.58 | 6.15 |
| 10..... | 13.77 | 11.59 | 10.15 | 9.02 | 8.23 | 7.58 | 7.05 | 6.53 | 6.11 |
| 11..... | 13.69 | 11.53 | 10.09 | 8.97 | 8.19 | 7.54 | 7.02 | 6.49 | 6.08 |
| 12..... | 13.63 | 11.47 | 10.05 | 8.93 | 8.15 | 7.50 | 6.98 | 6.46 | 6.05 |
| 13..... | 13.57 | 11.42 | 10.00 | 8.89 | 8.11 | 7.47 | 6.95 | 6.43 | 6.02 |
| 14..... | 13.53 | 11.39 | 9.97 | 8.86 | 8.09 | 7.45 | 6.93 | 6.42 | 6.00 |
| 15..... | 13.49 | 11.36 | 9.95 | 8.84 | 8.07 | 7.43 | 6.91 | 6.40 | 5.99 |
| 16..... | 13.46 | 11.33 | 9.92 | 8.82 | 8.05 | 7.41 | 6.89 | 6.38 | 5.97 |
| 17..... | 13.43 | 11.31 | 9.90 | 8.80 | 8.03 | 7.39 | 6.88 | 6.37 | 5.96 |
| 18..... | 13.40 | 11.28 | 9.88 | 8.78 | 8.02 | 7.38 | 6.87 | 6.36 | 5.95 |
| 19..... | 13.38 | 11.26 | 9.86 | 8.77 | 8.00 | 7.36 | 6.85 | 6.34 | 5.94 |
| 20..... | 13.36 | 11.24 | 9.85 | 8.75 | 7.99 | 7.35 | 6.84 | 6.33 | 5.93 |
| 21..... | 13.34 | 11.23 | 9.83 | 8.74 | 7.98 | 7.34 | 6.83 | 6.32 | 5.92 |
| 22..... | 13.32 | 11.21 | 9.82 | 8.73 | 7.97 | 7.33 | 6.82 | 6.32 | 5.91 |
| 23..... | 13.30 | 11.20 | 9.81 | 8.72 | 7.96 | 7.32 | 6.82 | 6.31 | 5.90 |
| 24..... | 13.29 | 11.19 | 9.79 | 8.71 | 7.95 | 7.31 | 6.81 | 6.30 | 5.90 |
| 25..... | 13.28 | 11.18 | 9.79 | 8.70 | 7.94 | 7.31 | 6.80 | 6.30 | 5.89 |
| 26..... | 13.27 | 11.17 | 9.78 | 8.69 | 7.93 | 7.30 | 6.80 | 6.29 | 5.89 |
| 27..... | 13.25 | 11.16 | 9.77 | 8.68 | 7.93 | 7.29 | 6.79 | 6.28 | 5.88 |
| 28..... | 13.24 | 11.15 | 9.76 | 8.68 | 7.92 | 7.29 | 6.78 | 6.28 | 5.88 |
| 29..... | 13.24 | 11.14 | 9.76 | 8.67 | 7.92 | 7.29 | 6.78 | 6.28 | 5.87 |
| 30..... | 13.22 | 11.13 | 9.75 | 8.67 | 7.91 | 7.28 | 6.78 | 6.27 | 5.87 |
| 31..... | 13.22 | 11.13 | 9.74 | 8.66 | 7.91 | 7.28 | 6.77 | 6.27 | 5.87 |
| 32..... | 13.21 | 11.12 | 9.74 | 8.66 | 7.90 | 7.27 | 6.77 | 6.26 | 5.86 |
| 33..... | 13.20 | 11.12 | 9.73 | 8.65 | 7.90 | 7.27 | 6.77 | 6.26 | 5.86 |
| 34..... | 13.20 | 11.11 | 9.73 | 8.65 | 7.89 | 7.27 | 6.76 | 6.26 | 5.86 |
| 35..... | 13.19 | 11.10 | 9.72 | 8.64 | 7.89 | 7.26 | 6.76 | 6.25 | 5.85 |
| 36..... | 13.18 | 11.10 | 9.72 | 8.64 | 7.88 | 7.26 | 6.75 | 6.25 | 5.85 |
| 37..... | 13.18 | 11.09 | 9.71 | 8.63 | 7.88 | 7.25 | 6.75 | 6.25 | 5.85 |
| 38..... | 13.17 | 11.09 | 9.71 | 8.63 | 7.88 | 7.25 | 6.75 | 6.25 | 5.85 |
| 39..... | 13.17 | 11.09 | 9.71 | 8.63 | 7.88 | 7.25 | 6.75 | 6.24 | 5.84 |
| 40..... | 13.16 | 11.08 | 9.70 | 8.62 | 7.87 | 7.25 | 6.74 | 6.24 | 5.84 |
| 50..... | 13.12 | 11.05 | 9.67 | 8.60 | 7.85 | 7.22 | 6.72 | 6.22 | 5.82 |
| 60..... | 13.10 | 11.03 | 9.66 | 8.58 | 7.83 | 7.21 | 6.71 | 6.21 | 5.81 |
| 70..... | 13.08 | 11.01 | 9.64 | 8.57 | 7.82 | 7.20 | 6.70 | 6.20 | 5.80 |
| 80..... | 13.07 | 11.00 | 9.63 | 8.56 | 7.82 | 7.19 | 6.70 | 6.20 | 5.80 |
| 90..... | 13.06 | 10.99 | 9.62 | 8.56 | 7.81 | 7.19 | 6.69 | 6.19 | 5.79 |
| 100..... | 13.05 | 10.98 | 9.62 | 8.55 | 7.80 | 7.18 | 6.68 | 6.19 | 5.79 |
| Infinite number..... | 12.97 | 10.92 | 9.56 | 8.50 | 7.76 | 7.14 | 6.64 | 6.15 | 5.76 |

TABLE IX.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE LEAF SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT DISPLACED BY USING EXACT ELEVATION.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 4.20 | 3.62 | 3.08 | 2.64 | 2.22 | 1.91 | 1.67 | 1.30 | 1.12 | 0.96 |
| 2..... | 6.12 | 5.51 | 4.84 | 4.32 | 3.73 | 3.26 | 2.93 | 2.46 | 2.07 | 1.79 |
| 3..... | 6.05 | 5.56 | 5.07 | 4.68 | 4.16 | 3.77 | 3.49 | 2.82 | 2.60 | 2.31 |
| 4..... | 5.75 | 5.32 | 4.88 | 4.57 | 4.13 | 3.80 | 3.59 | 3.15 | 2.80 | 2.55 |
| 5..... | 5.56 | 5.14 | 4.72 | 4.42 | 4.00 | 3.72 | 3.55 | 3.13 | 2.82 | 2.74 |
| 6..... | 5.44 | 5.03 | 4.62 | 4.32 | 3.91 | 3.64 | 3.47 | 3.06 | 2.79 | 2.60 |
| 7..... | 5.36 | 4.96 | 4.55 | 4.26 | 3.85 | 3.58 | 3.42 | 3.02 | 2.75 | 2.56 |
| 8..... | 5.30 | 4.90 | 4.50 | 4.20 | 3.81 | 3.54 | 3.38 | 2.98 | 2.71 | 2.53 |
| 9..... | 5.26 | 4.86 | 4.46 | 4.17 | 3.78 | 3.51 | 3.35 | 2.96 | 2.69 | 2.51 |
| 10..... | 5.22 | 4.82 | 4.43 | 4.14 | 3.75 | 3.49 | 3.33 | 2.94 | 2.67 | 2.49 |
| 11..... | 5.19 | 4.80 | 4.41 | 4.12 | 3.73 | 3.47 | 3.31 | 2.92 | 2.66 | 2.48 |
| 12..... | 5.17 | 4.78 | 4.39 | 4.10 | 3.71 | 3.45 | 3.30 | 2.91 | 2.65 | 2.47 |
| 13..... | 5.14 | 4.75 | 4.37 | 4.08 | 3.70 | 3.44 | 3.28 | 2.89 | 2.64 | 2.45 |
| 14..... | 5.13 | 4.74 | 4.36 | 4.07 | 3.69 | 3.43 | 3.27 | 2.89 | 2.63 | 2.45 |
| 15..... | 5.11 | 4.73 | 4.34 | 4.06 | 3.68 | 3.42 | 3.26 | 2.88 | 2.62 | 2.44 |
| 16..... | 5.10 | 4.71 | 4.33 | 4.05 | 3.67 | 3.41 | 3.26 | 2.87 | 2.61 | 2.43 |
| 17..... | 5.09 | 4.71 | 4.32 | 4.04 | 3.66 | 3.40 | 3.25 | 2.86 | 2.61 | 2.43 |
| 18..... | 5.08 | 4.70 | 4.31 | 4.03 | 3.65 | 3.40 | 3.24 | 2.86 | 2.61 | 2.43 |
| 19..... | 5.07 | 4.69 | 4.31 | 4.03 | 3.64 | 3.39 | 3.24 | 2.85 | 2.60 | 2.42 |
| 20..... | 5.06 | 4.68 | 4.30 | 4.02 | 3.64 | 3.38 | 3.23 | 2.85 | 2.59 | 2.42 |
| 21..... | 5.05 | 4.67 | 4.29 | 4.01 | 3.63 | 3.38 | 3.23 | 2.84 | 2.59 | 2.41 |
| 22..... | 5.05 | 4.67 | 4.29 | 4.01 | 3.63 | 3.37 | 3.22 | 2.84 | 2.59 | 2.41 |
| 23..... | 5.04 | 4.66 | 4.28 | 4.00 | 3.62 | 3.37 | 3.22 | 2.84 | 2.58 | 2.41 |
| 24..... | 5.04 | 4.66 | 4.28 | 4.00 | 3.62 | 3.37 | 3.21 | 2.83 | 2.58 | 2.40 |
| 25..... | 5.03 | 4.65 | 4.27 | 4.00 | 3.62 | 3.36 | 3.21 | 2.83 | 2.58 | 2.40 |
| 26..... | 5.03 | 4.65 | 4.27 | 4.00 | 3.61 | 3.36 | 3.21 | 2.83 | 2.58 | 2.40 |
| 27..... | 5.02 | 4.64 | 4.27 | 3.99 | 3.61 | 3.36 | 3.21 | 2.83 | 2.57 | 2.40 |
| 28..... | 5.02 | 4.64 | 4.26 | 3.98 | 3.61 | 3.35 | 3.20 | 2.82 | 2.57 | 2.40 |
| 29..... | 5.02 | 4.64 | 4.26 | 3.98 | 3.61 | 3.35 | 3.20 | 2.82 | 2.57 | 2.39 |
| 30..... | 5.01 | 4.63 | 4.26 | 3.98 | 3.60 | 3.35 | 3.20 | 2.82 | 2.57 | 2.39 |
| 31..... | 5.01 | 4.63 | 4.26 | 3.98 | 3.60 | 3.35 | 3.20 | 2.82 | 2.57 | 2.39 |
| 32..... | 5.01 | 4.63 | 4.25 | 3.98 | 3.60 | 3.35 | 3.20 | 2.82 | 2.57 | 2.39 |
| 33..... | 5.00 | 4.63 | 4.25 | 3.97 | 3.60 | 3.34 | 3.19 | 2.82 | 2.57 | 2.39 |
| 34..... | 5.00 | 4.63 | 4.25 | 3.97 | 3.60 | 3.34 | 3.19 | 2.82 | 2.56 | 2.39 |
| 35..... | 5.00 | 4.62 | 4.25 | 3.97 | 3.59 | 3.34 | 3.19 | 2.81 | 2.56 | 2.39 |
| 36..... | 5.00 | 4.62 | 4.24 | 3.97 | 3.59 | 3.34 | 3.19 | 2.81 | 2.56 | 2.39 |
| 37..... | 4.99 | 4.62 | 4.24 | 3.97 | 3.59 | 3.34 | 3.19 | 2.81 | 2.56 | 2.38 |
| 38..... | 4.99 | 4.62 | 4.24 | 3.96 | 3.59 | 3.34 | 3.19 | 2.81 | 2.56 | 2.38 |
| 39..... | 4.99 | 4.61 | 4.24 | 3.96 | 3.59 | 3.34 | 3.19 | 2.81 | 2.56 | 2.38 |
| 40..... | 4.99 | 4.61 | 4.24 | 3.96 | 3.59 | 3.33 | 3.18 | 2.81 | 2.56 | 2.38 |
| 50..... | 4.97 | 4.60 | 4.22 | 3.95 | 3.57 | 3.32 | 3.17 | 2.80 | 2.55 | 2.37 |
| 60..... | 4.97 | 4.59 | 4.22 | 3.94 | 3.57 | 3.32 | 3.17 | 2.79 | 2.54 | 2.37 |
| 70..... | 4.96 | 4.58 | 4.21 | 3.94 | 3.56 | 3.31 | 3.16 | 2.79 | 2.54 | 2.37 |
| 80..... | 4.95 | 4.58 | 4.21 | 3.93 | 3.56 | 3.31 | 3.16 | 2.79 | 2.54 | 2.36 |
| 90..... | 4.95 | 4.58 | 4.20 | 3.93 | 3.56 | 3.31 | 3.16 | 2.79 | 2.54 | 2.36 |
| 100..... | 4.95 | 4.57 | 4.20 | 3.93 | 3.55 | 3.31 | 3.16 | 2.78 | 2.53 | 2.36 |
| Infinite number.. | 4.92 | 4.54 | 4.17 | 3.90 | 3.53 | 3.29 | 3.14 | 2.77 | 2.52 | 2.35 |

TABLE X.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE LEAF SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 5.25 | 4.58 | 3.97 | 3.21 | 2.89 | 2.53 | 2.17 | 1.94 | 1.58 | 1.40 |
| 2..... | 7.65 | 6.97 | 6.24 | 5.26 | 4.85 | 4.31 | 3.80 | 3.40 | 2.92 | 2.62 |
| 3..... | 7.56 | 7.04 | 6.54 | 5.69 | 5.41 | 4.99 | 4.54 | 3.91 | 3.67 | 3.38 |
| 4..... | 7.20 | 6.73 | 6.30 | 5.54 | 5.38 | 5.02 | 4.67 | 4.36 | 3.95 | 3.72 |
| 5..... | 6.96 | 6.51 | 6.09 | 5.37 | 5.20 | 4.92 | 4.61 | 4.33 | 3.98 | 3.80 |
| 6..... | 6.81 | 6.37 | 5.96 | 5.25 | 5.09 | 4.81 | 4.51 | 4.24 | 3.94 | 3.80 |
| 7..... | 6.71 | 6.28 | 5.87 | 5.17 | 5.01 | 4.74 | 4.45 | 4.18 | 3.88 | 3.74 |
| 8..... | 6.63 | 6.20 | 5.80 | 5.11 | 4.95 | 4.68 | 4.39 | 4.12 | 3.83 | 3.70 |
| 9..... | 6.58 | 6.15 | 5.76 | 5.07 | 4.91 | 4.65 | 4.36 | 4.09 | 3.80 | 3.67 |
| 10..... | 6.53 | 6.11 | 5.72 | 5.03 | 4.88 | 4.61 | 4.33 | 4.06 | 3.78 | 3.64 |
| 11..... | 6.49 | 6.08 | 5.69 | 5.01 | 4.85 | 4.59 | 4.30 | 4.04 | 3.76 | 3.63 |
| 12..... | 6.46 | 6.05 | 5.66 | 4.98 | 4.83 | 4.57 | 4.28 | 4.02 | 3.74 | 3.61 |
| 13..... | 6.43 | 6.02 | 5.63 | 4.96 | 4.81 | 4.55 | 4.26 | 4.01 | 3.72 | 3.59 |
| 14..... | 6.42 | 6.00 | 5.62 | 4.94 | 4.79 | 4.54 | 4.25 | 3.99 | 3.71 | 3.58 |
| 15..... | 6.40 | 5.99 | 5.60 | 4.93 | 4.78 | 4.52 | 4.24 | 3.98 | 3.70 | 3.57 |
| 16..... | 6.38 | 5.97 | 5.59 | 4.92 | 4.77 | 4.51 | 4.23 | 3.97 | 3.69 | 3.56 |
| 17..... | 6.37 | 5.96 | 5.58 | 4.91 | 4.76 | 4.50 | 4.22 | 3.96 | 3.68 | 3.56 |
| 18..... | 6.36 | 5.95 | 5.57 | 4.90 | 4.75 | 4.49 | 4.21 | 3.96 | 3.68 | 3.55 |
| 19..... | 6.34 | 5.94 | 5.55 | 4.89 | 4.74 | 4.48 | 4.20 | 3.95 | 3.67 | 3.54 |
| 20..... | 6.33 | 5.93 | 5.55 | 4.88 | 4.73 | 4.47 | 4.20 | 3.94 | 3.66 | 3.54 |
| 21..... | 6.32 | 5.92 | 5.54 | 4.88 | 4.72 | 4.47 | 4.19 | 3.94 | 3.66 | 3.53 |
| 22..... | 6.32 | 5.91 | 5.53 | 4.87 | 4.72 | 4.47 | 4.19 | 3.93 | 3.65 | 3.53 |
| 23..... | 6.31 | 5.90 | 5.52 | 4.87 | 4.71 | 4.46 | 4.18 | 3.93 | 3.65 | 3.52 |
| 24..... | 6.30 | 5.90 | 5.52 | 4.86 | 4.71 | 4.45 | 4.18 | 3.92 | 3.64 | 3.52 |
| 25..... | 6.30 | 5.89 | 5.51 | 4.86 | 4.70 | 4.45 | 4.17 | 3.92 | 3.64 | 3.52 |
| 26..... | 5.29 | 5.89 | 5.51 | 4.85 | 4.70 | 4.45 | 4.17 | 3.92 | 3.64 | 3.51 |
| 27..... | 6.28 | 5.88 | 5.50 | 4.85 | 4.69 | 4.44 | 4.16 | 3.91 | 3.63 | 3.51 |
| 28..... | 6.28 | 5.88 | 5.50 | 4.84 | 4.69 | 4.44 | 4.16 | 3.91 | 3.63 | 3.51 |
| 29..... | 6.28 | 5.87 | 5.50 | 4.84 | 4.69 | 4.44 | 4.16 | 3.91 | 3.63 | 3.50 |
| 30..... | 6.27 | 5.87 | 5.49 | 4.84 | 4.69 | 4.43 | 4.16 | 3.90 | 3.63 | 3.50 |
| 31..... | 6.27 | 5.87 | 5.49 | 4.83 | 4.68 | 4.43 | 4.15 | 3.90 | 3.63 | 3.50 |
| 32..... | 6.26 | 5.86 | 5.48 | 4.83 | 4.68 | 4.43 | 4.15 | 3.90 | 3.62 | 3.50 |
| 33..... | 6.26 | 5.86 | 5.48 | 4.83 | 4.68 | 4.43 | 4.15 | 3.90 | 3.62 | 3.50 |
| 34..... | 6.26 | 5.86 | 5.48 | 4.83 | 4.68 | 4.42 | 4.14 | 3.90 | 3.62 | 3.49 |
| 35..... | 6.25 | 5.85 | 5.48 | 4.82 | 4.67 | 4.42 | 4.14 | 3.89 | 3.62 | 3.49 |
| 36..... | 6.25 | 5.85 | 5.47 | 4.82 | 4.67 | 4.42 | 4.14 | 3.89 | 3.62 | 3.49 |
| 37..... | 6.25 | 5.85 | 5.47 | 4.82 | 4.67 | 4.42 | 4.14 | 3.89 | 3.61 | 3.49 |
| 38..... | 6.25 | 5.85 | 5.47 | 4.82 | 4.67 | 4.42 | 4.14 | 3.89 | 3.61 | 3.49 |
| 39..... | 6.24 | 5.84 | 5.47 | 4.82 | 4.66 | 4.41 | 4.14 | 3.89 | 3.61 | 3.49 |
| 40..... | 6.24 | 5.84 | 5.47 | 4.81 | 4.66 | 4.41 | 4.14 | 3.89 | 3.61 | 3.48 |
| 50..... | 6.22 | 5.82 | 5.45 | 4.80 | 4.65 | 4.40 | 4.12 | 3.87 | 3.60 | 3.47 |
| 60..... | 6.21 | 5.81 | 5.44 | 4.79 | 4.64 | 4.39 | 4.12 | 3.87 | 3.59 | 3.47 |
| 70..... | 6.20 | 5.80 | 5.43 | 4.78 | 4.63 | 4.38 | 4.11 | 3.86 | 3.59 | 3.46 |
| 80..... | 6.20 | 5.80 | 5.43 | 4.78 | 4.63 | 4.38 | 4.11 | 3.86 | 3.58 | 3.46 |
| 90..... | 6.19 | 5.79 | 5.42 | 4.78 | 4.63 | 4.38 | 4.10 | 3.85 | 3.58 | 3.46 |
| 100..... | 6.19 | 5.79 | 5.42 | 4.77 | 4.62 | 4.37 | 4.10 | 3.85 | 3.58 | 3.45 |
| Infinite number.. | 6.15 | 5.76 | 5.38 | 4.74 | 4.59 | 4.35 | 4.08 | 3.83 | 3.56 | 3.43 |

TABLE XI.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE BATTLE SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT DISPLACED BY AIMING AT LOWER EDGE OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|-------|-------|-------|-------|-------|------|------|------|--|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | |
| 1 | 31.29 | 24.29 | 19.35 | 15.39 | 12.61 | 9.38 | 6.69 | 4.49 | 2.78 | |
| 2 | 28.85 | 25.48 | 22.57 | 19.32 | 16.50 | 12.77 | 9.53 | 6.54 | 4.24 | |
| 3 | 25.39 | 22.64 | 20.34 | 17.75 | 15.44 | 12.16 | 9.23 | 6.47 | 4.28 | |
| 4 | 23.95 | 21.36 | 19.18 | 16.74 | 14.56 | 11.47 | 8.71 | 6.15 | 4.09 | |
| 5 | 23.17 | 20.66 | 18.56 | 16.19 | 14.09 | 11.10 | 8.42 | 5.95 | 3.96 | |
| 6 | 22.67 | 20.22 | 18.16 | 15.85 | 13.79 | 10.86 | 8.24 | 5.82 | 3.87 | |
| 7 | 22.33 | 19.91 | 17.88 | 15.61 | 13.58 | 10.70 | 8.12 | 5.73 | 3.81 | |
| 8 | 22.08 | 19.69 | 17.68 | 15.43 | 13.42 | 10.58 | 8.03 | 5.67 | 3.77 | |
| 9 | 21.89 | 19.52 | 17.53 | 15.30 | 13.31 | 10.49 | 7.96 | 5.62 | 3.74 | |
| 10 | 21.74 | 19.38 | 17.41 | 15.19 | 13.22 | 10.41 | 7.90 | 5.58 | 3.71 | |
| 11 | 21.61 | 19.28 | 17.31 | 15.11 | 13.14 | 10.35 | 7.86 | 5.55 | 3.69 | |
| 12 | 21.51 | 19.19 | 17.23 | 15.04 | 13.08 | 10.31 | 7.82 | 5.52 | 3.67 | |
| 13 | 21.43 | 19.12 | 17.17 | 14.98 | 13.03 | 10.27 | 7.79 | 5.50 | 3.66 | |
| 14 | 21.36 | 19.05 | 17.11 | 14.93 | 12.99 | 10.23 | 7.77 | 5.48 | 3.65 | |
| 15 | 21.30 | 19.00 | 17.06 | 14.89 | 12.95 | 10.21 | 7.75 | 5.47 | 3.64 | |
| 16 | 21.25 | 18.95 | 17.02 | 14.85 | 12.92 | 10.18 | 7.73 | 5.45 | 3.63 | |
| 17 | 21.20 | 18.91 | 16.98 | 14.82 | 12.89 | 10.16 | 7.71 | 5.44 | 3.62 | |
| 18 | 21.16 | 18.87 | 16.95 | 14.79 | 12.87 | 10.14 | 7.69 | 5.43 | 3.61 | |
| 19 | 21.12 | 18.84 | 16.92 | 14.77 | 12.85 | 10.12 | 7.68 | 5.42 | 3.61 | |
| 20 | 21.09 | 18.81 | 16.89 | 14.74 | 12.83 | 10.10 | 7.67 | 5.42 | 3.60 | |
| 21 | 21.06 | 18.78 | 16.87 | 14.72 | 12.81 | 10.09 | 7.66 | 5.41 | 3.60 | |
| 22 | 21.03 | 18.76 | 16.85 | 14.70 | 12.79 | 10.08 | 7.65 | 5.40 | 3.59 | |
| 23 | 21.00 | 18.73 | 16.82 | 14.68 | 12.77 | 10.06 | 7.64 | 5.39 | 3.59 | |
| 24 | 20.98 | 18.72 | 16.81 | 14.67 | 12.76 | 10.05 | 7.63 | 5.39 | 3.58 | |
| 25 | 20.96 | 18.69 | 16.79 | 14.65 | 12.75 | 10.04 | 7.62 | 5.38 | 3.58 | |
| 26 | 20.94 | 18.68 | 16.78 | 14.64 | 12.74 | 10.03 | 7.62 | 5.38 | 3.58 | |
| 27 | 20.94 | 18.67 | 16.77 | 14.63 | 12.73 | 10.03 | 7.61 | 5.38 | 3.58 | |
| 28 | 20.91 | 18.65 | 16.75 | 14.62 | 12.72 | 10.02 | 7.60 | 5.37 | 3.57 | |
| 29 | 20.90 | 18.64 | 16.74 | 14.61 | 12.71 | 10.01 | 7.60 | 5.37 | 3.57 | |
| 30 | 20.88 | 18.62 | 16.72 | 14.59 | 12.70 | 10.00 | 7.59 | 5.36 | 3.57 | |
| 31 | 20.86 | 18.61 | 16.71 | 14.58 | 12.69 | 10.00 | 7.59 | 5.36 | 3.56 | |
| 32 | 20.85 | 18.60 | 16.70 | 14.58 | 12.68 | 9.99 | 7.58 | 5.35 | 3.56 | |
| 33 | 20.84 | 18.59 | 16.69 | 14.57 | 12.67 | 9.98 | 7.58 | 5.35 | 3.56 | |
| 34 | 20.83 | 18.58 | 16.68 | 14.56 | 12.67 | 9.98 | 7.57 | 5.35 | 3.56 | |
| 35 | 20.82 | 18.57 | 16.68 | 14.56 | 12.66 | 9.98 | 7.57 | 5.35 | 3.56 | |
| 36 | 20.81 | 18.56 | 16.67 | 14.55 | 12.66 | 9.97 | 7.57 | 5.34 | 3.55 | |
| 37 | 20.80 | 18.55 | 16.66 | 14.54 | 12.65 | 9.96 | 7.56 | 5.34 | 3.55 | |
| 38 | 20.79 | 18.54 | 16.65 | 14.53 | 12.64 | 9.96 | 7.56 | 5.34 | 3.55 | |
| 39 | 20.78 | 18.53 | 16.65 | 14.53 | 12.64 | 9.96 | 7.56 | 5.34 | 3.55 | |
| 40 | 20.77 | 18.53 | 16.64 | 14.52 | 12.63 | 9.95 | 7.55 | 5.33 | 3.55 | |
| 50 | 20.72 | 18.48 | 16.59 | 14.48 | 12.60 | 9.93 | 7.53 | 5.32 | 3.54 | |
| 60 | 20.68 | 18.44 | 16.56 | 14.45 | 12.57 | 9.91 | 7.52 | 5.31 | 3.53 | |
| 70 | 20.64 | 18.41 | 16.53 | 14.43 | 12.55 | 9.89 | 7.51 | 5.30 | 3.53 | |
| 80 | 20.63 | 18.40 | 16.52 | 14.42 | 12.54 | 9.88 | 7.50 | 5.30 | 3.52 | |
| 90 | 20.61 | 18.38 | 16.51 | 14.41 | 12.53 | 9.87 | 7.49 | 5.29 | 3.52 | |
| 100 | 20.59 | 18.37 | 16.50 | 14.40 | 12.52 | 9.87 | 7.49 | 5.29 | 3.52 | |
| Infinite number. | 20.47 | 18.26 | 16.40 | 14.31 | 12.45 | 9.81 | 7.44 | 5.26 | 3.50 | |

TABLE XII.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE BATTLE SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|--------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1 | 31.90 | 24.76 | 19.74 | 16.45 | 14.22 | 12.53 | 11.01 | 9.79 | 8.59 |
| 2 | 29.42 | 25.96 | 23.02 | 20.64 | 18.61 | 17.06 | 15.67 | 14.27 | 13.07 |
| 3 | 25.89 | 23.08 | 20.74 | 18.96 | 17.40 | 16.25 | 15.19 | 14.11 | 13.20 |
| 4 | 24.42 | 21.77 | 19.56 | 17.89 | 16.42 | 15.33 | 14.33 | 13.42 | 12.62 |
| 5 | 23.62 | 21.06 | 18.93 | 17.25 | 15.88 | 14.83 | 13.83 | 12.98 | 12.21 |
| 6 | 23.12 | 20.61 | 18.52 | 16.93 | 15.54 | 14.51 | 13.56 | 12.70 | 11.95 |
| 7 | 22.77 | 20.30 | 18.24 | 16.68 | 15.31 | 14.29 | 13.36 | 12.51 | 11.77 |
| 8 | 22.51 | 20.07 | 18.03 | 16.49 | 15.13 | 14.13 | 13.21 | 12.37 | 11.63 |
| 9 | 22.32 | 19.90 | 17.88 | 16.35 | 15.00 | 14.01 | 13.10 | 12.26 | 11.54 |
| 10 | 22.16 | 19.76 | 17.76 | 16.23 | 14.90 | 13.91 | 13.00 | 12.18 | 11.45 |
| 11 | 22.04 | 19.65 | 17.66 | 16.14 | 14.81 | 13.83 | 12.93 | 12.11 | 11.39 |
| 12 | 21.94 | 19.56 | 17.58 | 16.07 | 14.75 | 13.77 | 12.87 | 12.05 | 11.34 |
| 13 | 21.85 | 19.48 | 17.51 | 16.01 | 14.69 | 13.72 | 12.82 | 12.01 | 11.30 |
| 14 | 21.78 | 19.42 | 17.45 | 15.95 | 14.64 | 13.67 | 12.78 | 11.97 | 11.26 |
| 15 | 21.72 | 19.37 | 17.40 | 15.91 | 14.60 | 13.63 | 12.74 | 11.93 | 11.23 |
| 16 | 21.66 | 19.31 | 17.36 | 15.87 | 14.56 | 13.60 | 12.71 | 11.90 | 11.20 |
| 17 | 21.61 | 19.27 | 17.32 | 15.83 | 14.53 | 13.57 | 12.68 | 11.87 | 11.17 |
| 18 | 21.57 | 19.23 | 17.28 | 15.80 | 14.50 | 13.54 | 12.66 | 11.85 | 11.15 |
| 19 | 21.54 | 19.20 | 17.26 | 15.78 | 14.48 | 13.52 | 12.64 | 11.83 | 11.13 |
| 20 | 21.51 | 19.17 | 17.23 | 15.75 | 14.46 | 13.50 | 12.62 | 11.81 | 11.12 |
| 21 | 21.47 | 19.14 | 17.20 | 15.73 | 14.44 | 13.48 | 12.60 | 11.80 | 11.10 |
| 22 | 21.45 | 19.12 | 17.18 | 15.71 | 14.42 | 13.46 | 12.58 | 11.78 | 11.09 |
| 23 | 21.41 | 19.09 | 17.16 | 15.69 | 14.40 | 13.44 | 12.56 | 11.76 | 11.07 |
| 24 | 21.40 | 19.08 | 17.14 | 15.67 | 14.39 | 13.43 | 12.55 | 11.76 | 11.06 |
| 25 | 21.37 | 19.06 | 17.12 | 15.66 | 14.37 | 13.42 | 12.54 | 11.74 | 11.05 |
| 26 | 21.36 | 19.04 | 17.11 | 15.64 | 14.36 | 13.41 | 12.53 | 11.73 | 11.04 |
| 27 | 21.35 | 19.03 | 17.10 | 15.64 | 14.35 | 13.40 | 12.53 | 11.73 | 11.03 |
| 28 | 21.32 | 19.01 | 17.08 | 15.62 | 14.34 | 13.38 | 12.51 | 11.71 | 11.02 |
| 29 | 21.31 | 19.00 | 17.07 | 15.61 | 14.32 | 13.37 | 12.50 | 11.71 | 11.01 |
| 30 | 21.29 | 18.98 | 17.06 | 15.60 | 14.31 | 13.36 | 12.49 | 11.70 | 11.00 |
| 31 | 21.27 | 18.97 | 17.04 | 15.58 | 14.30 | 13.35 | 12.48 | 11.69 | 11.00 |
| 32 | 21.26 | 18.96 | 17.04 | 15.58 | 14.30 | 13.35 | 12.48 | 11.68 | 10.99 |
| 33 | 21.25 | 18.94 | 17.02 | 15.56 | 14.28 | 13.34 | 12.47 | 11.67 | 10.98 |
| 34 | 21.24 | 18.94 | 17.02 | 15.56 | 14.28 | 13.33 | 12.46 | 11.67 | 10.98 |
| 35 | 21.23 | 18.93 | 17.01 | 15.55 | 14.27 | 13.33 | 12.46 | 11.66 | 10.97 |
| 36 | 21.22 | 18.92 | 17.00 | 15.55 | 14.27 | 13.32 | 12.45 | 11.66 | 10.97 |
| 37 | 21.21 | 18.91 | 16.99 | 15.53 | 14.26 | 13.31 | 12.44 | 11.65 | 10.96 |
| 38 | 21.20 | 18.90 | 16.98 | 15.53 | 14.25 | 13.31 | 12.44 | 11.65 | 10.96 |
| 39 | 21.19 | 18.89 | 16.98 | 15.52 | 14.25 | 13.30 | 12.43 | 11.64 | 10.95 |
| 40 | 21.18 | 18.88 | 16.97 | 15.52 | 14.24 | 13.30 | 12.43 | 11.64 | 10.95 |
| 50 | 21.12 | 18.83 | 16.92 | 15.47 | 14.20 | 13.26 | 12.39 | 11.61 | 10.92 |
| 60 | 21.08 | 18.80 | 16.89 | 15.44 | 14.17 | 13.23 | 12.37 | 11.58 | 10.90 |
| 70 | 21.05 | 18.77 | 16.86 | 15.42 | 14.15 | 13.21 | 12.35 | 11.56 | 10.88 |
| 80 | 21.03 | 18.75 | 16.85 | 15.41 | 14.14 | 13.20 | 12.34 | 11.56 | 10.87 |
| 90 | 21.02 | 18.74 | 16.84 | 15.39 | 14.13 | 13.19 | 12.33 | 11.55 | 10.86 |
| 100 | 21.00 | 18.72 | 16.82 | 15.38 | 14.12 | 13.18 | 12.32 | 11.54 | 10.85 |
| Infinite number. | 20.87 | 18.61 | 16.72 | 15.29 | 14.03 | 13.10 | 12.25 | 11.47 | 10.79 |

TABLE XIII.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE LEAF SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT DISPLACED BY USING EXACT ELEVATION.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 6.40 | 5.65 | 4.91 | 4.19 | 3.59 | 3.13 | 2.62 | 2.34 | 1.90 | 1.61 |
| 2..... | 9.32 | 8.59 | 7.73 | 6.89 | 6.02 | 5.34 | 4.60 | 4.09 | 3.51 | 3.01 |
| 3..... | 9.22 | 8.68 | 8.09 | 7.42 | 6.73 | 6.18 | 5.49 | 4.70 | 4.42 | 3.89 |
| 4..... | 8.77 | 8.30 | 7.80 | 7.24 | 6.68 | 6.30 | 5.64 | 5.24 | 4.75 | 4.28 |
| 5..... | 5.48 | 8.03 | 7.54 | 7.00 | 6.46 | 6.09 | 5.58 | 5.21 | 4.78 | 4.37 |
| 6..... | 8.30 | 7.85 | 7.38 | 6.85 | 6.32 | 5.96 | 5.46 | 5.10 | 4.73 | 4.37 |
| 7..... | 8.17 | 7.74 | 7.27 | 6.75 | 6.23 | 5.87 | 5.38 | 5.02 | 4.66 | 4.31 |
| 8..... | 8.08 | 7.65 | 7.19 | 6.67 | 6.16 | 5.80 | 5.32 | 4.96 | 4.61 | 4.26 |
| 9..... | 8.01 | 7.58 | 7.13 | 6.61 | 6.10 | 5.75 | 5.27 | 4.92 | 4.57 | 4.22 |
| 10..... | 7.96 | 7.53 | 7.08 | 6.57 | 6.06 | 5.71 | 5.23 | 4.89 | 4.54 | 4.19 |
| 11..... | 7.91 | 7.49 | 7.04 | 6.53 | 6.03 | 5.68 | 5.20 | 4.86 | 4.51 | 4.17 |
| 12..... | 7.88 | 7.45 | 7.00 | 6.50 | 6.00 | 5.66 | 5.18 | 4.84 | 4.49 | 4.15 |
| 13..... | 7.85 | 7.43 | 6.98 | 6.48 | 5.98 | 5.63 | 5.16 | 4.82 | 4.48 | 4.13 |
| 14..... | 7.82 | 7.40 | 6.95 | 6.46 | 5.96 | 5.62 | 5.14 | 4.80 | 4.46 | 4.12 |
| 15..... | 7.80 | 7.38 | 6.94 | 6.44 | 5.94 | 5.60 | 5.13 | 4.79 | 4.45 | 4.11 |
| 16..... | 7.78 | 7.36 | 6.92 | 6.42 | 5.92 | 5.59 | 5.12 | 4.78 | 4.44 | 4.10 |
| 17..... | 7.76 | 7.34 | 6.90 | 6.41 | 5.91 | 5.57 | 5.10 | 4.77 | 4.43 | 4.09 |
| 18..... | 7.75 | 7.33 | 6.89 | 6.39 | 5.90 | 5.56 | 5.09 | 4.76 | 4.42 | 4.08 |
| 19..... | 7.73 | 7.32 | 6.88 | 6.38 | 5.89 | 5.55 | 5.09 | 4.75 | 4.41 | 4.07 |
| 20..... | 7.72 | 7.31 | 6.87 | 6.37 | 5.88 | 5.54 | 5.08 | 4.74 | 4.40 | 4.07 |
| 21..... | 7.71 | 7.30 | 6.86 | 6.36 | 5.87 | 5.54 | 5.07 | 4.73 | 4.40 | 4.06 |
| 22..... | 7.70 | 7.29 | 6.85 | 6.36 | 5.87 | 5.53 | 5.06 | 4.73 | 4.39 | 4.06 |
| 23..... | 7.69 | 7.28 | 6.84 | 6.35 | 5.86 | 5.52 | 5.06 | 4.72 | 4.39 | 4.05 |
| 24..... | 7.68 | 7.27 | 6.83 | 6.34 | 5.85 | 5.52 | 5.05 | 4.72 | 4.38 | 4.05 |
| 25..... | 7.67 | 7.26 | 6.82 | 6.33 | 5.85 | 5.51 | 5.05 | 4.71 | 4.38 | 4.04 |
| 26..... | 7.67 | 7.26 | 6.82 | 6.33 | 5.84 | 5.51 | 5.04 | 4.71 | 4.37 | 4.04 |
| 27..... | 7.66 | 7.25 | 6.82 | 6.33 | 5.84 | 5.50 | 5.04 | 4.71 | 4.37 | 4.04 |
| 28..... | 7.66 | 7.24 | 6.81 | 6.32 | 5.83 | 5.49 | 5.04 | 4.70 | 4.37 | 4.03 |
| 29..... | 7.65 | 7.24 | 6.80 | 6.31 | 5.83 | 5.49 | 5.03 | 4.70 | 4.36 | 4.03 |
| 30..... | 7.64 | 7.23 | 6.80 | 6.31 | 5.82 | 5.49 | 5.03 | 4.69 | 4.36 | 4.03 |
| 31..... | 7.64 | 7.23 | 6.79 | 6.30 | 5.82 | 5.48 | 5.02 | 4.69 | 4.36 | 4.02 |
| 32..... | 7.63 | 7.22 | 6.79 | 6.30 | 5.82 | 5.48 | 5.02 | 4.69 | 4.36 | 4.02 |
| 33..... | 7.63 | 7.22 | 6.78 | 6.30 | 5.81 | 5.48 | 5.02 | 4.68 | 4.35 | 4.02 |
| 34..... | 7.63 | 7.22 | 6.78 | 6.30 | 5.81 | 5.48 | 5.02 | 4.68 | 4.35 | 4.02 |
| 35..... | 7.62 | 7.21 | 6.78 | 6.29 | 5.81 | 5.47 | 5.01 | 4.68 | 4.35 | 4.02 |
| 36..... | 7.62 | 7.21 | 6.78 | 6.29 | 5.80 | 5.47 | 5.01 | 4.68 | 4.35 | 4.01 |
| 37..... | 7.61 | 7.21 | 6.77 | 6.29 | 5.80 | 5.47 | 5.01 | 4.68 | 4.34 | 4.01 |
| 38..... | 7.61 | 7.20 | 6.77 | 6.28 | 5.80 | 5.47 | 5.01 | 4.67 | 4.34 | 4.01 |
| 39..... | 7.61 | 7.20 | 6.77 | 6.28 | 5.80 | 5.46 | 5.00 | 4.67 | 4.34 | 4.01 |
| 40..... | 7.60 | 7.20 | 6.76 | 6.28 | 5.79 | 5.46 | 5.00 | 4.67 | 4.34 | 4.01 |
| 50..... | 7.58 | 7.18 | 6.74 | 6.26 | 5.78 | 5.45 | 4.99 | 4.66 | 4.33 | 4.00 |
| 60..... | 7.57 | 7.16 | 6.73 | 6.25 | 5.77 | 5.44 | 4.98 | 4.65 | 4.32 | 3.99 |
| 70..... | 7.56 | 7.15 | 6.72 | 6.24 | 5.76 | 5.43 | 4.97 | 4.64 | 4.31 | 3.98 |
| 80..... | 7.55 | 7.15 | 6.72 | 6.23 | 5.75 | 5.42 | 4.97 | 4.64 | 4.31 | 3.98 |
| 90..... | 7.55 | 7.14 | 6.71 | 6.23 | 5.75 | 5.42 | 4.96 | 4.63 | 4.30 | 3.98 |
| 100..... | 7.54 | 7.13 | 6.70 | 6.22 | 5.74 | 5.41 | 4.96 | 4.63 | 4.30 | 3.97 |
| Infinite number.. | 7.49 | 7.09 | 6.66 | 6.19 | 5.71 | 5.38 | 4.93 | 4.60 | 4.28 | 3.95 |

TABLE XIV.

PERCENTAGE OF HITS TO BE EXPECTED FROM GOOD SHOTS WITH THE LEAF SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|-------|-------|-------|-------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1 | 9.79 | 8.59 | 7.43 | 6.42 | 5.60 | 4.89 | 4.18 | 3.68 | 3.06 | 2.70 |
| 2 | 14.27 | 13.07 | 11.69 | 10.51 | 9.40 | 8.33 | 7.34 | 6.43 | 5.65 | 5.05 |
| 3 | 14.11 | 13.20 | 12.24 | 11.37 | 10.49 | 9.65 | 8.77 | 7.39 | 7.12 | 6.52 |
| 4 | 13.42 | 12.62 | 11.80 | 11.09 | 10.41 | 9.71 | 9.01 | 8.25 | 7.66 | 7.17 |
| 5 | 12.98 | 12.21 | 11.41 | 10.73 | 10.07 | 9.51 | 8.91 | 8.20 | 7.70 | 7.33 |
| 6 | 12.70 | 11.95 | 11.17 | 10.50 | 9.86 | 9.30 | 8.72 | 8.02 | 7.63 | 7.32 |
| 7 | 12.51 | 11.77 | 11.00 | 10.34 | 9.71 | 9.16 | 8.59 | 7.90 | 7.52 | 7.21 |
| 8 | 12.37 | 11.63 | 10.88 | 10.22 | 9.60 | 9.06 | 8.49 | 7.81 | 7.43 | 7.13 |
| 9 | 12.26 | 11.54 | 10.78 | 10.14 | 9.52 | 8.98 | 8.42 | 7.74 | 7.37 | 7.07 |
| 10 | 12.18 | 11.45 | 10.71 | 10.07 | 9.45 | 8.92 | 8.36 | 7.69 | 7.32 | 7.02 |
| 11 | 12.11 | 11.39 | 10.65 | 10.01 | 9.40 | 8.87 | 8.31 | 7.65 | 7.27 | 6.98 |
| 12 | 12.05 | 11.34 | 10.60 | 9.96 | 9.36 | 8.83 | 8.27 | 7.61 | 7.24 | 6.95 |
| 13 | 12.01 | 11.30 | 10.56 | 9.93 | 9.32 | 8.79 | 8.24 | 7.58 | 7.21 | 6.92 |
| 14 | 11.97 | 11.26 | 10.52 | 9.89 | 9.29 | 8.76 | 8.21 | 7.56 | 7.19 | 6.90 |
| 15 | 11.93 | 11.23 | 10.49 | 9.87 | 9.26 | 8.74 | 8.19 | 7.54 | 7.17 | 6.88 |
| 16 | 11.90 | 11.20 | 10.47 | 9.84 | 9.24 | 8.72 | 8.17 | 7.52 | 7.15 | 6.86 |
| 17 | 11.87 | 11.17 | 10.44 | 9.82 | 9.22 | 8.70 | 8.15 | 7.50 | 7.13 | 6.85 |
| 18 | 11.85 | 11.15 | 10.42 | 9.80 | 9.20 | 8.68 | 8.13 | 7.49 | 7.12 | 6.84 |
| 19 | 11.83 | 11.13 | 10.41 | 9.78 | 9.19 | 8.67 | 8.12 | 7.47 | 7.11 | 6.82 |
| 20 | 11.81 | 11.12 | 10.39 | 9.77 | 9.17 | 8.65 | 8.11 | 7.46 | 7.10 | 6.81 |
| 21 | 11.80 | 11.10 | 10.37 | 9.75 | 9.16 | 8.64 | 8.10 | 7.45 | 7.09 | 6.80 |
| 22 | 11.78 | 11.09 | 10.36 | 9.74 | 9.15 | 8.63 | 8.09 | 7.44 | 7.08 | 6.80 |
| 23 | 11.76 | 11.07 | 10.35 | 9.73 | 9.13 | 8.62 | 8.08 | 7.43 | 7.07 | 6.79 |
| 24 | 11.76 | 11.06 | 10.34 | 9.72 | 9.13 | 8.61 | 8.07 | 7.42 | 7.06 | 6.78 |
| 25 | 11.74 | 11.05 | 10.33 | 9.71 | 9.12 | 8.60 | 8.06 | 7.42 | 7.06 | 6.77 |
| 26 | 11.73 | 11.04 | 10.32 | 9.70 | 9.11 | 8.59 | 8.05 | 7.41 | 7.05 | 6.77 |
| 27 | 11.73 | 11.03 | 10.31 | 9.70 | 9.09 | 8.59 | 8.05 | 7.41 | 7.05 | 6.76 |
| 28 | 11.71 | 11.02 | 10.30 | 9.69 | 9.09 | 8.58 | 8.04 | 7.40 | 7.04 | 6.76 |
| 29 | 11.71 | 11.01 | 10.29 | 9.68 | 9.09 | 8.57 | 8.03 | 7.39 | 7.03 | 6.75 |
| 30 | 11.70 | 11.00 | 10.29 | 9.67 | 9.08 | 8.57 | 8.03 | 7.39 | 7.03 | 6.75 |
| 31 | 11.69 | 11.00 | 10.28 | 9.66 | 9.07 | 8.56 | 8.02 | 7.38 | 7.02 | 6.74 |
| 32 | 11.68 | 10.99 | 10.27 | 9.66 | 9.07 | 8.56 | 8.02 | 7.38 | 7.02 | 6.74 |
| 33 | 11.67 | 10.98 | 10.27 | 9.65 | 9.06 | 8.55 | 8.01 | 7.37 | 7.01 | 6.73 |
| 34 | 11.67 | 10.98 | 10.26 | 9.65 | 9.06 | 8.55 | 8.01 | 7.37 | 7.01 | 6.73 |
| 35 | 11.66 | 10.97 | 10.26 | 9.64 | 9.06 | 8.54 | 8.01 | 7.37 | 7.01 | 6.73 |
| 36 | 11.66 | 10.97 | 10.25 | 9.64 | 9.05 | 8.54 | 8.00 | 7.36 | 7.01 | 6.72 |
| 37 | 11.65 | 10.96 | 10.25 | 9.63 | 9.04 | 8.53 | 8.00 | 7.36 | 7.00 | 6.72 |
| 38 | 11.65 | 10.96 | 10.24 | 9.63 | 9.04 | 8.53 | 7.99 | 7.36 | 7.00 | 6.72 |
| 39 | 11.64 | 10.95 | 10.24 | 9.62 | 9.04 | 8.53 | 7.99 | 7.35 | 7.00 | 6.71 |
| 40 | 11.64 | 10.95 | 10.23 | 9.62 | 9.03 | 8.52 | 7.98 | 7.35 | 6.99 | 6.71 |
| 50 | 11.61 | 10.92 | 10.21 | 9.59 | 9.01 | 8.50 | 7.97 | 7.33 | 6.97 | 6.69 |
| 60 | 11.58 | 10.90 | 10.19 | 9.58 | 8.99 | 8.48 | 7.95 | 7.32 | 6.96 | 6.68 |
| 70 | 11.56 | 10.88 | 10.17 | 9.56 | 8.98 | 8.47 | 7.94 | 7.30 | 6.95 | 6.67 |
| 80 | 11.56 | 10.87 | 10.16 | 9.55 | 8.97 | 8.46 | 7.93 | 7.30 | 6.94 | 6.66 |
| 90 | 11.55 | 10.86 | 10.15 | 9.55 | 8.96 | 8.46 | 7.93 | 7.29 | 6.94 | 6.66 |
| 100 | 11.54 | 10.85 | 10.15 | 9.54 | 8.96 | 8.45 | 7.92 | 7.29 | 6.93 | 6.65 |
| Infinite number | 11.47 | 10.79 | 10.09 | 9.48 | 8.90 | 8.40 | 7.87 | 7.24 | 6.89 | 6.61 |

TABLE XV.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE BATTLE SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT MISPLACED BY AIMING AT THE BOTTOM OF THE FIGURE.

| Number of targets. | Range (in yards). | | | | | | | | |
|----------------------|-------------------|-------|-------|------|------|------|------|------|------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1..... | 15.09 | 11.21 | 8.73 | 7.19 | 5.98 | 4.87 | 3.79 | 2.79 | 1.92 |
| 2..... | 15.14 | 12.77 | 10.95 | 9.66 | 8.44 | 7.08 | 5.66 | 4.28 | 3.08 |
| 3..... | 13.32 | 11.46 | 10.05 | 9.10 | 8.15 | 6.98 | 5.67 | 4.40 | 3.26 |
| 4..... | 12.57 | 10.81 | 9.48 | 8.58 | 7.69 | 6.59 | 5.40 | 4.22 | 3.15 |
| 5..... | 12.16 | 10.45 | 9.17 | 8.30 | 7.43 | 6.37 | 5.23 | 4.08 | 3.05 |
| 6..... | 11.90 | 10.27 | 8.97 | 8.12 | 7.28 | 6.24 | 5.11 | 3.99 | 2.98 |
| 7..... | 11.72 | 10.08 | 8.84 | 8.00 | 7.17 | 6.14 | 5.04 | 3.93 | 2.94 |
| 8..... | 11.58 | 9.95 | 8.73 | 7.90 | 7.08 | 6.07 | 4.98 | 3.89 | 2.90 |
| 9..... | 11.49 | 9.88 | 8.66 | 7.84 | 7.03 | 6.02 | 4.94 | 3.86 | 2.88 |
| 10..... | 11.41 | 9.81 | 8.60 | 7.79 | 6.97 | 5.98 | 4.90 | 3.83 | 2.86 |
| 11..... | 11.34 | 9.75 | 8.55 | 7.75 | 6.94 | 5.95 | 4.88 | 3.81 | 2.84 |
| 12..... | 11.29 | 9.71 | 8.51 | 7.71 | 6.91 | 5.92 | 4.85 | 3.79 | 2.83 |
| 13..... | 11.24 | 9.66 | 8.48 | 7.67 | 6.87 | 5.89 | 4.83 | 3.77 | 2.82 |
| 14..... | 11.21 | 9.64 | 8.45 | 7.65 | 6.85 | 5.88 | 4.82 | 3.76 | 2.81 |
| 15..... | 11.18 | 9.61 | 8.43 | 7.63 | 6.84 | 5.86 | 4.81 | 3.75 | 2.80 |
| 16..... | 11.15 | 9.59 | 8.41 | 7.61 | 6.82 | 5.84 | 4.79 | 3.74 | 2.79 |
| 17..... | 11.13 | 9.57 | 8.39 | 7.60 | 6.80 | 5.83 | 4.78 | 3.73 | 2.79 |
| 18..... | 11.11 | 9.55 | 8.37 | 7.58 | 6.79 | 5.82 | 4.77 | 3.73 | 2.78 |
| 19..... | 11.08 | 9.53 | 8.36 | 7.57 | 6.78 | 5.81 | 4.76 | 3.72 | 2.78 |
| 20..... | 11.07 | 9.51 | 8.34 | 7.56 | 6.77 | 5.80 | 4.76 | 3.71 | 2.77 |
| 21..... | 11.05 | 9.50 | 8.33 | 7.54 | 6.76 | 5.79 | 4.75 | 3.71 | 2.77 |
| 22..... | 11.04 | 9.49 | 8.32 | 7.53 | 6.75 | 5.78 | 4.74 | 3.70 | 2.77 |
| 23..... | 11.02 | 9.48 | 8.31 | 7.53 | 6.74 | 5.78 | 4.74 | 3.70 | 2.76 |
| 24..... | 11.01 | 9.47 | 8.30 | 7.52 | 6.73 | 5.77 | 4.73 | 3.70 | 2.76 |
| 25..... | 11.00 | 9.46 | 8.30 | 7.51 | 6.73 | 5.77 | 4.73 | 3.69 | 2.76 |
| 26..... | 10.99 | 9.45 | 8.29 | 7.51 | 6.72 | 5.76 | 4.73 | 3.69 | 2.75 |
| 27..... | 10.98 | 9.44 | 8.28 | 7.50 | 6.71 | 5.75 | 4.72 | 3.69 | 2.75 |
| 28..... | 10.97 | 9.43 | 8.27 | 7.49 | 6.71 | 5.75 | 4.72 | 3.68 | 2.75 |
| 29..... | 10.97 | 9.43 | 8.27 | 7.49 | 6.71 | 5.75 | 4.71 | 3.68 | 2.75 |
| 30..... | 10.96 | 9.42 | 8.26 | 7.48 | 6.70 | 5.74 | 4.71 | 3.68 | 2.75 |
| 31..... | 10.95 | 9.42 | 8.26 | 7.48 | 6.70 | 5.74 | 4.71 | 3.68 | 2.74 |
| 32..... | 10.94 | 9.41 | 8.25 | 7.47 | 6.69 | 5.74 | 4.70 | 3.67 | 2.74 |
| 33..... | 10.94 | 9.41 | 8.25 | 7.47 | 6.69 | 5.73 | 4.70 | 3.67 | 2.74 |
| 34..... | 10.93 | 9.40 | 8.25 | 7.47 | 6.69 | 5.73 | 4.70 | 3.67 | 2.74 |
| 35..... | 10.93 | 9.39 | 8.24 | 7.46 | 6.68 | 5.73 | 4.70 | 3.67 | 2.74 |
| 36..... | 10.92 | 9.39 | 8.24 | 7.46 | 6.68 | 5.73 | 4.70 | 3.67 | 2.74 |
| 37..... | 10.92 | 9.39 | 8.23 | 7.45 | 6.68 | 5.72 | 4.69 | 3.66 | 2.74 |
| 38..... | 10.91 | 9.38 | 8.23 | 7.45 | 6.67 | 5.72 | 4.69 | 3.66 | 2.73 |
| 39..... | 10.91 | 9.38 | 8.23 | 7.45 | 6.67 | 5.72 | 4.69 | 3.66 | 2.73 |
| 40..... | 10.91 | 9.38 | 8.22 | 7.45 | 6.67 | 5.72 | 4.69 | 3.66 | 2.73 |
| 50..... | 10.87 | 9.35 | 8.20 | 7.42 | 6.65 | 5.70 | 4.67 | 3.65 | 2.72 |
| 60..... | 10.85 | 9.33 | 8.18 | 7.41 | 6.64 | 5.69 | 4.67 | 3.64 | 2.72 |
| 70..... | 10.84 | 9.32 | 8.17 | 7.40 | 6.63 | 5.68 | 4.66 | 3.64 | 2.72 |
| 80..... | 10.83 | 9.31 | 8.16 | 7.39 | 6.62 | 5.67 | 4.65 | 3.63 | 2.71 |
| 90..... | 10.82 | 9.30 | 8.16 | 7.39 | 6.62 | 5.67 | 4.65 | 3.63 | 2.71 |
| 100..... | 10.81 | 9.29 | 8.15 | 7.38 | 6.61 | 5.67 | 4.65 | 3.63 | 2.71 |
| Infinite number..... | 10.74 | 9.24 | 8.10 | 7.34 | 6.57 | 5.63 | 4.62 | 3.61 | 2.69 |

TABLE XVI.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH BATTLE SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|----------------------|-------------------|-------|-------|------|------|------|------|------|------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1..... | 15.82 | 11.45 | 8.89 | 7.19 | 6.05 | 5.22 | 4.62 | 4.10 | 3.47 |
| 2..... | 15.87 | 13.04 | 11.15 | 9.66 | 8.53 | 7.58 | 6.90 | 6.31 | 5.56 |
| 3..... | 13.97 | 11.70 | 10.23 | 9.10 | 8.24 | 7.47 | 6.91 | 6.48 | 5.88 |
| 4..... | 13.18 | 11.04 | 9.65 | 8.58 | 7.77 | 7.05 | 6.59 | 6.21 | 5.69 |
| 5..... | 12.75 | 10.68 | 9.34 | 8.30 | 7.51 | 6.82 | 6.37 | 6.01 | 5.51 |
| 6..... | 12.47 | 10.45 | 9.13 | 8.12 | 7.36 | 6.67 | 6.24 | 5.88 | 5.39 |
| 7..... | 12.28 | 10.29 | 9.00 | 8.00 | 7.25 | 6.57 | 6.14 | 5.79 | 5.31 |
| 8..... | 12.13 | 10.17 | 8.89 | 7.90 | 7.16 | 6.49 | 6.07 | 5.72 | 5.24 |
| 9..... | 12.04 | 10.09 | 8.82 | 7.84 | 7.10 | 6.44 | 6.02 | 5.68 | 5.20 |
| 10..... | 11.96 | 10.02 | 8.76 | 7.79 | 7.05 | 6.40 | 5.98 | 5.64 | 5.17 |
| 11..... | 11.89 | 9.96 | 8.71 | 7.75 | 7.02 | 6.36 | 5.95 | 5.61 | 5.14 |
| 12..... | 11.84 | 9.92 | 8.67 | 7.71 | 6.98 | 6.33 | 5.92 | 5.58 | 5.11 |
| 13..... | 11.78 | 9.87 | 8.63 | 7.67 | 6.95 | 6.30 | 5.89 | 5.56 | 5.09 |
| 14..... | 11.75 | 9.84 | 8.61 | 7.65 | 6.93 | 6.29 | 5.88 | 5.54 | 5.08 |
| 15..... | 11.72 | 9.82 | 8.58 | 7.63 | 6.91 | 6.27 | 5.86 | 5.53 | 5.06 |
| 16..... | 11.69 | 9.79 | 8.56 | 7.61 | 6.89 | 6.25 | 5.84 | 5.51 | 5.05 |
| 17..... | 11.66 | 9.77 | 8.54 | 7.60 | 6.88 | 6.24 | 5.83 | 5.50 | 5.04 |
| 18..... | 11.64 | 9.75 | 8.53 | 7.58 | 6.87 | 6.23 | 5.82 | 5.49 | 5.03 |
| 19..... | 11.62 | 9.73 | 8.51 | 7.57 | 6.85 | 6.22 | 5.81 | 5.48 | 5.02 |
| 20..... | 11.60 | 9.72 | 8.50 | 7.56 | 6.84 | 6.22 | 5.80 | 5.47 | 5.01 |
| 21..... | 11.58 | 9.70 | 8.48 | 7.54 | 6.83 | 6.22 | 5.79 | 5.46 | 5.00 |
| 22..... | 11.57 | 9.69 | 8.47 | 7.53 | 6.82 | 6.19 | 5.78 | 5.45 | 5.00 |
| 23..... | 11.56 | 9.68 | 8.46 | 7.53 | 6.82 | 6.18 | 5.78 | 5.45 | 4.99 |
| 24..... | 11.54 | 9.67 | 8.45 | 7.52 | 6.81 | 6.18 | 5.77 | 5.44 | 4.99 |
| 25..... | 11.53 | 9.66 | 8.45 | 7.51 | 6.80 | 6.17 | 5.77 | 5.44 | 4.98 |
| 26..... | 11.52 | 9.65 | 8.44 | 7.51 | 6.80 | 6.17 | 5.76 | 5.43 | 4.98 |
| 27..... | 11.51 | 9.64 | 8.43 | 7.50 | 6.79 | 6.16 | 5.75 | 5.43 | 4.97 |
| 28..... | 11.50 | 9.63 | 8.42 | 7.49 | 6.78 | 6.15 | 5.75 | 5.42 | 4.97 |
| 29..... | 11.50 | 9.63 | 8.42 | 7.49 | 6.78 | 6.15 | 5.75 | 5.42 | 4.97 |
| 30..... | 11.49 | 9.62 | 8.41 | 7.48 | 6.78 | 6.15 | 5.74 | 5.42 | 4.96 |
| 31..... | 11.48 | 9.62 | 8.41 | 7.48 | 6.77 | 6.14 | 5.74 | 5.41 | 4.96 |
| 32..... | 11.47 | 9.61 | 8.40 | 7.47 | 6.77 | 6.14 | 5.74 | 5.41 | 4.96 |
| 33..... | 11.47 | 9.61 | 8.40 | 7.47 | 6.77 | 6.14 | 5.73 | 5.41 | 4.95 |
| 34..... | 11.46 | 9.60 | 8.40 | 7.47 | 6.76 | 6.13 | 5.73 | 5.41 | 4.95 |
| 35..... | 11.45 | 9.60 | 8.39 | 7.46 | 6.76 | 6.13 | 5.73 | 5.40 | 4.95 |
| 36..... | 11.45 | 9.59 | 8.39 | 7.46 | 6.75 | 6.13 | 5.73 | 5.40 | 4.95 |
| 37..... | 11.45 | 9.59 | 8.38 | 7.45 | 6.75 | 6.12 | 5.72 | 5.40 | 4.94 |
| 38..... | 11.44 | 9.58 | 8.38 | 7.45 | 6.75 | 6.12 | 5.72 | 5.39 | 4.94 |
| 39..... | 11.44 | 9.58 | 8.38 | 7.45 | 6.75 | 6.12 | 5.72 | 5.39 | 4.94 |
| 40..... | 11.43 | 9.58 | 8.37 | 7.45 | 6.74 | 6.12 | 5.72 | 5.39 | 4.94 |
| 50..... | 11.40 | 9.55 | 8.35 | 7.42 | 6.72 | 6.10 | 5.70 | 5.37 | 4.92 |
| 60..... | 11.38 | 9.53 | 7.33 | 7.41 | 6.71 | 6.09 | 5.69 | 5.36 | 4.92 |
| 70..... | 11.36 | 9.52 | 8.32 | 7.40 | 6.70 | 6.08 | 5.68 | 5.36 | 4.91 |
| 80..... | 11.35 | 9.51 | 8.31 | 7.39 | 6.70 | 6.07 | 5.67 | 5.35 | 4.90 |
| 90..... | 11.34 | 9.50 | 8.31 | 7.39 | 6.69 | 6.07 | 5.67 | 5.35 | 4.90 |
| 100..... | 11.33 | 9.49 | 8.30 | 7.38 | 6.68 | 6.06 | 5.67 | 5.34 | 4.90 |
| Infinite number..... | 11.26 | 9.44 | 8.25 | 7.34 | 6.64 | 6.03 | 5.63 | 5.31 | 4.87 |

TABLE XVII.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE LEAF SIGHT ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT MISPLACED BY USING EXACT ELEVATION.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 3.45 | 2.96 | 2.55 | 2.20 | 1.88 | 1.58 | 1.34 | 1.12 | 0.98 | 0.81 |
| 2..... | 5.31 | 4.74 | 4.18 | 3.69 | 3.26 | 2.80 | 2.41 | 2.10 | 1.80 | 1.53 |
| 3..... | 5.46 | 5.02 | 4.57 | 4.16 | 3.78 | 3.36 | 2.98 | 2.65 | 2.33 | 2.03 |
| 4..... | 5.23 | 4.86 | 4.48 | 4.16 | 3.82 | 3.47 | 3.15 | 2.86 | 2.66 | 2.30 |
| 5..... | 5.06 | 4.70 | 4.33 | 4.02 | 3.75 | 3.44 | 3.16 | 2.89 | 2.65 | 2.40 |
| 6..... | 4.95 | 4.59 | 4.24 | 3.94 | 3.66 | 3.36 | 3.09 | 2.87 | 2.65 | 2.41 |
| 7..... | 4.88 | 4.53 | 4.18 | 3.88 | 3.61 | 3.31 | 3.04 | 2.83 | 2.61 | 2.40 |
| 8..... | 4.82 | 4.47 | 4.12 | 3.83 | 3.57 | 3.27 | 3.01 | 2.79 | 2.58 | 2.37 |
| 9..... | 4.78 | 4.44 | 4.09 | 3.80 | 3.54 | 3.25 | 2.98 | 2.77 | 2.56 | 2.35 |
| 10..... | 4.75 | 4.40 | 4.06 | 3.78 | 3.51 | 3.23 | 2.96 | 2.75 | 2.54 | 2.33 |
| 11..... | 4.72 | 4.38 | 4.04 | 3.76 | 3.49 | 3.21 | 2.95 | 2.74 | 2.53 | 2.32 |
| 12..... | 4.70 | 4.36 | 4.02 | 3.74 | 3.48 | 3.19 | 2.93 | 2.73 | 2.52 | 2.31 |
| 13..... | 4.68 | 4.34 | 4.01 | 3.72 | 3.46 | 3.18 | 2.92 | 2.71 | 2.51 | 2.30 |
| 14..... | 4.66 | 4.33 | 3.99 | 3.71 | 3.45 | 3.17 | 2.91 | 2.71 | 2.50 | 2.29 |
| 15..... | 4.65 | 4.32 | 3.98 | 3.70 | 3.44 | 3.16 | 2.90 | 2.70 | 2.49 | 2.29 |
| 16..... | 4.64 | 4.31 | 3.97 | 3.69 | 3.43 | 3.15 | 2.90 | 2.69 | 2.49 | 2.28 |
| 17..... | 4.63 | 4.30 | 3.96 | 3.68 | 3.43 | 3.15 | 2.89 | 2.69 | 2.48 | 2.28 |
| 18..... | 4.62 | 4.29 | 3.96 | 3.68 | 3.42 | 3.14 | 2.88 | 2.68 | 2.48 | 2.27 |
| 19..... | 4.61 | 4.28 | 3.95 | 3.67 | 3.41 | 3.13 | 2.88 | 2.68 | 2.47 | 2.27 |
| 20..... | 4.60 | 4.27 | 3.94 | 3.66 | 3.41 | 3.13 | 2.87 | 2.67 | 2.47 | 2.26 |
| 21..... | 4.60 | 4.27 | 3.94 | 3.66 | 3.40 | 3.12 | 2.87 | 2.67 | 2.46 | 2.26 |
| 22..... | 4.59 | 4.26 | 3.93 | 3.65 | 3.40 | 3.12 | 2.87 | 2.66 | 2.46 | 2.26 |
| 23..... | 4.59 | 4.26 | 3.93 | 3.65 | 3.40 | 3.12 | 2.86 | 2.66 | 2.46 | 2.26 |
| 24..... | 4.58 | 4.25 | 3.92 | 3.64 | 3.39 | 3.11 | 2.86 | 2.66 | 2.46 | 2.25 |
| 25..... | 4.58 | 4.25 | 3.92 | 3.64 | 3.39 | 3.11 | 2.86 | 2.66 | 2.45 | 2.25 |
| 26..... | 4.57 | 4.25 | 3.92 | 3.64 | 3.39 | 3.11 | 2.86 | 2.65 | 2.45 | 2.25 |
| 27..... | 4.57 | 4.24 | 3.91 | 3.63 | 3.38 | 3.10 | 2.85 | 2.65 | 2.45 | 2.25 |
| 28..... | 4.56 | 4.24 | 3.91 | 3.63 | 3.38 | 3.10 | 2.85 | 2.65 | 2.45 | 2.24 |
| 29..... | 4.56 | 4.24 | 3.91 | 3.63 | 3.38 | 3.10 | 2.85 | 2.65 | 2.45 | 2.24 |
| 30..... | 4.56 | 4.23 | 3.90 | 3.63 | 3.38 | 3.10 | 2.85 | 2.64 | 2.44 | 2.24 |
| 31..... | 4.56 | 4.23 | 3.90 | 3.63 | 3.37 | 3.10 | 2.85 | 2.64 | 2.44 | 2.24 |
| 32..... | 4.55 | 4.23 | 3.90 | 3.62 | 3.37 | 3.09 | 2.84 | 2.64 | 2.44 | 2.24 |
| 33..... | 4.55 | 4.23 | 3.90 | 3.62 | 3.37 | 3.09 | 2.84 | 2.64 | 2.44 | 2.24 |
| 34..... | 4.55 | 4.22 | 3.90 | 3.62 | 3.37 | 3.09 | 2.84 | 2.64 | 2.44 | 2.24 |
| 35..... | 4.55 | 4.22 | 3.89 | 3.62 | 3.37 | 3.09 | 2.84 | 2.64 | 2.44 | 2.24 |
| 36..... | 4.54 | 4.22 | 3.89 | 3.62 | 3.36 | 3.09 | 2.84 | 2.64 | 2.44 | 2.23 |
| 37..... | 4.54 | 4.22 | 3.89 | 3.61 | 3.36 | 3.09 | 2.84 | 2.64 | 2.43 | 2.23 |
| 38..... | 4.54 | 4.22 | 3.89 | 3.61 | 3.36 | 3.09 | 2.84 | 2.63 | 2.43 | 2.23 |
| 39..... | 4.54 | 4.21 | 3.89 | 3.61 | 3.36 | 3.08 | 2.83 | 2.63 | 2.43 | 2.23 |
| 40..... | 4.54 | 4.21 | 3.89 | 3.61 | 3.36 | 3.08 | 2.83 | 2.63 | 2.43 | 2.23 |
| 50..... | 4.52 | 4.20 | 3.87 | 3.60 | 3.35 | 3.07 | 2.82 | 2.62 | 2.42 | 2.22 |
| 60..... | 4.52 | 4.19 | 3.87 | 3.59 | 3.34 | 3.07 | 2.82 | 2.62 | 2.42 | 2.22 |
| 70..... | 4.51 | 4.18 | 3.86 | 3.59 | 3.34 | 3.06 | 2.81 | 2.62 | 2.42 | 2.22 |
| 80..... | 4.51 | 4.18 | 3.86 | 3.58 | 3.34 | 3.06 | 2.81 | 2.61 | 2.41 | 2.22 |
| 90..... | 4.50 | 4.18 | 3.85 | 3.58 | 3.33 | 3.06 | 2.81 | 2.61 | 2.41 | 2.21 |
| 100..... | 4.50 | 4.17 | 3.85 | 3.58 | 3.33 | 3.06 | 2.81 | 2.61 | 2.41 | 2.21 |
| Infinite number.. | 4.47 | 4.15 | 3.83 | 3.56 | 3.31 | 3.04 | 2.79 | 2.59 | 2.40 | 2.20 |

TABLE XVIII.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE LEAF SIGHT
ON LINES OF PRONE FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND
WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 4.10 | 3.47 | 3.06 | 2.61 | 2.24 | 1.93 | 1.65 | 1.43 | 1.30 | 1.08 |
| 2..... | 6.31 | 5.56 | 5.02 | 4.39 | 3.89 | 3.42 | 2.96 | 2.68 | 2.40 | 2.03 |
| 3..... | 6.48 | 5.88 | 5.48 | 4.94 | 4.52 | 4.10 | 3.66 | 3.39 | 3.10 | 2.70 |
| 4..... | 6.21 | 5.69 | 5.38 | 4.94 | 4.56 | 4.24 | 3.87 | 3.65 | 3.44 | 3.05 |
| 5..... | 6.01 | 5.51 | 5.20 | 4.78 | 4.47 | 4.19 | 3.89 | 3.69 | 3.52 | 3.18 |
| 6..... | 5.88 | 5.39 | 5.09 | 4.68 | 4.38 | 4.10 | 3.80 | 3.66 | 3.53 | 3.19 |
| 7..... | 5.79 | 5.31 | 5.01 | 4.61 | 4.31 | 4.04 | 3.74 | 3.61 | 3.48 | 3.18 |
| 8..... | 5.72 | 5.24 | 4.95 | 4.55 | 4.26 | 3.99 | 3.70 | 3.57 | 3.43 | 3.14 |
| 9..... | 5.68 | 5.20 | 4.91 | 4.52 | 4.23 | 3.96 | 3.67 | 3.54 | 3.41 | 3.12 |
| 10..... | 5.64 | 5.17 | 4.88 | 4.48 | 4.20 | 3.93 | 3.64 | 3.51 | 3.38 | 3.09 |
| 11..... | 5.61 | 5.14 | 4.85 | 4.46 | 4.17 | 3.91 | 3.63 | 3.49 | 3.36 | 3.08 |
| 12..... | 5.58 | 5.11 | 4.83 | 4.44 | 4.15 | 3.89 | 3.61 | 3.48 | 3.35 | 3.06 |
| 13..... | 5.56 | 5.09 | 4.81 | 4.42 | 4.13 | 3.88 | 3.59 | 3.46 | 3.33 | 3.05 |
| 14..... | 5.54 | 5.08 | 4.79 | 4.41 | 4.12 | 3.87 | 3.58 | 3.45 | 3.32 | 3.04 |
| 15..... | 5.53 | 5.06 | 4.78 | 4.39 | 4.11 | 3.86 | 3.57 | 3.44 | 3.32 | 3.03 |
| 16..... | 5.51 | 5.05 | 4.77 | 4.38 | 4.10 | 3.84 | 3.56 | 3.43 | 3.31 | 3.02 |
| 17..... | 5.50 | 5.04 | 4.76 | 4.37 | 4.09 | 3.84 | 3.56 | 3.43 | 3.30 | 3.02 |
| 18..... | 5.49 | 5.03 | 4.75 | 4.37 | 4.08 | 3.83 | 3.55 | 3.42 | 3.29 | 3.01 |
| 19..... | 5.48 | 5.02 | 4.74 | 4.36 | 4.08 | 3.82 | 3.54 | 3.41 | 3.29 | 3.01 |
| 20..... | 5.47 | 5.01 | 4.73 | 4.35 | 4.07 | 3.82 | 3.54 | 3.41 | 3.28 | 3.00 |
| 21..... | 5.46 | 5.00 | 4.72 | 4.34 | 4.06 | 3.81 | 3.53 | 3.40 | 3.28 | 3.00 |
| 22..... | 5.45 | 5.00 | 4.72 | 4.34 | 4.06 | 3.81 | 3.53 | 3.40 | 3.27 | 2.99 |
| 23..... | 5.45 | 4.99 | 4.71 | 4.33 | 4.05 | 3.80 | 3.52 | 3.40 | 3.27 | 2.99 |
| 24..... | 5.44 | 4.99 | 4.71 | 4.33 | 4.05 | 3.80 | 3.52 | 3.39 | 3.26 | 2.99 |
| 25..... | 5.44 | 4.98 | 4.70 | 4.32 | 4.05 | 3.79 | 3.52 | 3.39 | 3.26 | 2.98 |
| 26..... | 5.43 | 4.98 | 4.70 | 4.32 | 4.04 | 3.79 | 3.51 | 3.39 | 3.26 | 2.98 |
| 27..... | 5.43 | 4.97 | 4.69 | 4.32 | 4.04 | 3.79 | 3.51 | 3.38 | 3.26 | 2.98 |
| 28..... | 5.42 | 4.97 | 4.69 | 4.31 | 4.04 | 3.78 | 3.51 | 3.38 | 3.25 | 2.98 |
| 29..... | 5.42 | 4.97 | 4.69 | 4.31 | 4.03 | 3.78 | 3.50 | 3.38 | 3.25 | 2.97 |
| 30..... | 5.42 | 4.96 | 4.69 | 4.31 | 4.03 | 3.78 | 3.50 | 3.38 | 3.25 | 2.97 |
| 31..... | 5.41 | 4.96 | 4.68 | 4.31 | 4.03 | 3.78 | 3.50 | 3.37 | 3.25 | 2.97 |
| 32..... | 5.41 | 4.96 | 4.68 | 4.30 | 4.03 | 3.77 | 3.50 | 3.37 | 3.25 | 2.97 |
| 33..... | 5.41 | 4.95 | 4.68 | 4.30 | 4.02 | 3.77 | 3.50 | 3.37 | 3.24 | 2.97 |
| 34..... | 5.41 | 4.95 | 4.68 | 4.30 | 4.02 | 3.77 | 3.49 | 3.37 | 3.24 | 2.97 |
| 35..... | 5.40 | 4.95 | 4.67 | 4.30 | 4.02 | 3.77 | 3.49 | 3.37 | 3.24 | 2.96 |
| 36..... | 5.40 | 4.95 | 4.67 | 4.29 | 4.02 | 3.77 | 3.49 | 3.36 | 3.24 | 2.96 |
| 37..... | 5.40 | 4.94 | 4.67 | 4.29 | 4.02 | 3.77 | 3.49 | 3.36 | 3.24 | 2.96 |
| 38..... | 5.39 | 4.94 | 4.67 | 4.29 | 4.01 | 3.76 | 3.49 | 3.36 | 3.24 | 2.96 |
| 39..... | 5.39 | 4.94 | 4.66 | 4.29 | 4.01 | 3.76 | 3.49 | 3.36 | 3.24 | 2.96 |
| 40..... | 5.39 | 4.94 | 4.66 | 4.29 | 4.01 | 3.76 | 3.48 | 3.36 | 3.23 | 2.96 |
| 50..... | 5.37 | 4.92 | 4.65 | 4.27 | 4.00 | 3.75 | 3.47 | 3.35 | 3.22 | 2.95 |
| 60..... | 5.36 | 4.92 | 4.64 | 4.27 | 3.99 | 3.74 | 3.47 | 3.34 | 3.22 | 2.94 |
| 70..... | 5.36 | 4.91 | 4.63 | 4.26 | 3.99 | 3.74 | 3.46 | 3.34 | 3.21 | 2.94 |
| 80..... | 5.35 | 4.90 | 4.63 | 4.26 | 3.98 | 3.73 | 3.46 | 3.34 | 3.21 | 2.94 |
| 90..... | 5.35 | 4.90 | 4.63 | 4.25 | 3.98 | 3.73 | 3.46 | 3.33 | 3.21 | 2.93 |
| 100..... | 5.34 | 4.90 | 4.62 | 4.25 | 3.98 | 3.73 | 3.45 | 3.33 | 3.21 | 2.93 |
| Infinite number.. | 5.31 | 4.87 | 4.59 | 4.22 | 3.95 | 3.71 | 3.43 | 3.31 | 3.19 | 2.91 |

TABLE XIX.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE BATTLE SIGHT
ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE
AND WITH CENTER OF IMPACT MISPLACED BY AIMING AT LOWER EDGE OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|----------------------|-------------------|-------|-------|-------|-------|-------|------|------|------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1..... | 26.28 | 19.90 | 15.72 | 12.49 | 10.19 | 7.90 | 5.96 | 4.29 | 2.90 |
| 2..... | 26.37 | 22.66 | 19.71 | 16.78 | 14.36 | 11.47 | 8.90 | 6.60 | 4.66 |
| 3..... | 23.21 | 20.34 | 18.09 | 15.81 | 13.88 | 11.32 | 8.92 | 6.78 | 4.93 |
| 4..... | 21.89 | 19.18 | 17.06 | 14.92 | 13.09 | 10.68 | 8.50 | 6.50 | 4.77 |
| 5..... | 21.17 | 18.56 | 16.51 | 14.43 | 12.66 | 10.33 | 8.22 | 6.29 | 4.61 |
| 6..... | 20.72 | 18.16 | 16.15 | 14.12 | 12.39 | 10.11 | 8.05 | 6.15 | 4.51 |
| 7..... | 20.41 | 17.88 | 15.91 | 13.91 | 12.21 | 9.96 | 7.93 | 6.06 | 4.44 |
| 8..... | 20.18 | 17.68 | 15.73 | 13.75 | 12.07 | 9.84 | 7.84 | 5.99 | 4.39 |
| 9..... | 20.01 | 17.53 | 15.60 | 13.63 | 11.97 | 9.76 | 7.77 | 5.94 | 4.36 |
| 10..... | 19.86 | 17.41 | 15.49 | 13.54 | 11.88 | 9.69 | 7.72 | 5.90 | 4.33 |
| 11..... | 19.75 | 17.31 | 15.40 | 13.46 | 11.81 | 9.64 | 7.67 | 5.87 | 4.30 |
| 12..... | 19.66 | 17.23 | 15.33 | 13.40 | 11.76 | 9.59 | 7.64 | 5.84 | 4.28 |
| 13..... | 19.59 | 17.17 | 15.27 | 13.35 | 11.72 | 9.56 | 7.61 | 5.82 | 4.27 |
| 14..... | 19.52 | 17.11 | 15.22 | 13.30 | 11.68 | 9.53 | 7.58 | 5.80 | 4.25 |
| 15..... | 19.47 | 17.06 | 15.18 | 13.27 | 11.65 | 9.50 | 7.56 | 5.78 | 4.24 |
| 16..... | 19.42 | 17.02 | 15.14 | 13.23 | 11.61 | 9.47 | 7.54 | 5.77 | 4.23 |
| 17..... | 19.37 | 16.98 | 15.10 | 13.20 | 11.59 | 9.45 | 7.53 | 5.75 | 4.22 |
| 18..... | 19.34 | 16.95 | 15.07 | 13.18 | 11.57 | 9.43 | 7.51 | 5.74 | 4.21 |
| 19..... | 19.31 | 16.92 | 15.05 | 13.16 | 11.55 | 9.42 | 7.50 | 5.73 | 4.20 |
| 20..... | 19.28 | 16.89 | 15.03 | 13.14 | 11.53 | 9.41 | 7.49 | 5.73 | 4.20 |
| 21..... | 19.25 | 16.87 | 15.00 | 13.12 | 11.51 | 9.39 | 7.48 | 5.72 | 4.19 |
| 22..... | 19.22 | 16.85 | 14.99 | 13.10 | 11.50 | 9.38 | 7.47 | 5.71 | 4.19 |
| 23..... | 19.20 | 16.82 | 14.96 | 13.08 | 11.48 | 9.37 | 7.46 | 5.70 | 4.18 |
| 24..... | 19.18 | 16.81 | 14.95 | 13.07 | 11.47 | 9.36 | 7.45 | 5.70 | 4.18 |
| 25..... | 19.16 | 16.79 | 14.94 | 13.06 | 11.46 | 9.35 | 7.44 | 5.69 | 4.17 |
| 26..... | 19.14 | 16.78 | 14.92 | 13.05 | 11.45 | 9.34 | 7.44 | 5.69 | 4.17 |
| 27..... | 19.14 | 16.77 | 14.92 | 13.05 | 11.45 | 9.34 | 7.43 | 5.68 | 4.17 |
| 28..... | 19.11 | 16.75 | 14.90 | 13.02 | 11.43 | 9.33 | 7.42 | 5.68 | 4.16 |
| 29..... | 19.10 | 16.74 | 14.89 | 13.01 | 11.42 | 9.32 | 7.42 | 5.67 | 4.16 |
| 30..... | 19.08 | 16.72 | 14.88 | 13.00 | 11.41 | 9.31 | 7.41 | 5.67 | 4.16 |
| 31..... | 19.07 | 16.71 | 14.87 | 12.99 | 11.41 | 9.30 | 7.41 | 5.66 | 4.15 |
| 32..... | 19.06 | 16.70 | 14.86 | 12.99 | 11.40 | 9.30 | 7.40 | 5.66 | 4.15 |
| 33..... | 19.05 | 16.69 | 14.85 | 12.98 | 11.39 | 9.29 | 7.40 | 5.66 | 4.15 |
| 34..... | 19.04 | 16.68 | 14.84 | 12.97 | 11.39 | 9.29 | 7.40 | 5.66 | 4.15 |
| 35..... | 19.03 | 16.68 | 14.84 | 12.97 | 11.38 | 9.29 | 7.39 | 5.65 | 4.14 |
| 36..... | 19.02 | 16.67 | 14.83 | 12.96 | 11.38 | 9.28 | 7.39 | 5.65 | 4.14 |
| 37..... | 19.01 | 16.66 | 14.82 | 12.95 | 11.37 | 9.27 | 7.38 | 5.65 | 4.14 |
| 38..... | 19.00 | 16.65 | 14.81 | 12.95 | 11.37 | 9.27 | 7.38 | 5.64 | 4.14 |
| 39..... | 18.99 | 16.65 | 14.81 | 12.94 | 11.36 | 9.27 | 7.38 | 5.64 | 4.14 |
| 40..... | 18.99 | 16.64 | 14.80 | 12.94 | 11.36 | 9.26 | 7.38 | 5.64 | 4.13 |
| 50..... | 18.93 | 16.59 | 14.76 | 12.90 | 11.33 | 9.24 | 7.36 | 5.62 | 4.12 |
| 60..... | 18.90 | 16.56 | 14.73 | 12.88 | 11.30 | 9.22 | 7.34 | 5.61 | 4.11 |
| 70..... | 18.87 | 16.53 | 14.71 | 12.86 | 11.29 | 9.21 | 7.33 | 5.60 | 4.11 |
| 80..... | 18.85 | 16.52 | 14.70 | 12.85 | 11.28 | 9.20 | 7.32 | 5.60 | 4.11 |
| 90..... | 18.84 | 16.51 | 14.69 | 12.84 | 11.27 | 9.19 | 7.32 | 5.60 | 4.10 |
| 100..... | 18.82 | 16.50 | 14.67 | 12.83 | 11.26 | 9.18 | 7.31 | 5.59 | 4.10 |
| Infinite number..... | 18.71 | 16.40 | 14.59 | 12.75 | 11.19 | 9.13 | 7.27 | 5.56 | 4.07 |

TABLE XX.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE BATTLE SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | |
|--------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 |
| 1 | 26.63 | 20.21 | 15.97 | 13.16 | 11.16 | 9.82 | 8.75 | 7.69 | 6.63 |
| 2 | 26.72 | 23.02 | 20.02 | 17.68 | 15.72 | 14.26 | 13.06 | 11.83 | 10.63 |
| 3 | 23.52 | 20.65 | 18.37 | 16.66 | 15.19 | 14.07 | 13.09 | 12.15 | 11.25 |
| 4 | 22.18 | 19.48 | 17.33 | 15.71 | 14.33 | 13.27 | 12.47 | 11.65 | 10.89 |
| 5 | 21.46 | 18.84 | 16.76 | 15.20 | 13.86 | 12.84 | 12.07 | 11.27 | 10.53 |
| 6 | 21.00 | 18.44 | 16.40 | 14.87 | 13.56 | 12.56 | 11.81 | 11.03 | 10.30 |
| 7 | 20.68 | 18.16 | 16.16 | 14.65 | 13.36 | 12.37 | 11.63 | 10.86 | 10.15 |
| 8 | 20.45 | 17.95 | 15.97 | 14.48 | 13.21 | 12.23 | 11.50 | 10.74 | 10.03 |
| 9 | 20.28 | 17.80 | 15.84 | 14.36 | 13.10 | 12.13 | 11.40 | 10.65 | 9.95 |
| 10 | 20.13 | 17.68 | 15.72 | 14.26 | 13.00 | 12.04 | 11.32 | 10.57 | 9.88 |
| 11 | 20.02 | 17.58 | 15.64 | 14.18 | 12.93 | 11.97 | 11.26 | 10.51 | 9.82 |
| 12 | 19.93 | 17.50 | 15.57 | 14.11 | 12.87 | 11.92 | 11.21 | 10.47 | 9.78 |
| 13 | 19.85 | 17.43 | 15.51 | 14.06 | 12.82 | 11.87 | 11.16 | 10.43 | 9.74 |
| 14 | 19.78 | 17.37 | 15.46 | 14.01 | 12.78 | 11.83 | 11.13 | 10.39 | 9.71 |
| 15 | 19.73 | 17.32 | 15.41 | 13.97 | 12.74 | 11.80 | 11.10 | 10.36 | 9.68 |
| 16 | 19.68 | 17.28 | 15.37 | 13.94 | 12.71 | 11.77 | 11.07 | 10.33 | 9.66 |
| 17 | 19.63 | 17.24 | 15.34 | 13.91 | 12.68 | 11.74 | 11.04 | 10.31 | 9.63 |
| 18 | 19.60 | 17.21 | 15.31 | 13.88 | 12.66 | 11.72 | 11.02 | 10.29 | 9.62 |
| 19 | 19.57 | 17.18 | 15.28 | 13.86 | 12.64 | 11.70 | 11.00 | 10.28 | 9.60 |
| 20 | 19.54 | 17.15 | 15.26 | 13.84 | 12.62 | 11.69 | 10.99 | 10.26 | 9.59 |
| 21 | 19.51 | 17.13 | 15.24 | 13.81 | 12.60 | 11.67 | 10.97 | 10.24 | 9.57 |
| 22 | 19.48 | 17.11 | 15.22 | 13.80 | 12.58 | 11.65 | 10.96 | 10.23 | 9.56 |
| 23 | 19.45 | 17.08 | 15.20 | 13.78 | 12.56 | 11.64 | 10.94 | 10.22 | 9.55 |
| 24 | 19.44 | 17.07 | 15.18 | 13.77 | 12.55 | 11.63 | 10.93 | 10.21 | 9.54 |
| 25 | 19.42 | 17.05 | 15.17 | 13.75 | 12.54 | 11.61 | 10.92 | 10.20 | 9.53 |
| 26 | 19.40 | 17.03 | 15.15 | 13.74 | 12.53 | 11.60 | 10.91 | 10.19 | 9.52 |
| 27 | 19.39 | 17.03 | 15.15 | 13.73 | 12.53 | 11.60 | 10.91 | 10.19 | 9.52 |
| 28 | 19.37 | 17.01 | 15.13 | 13.72 | 12.51 | 11.59 | 11.89 | 10.17 | 9.51 |
| 29 | 19.36 | 16.99 | 15.12 | 13.71 | 12.50 | 11.58 | 10.88 | 10.17 | 9.50 |
| 30 | 19.34 | 16.98 | 15.11 | 13.70 | 12.49 | 11.57 | 10.88 | 10.16 | 9.49 |
| 31 | 19.33 | 16.97 | 15.10 | 13.69 | 12.48 | 11.56 | 10.87 | 10.15 | 9.48 |
| 32 | 19.32 | 16.96 | 15.09 | 13.68 | 12.48 | 11.55 | 10.86 | 10.15 | 9.48 |
| 33 | 19.30 | 16.95 | 15.08 | 13.67 | 12.47 | 11.55 | 10.85 | 10.14 | 9.47 |
| 34 | 19.29 | 16.94 | 15.07 | 13.67 | 12.46 | 11.54 | 10.85 | 10.13 | 9.47 |
| 35 | 19.29 | 16.93 | 15.07 | 13.66 | 12.46 | 11.54 | 10.85 | 10.13 | 9.46 |
| 36 | 19.28 | 16.93 | 15.06 | 13.65 | 12.45 | 11.53 | 10.84 | 10.13 | 9.46 |
| 37 | 19.26 | 16.91 | 15.05 | 13.64 | 12.44 | 11.52 | 10.83 | 10.12 | 9.45 |
| 38 | 19.26 | 16.91 | 15.04 | 13.64 | 12.44 | 11.52 | 10.83 | 10.11 | 9.45 |
| 39 | 19.25 | 16.90 | 15.04 | 13.63 | 12.43 | 11.51 | 10.82 | 10.11 | 9.45 |
| 40 | 19.24 | 16.89 | 15.03 | 13.63 | 12.43 | 11.51 | 10.82 | 10.11 | 9.44 |
| 50 | 19.19 | 16.85 | 14.99 | 13.59 | 12.39 | 11.48 | 10.79 | 10.08 | 9.42 |
| 60 | 19.15 | 16.81 | 14.96 | 13.56 | 12.37 | 11.46 | 10.77 | 10.06 | 9.40 |
| 70 | 19.12 | 16.79 | 14.94 | 13.54 | 12.35 | 11.44 | 10.75 | 10.04 | 9.38 |
| 80 | 19.11 | 16.78 | 14.93 | 13.53 | 12.34 | 11.43 | 10.74 | 10.03 | 9.38 |
| 90 | 19.09 | 16.76 | 14.91 | 13.52 | 12.33 | 11.42 | 10.74 | 10.03 | 9.37 |
| 100 | 19.07 | 16.75 | 14.90 | 13.51 | 12.32 | 11.41 | 10.73 | 10.02 | 9.36 |
| Infinite number | 18.96 | 16.65 | 14.81 | 13.43 | 12.25 | 11.34 | 10.66 | 9.96 | 9.31 |

TABLE XXI.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE LEAF SIGHT ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND WITH CENTER OF IMPACT MISPLACED BY USING EXACT ELEVATION.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|------|------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1..... | 5.60 | 4.93 | 4.23 | 3.68 | 3.17 | 2.68 | 2.30 | 1.92 | 1.68 | 1.42 |
| 2..... | 9.62 | 8.19 | 6.95 | 6.19 | 5.49 | 4.76 | 4.12 | 3.60 | 3.10 | 2.68 |
| 3..... | 8.84 | 8.36 | 7.59 | 6.98 | 6.38 | 5.70 | 5.10 | 4.55 | 4.01 | 3.56 |
| 4..... | 8.47 | 8.09 | 7.44 | 6.97 | 6.45 | 5.89 | 5.39 | 4.91 | 4.45 | 4.02 |
| 5..... | 8.20 | 7.83 | 7.20 | 6.75 | 6.32 | 5.83 | 5.41 | 4.97 | 4.56 | 4.19 |
| 6..... | 8.02 | 7.66 | 7.05 | 6.60 | 6.18 | 5.71 | 5.29 | 4.93 | 4.57 | 4.21 |
| 7..... | 7.90 | 7.54 | 6.94 | 6.50 | 6.09 | 5.62 | 5.21 | 4.86 | 4.50 | 4.20 |
| 8..... | 7.81 | 7.46 | 6.86 | 6.43 | 6.02 | 5.56 | 5.15 | 4.80 | 4.45 | 4.15 |
| 9..... | 7.74 | 7.39 | 6.80 | 6.37 | 5.97 | 5.51 | 5.11 | 4.76 | 4.41 | 4.11 |
| 10..... | 7.69 | 7.34 | 6.76 | 6.33 | 5.93 | 5.47 | 5.07 | 4.73 | 4.38 | 4.09 |
| 11..... | 7.65 | 7.30 | 6.72 | 6.29 | 5.89 | 5.44 | 5.04 | 4.70 | 4.35 | 4.06 |
| 12..... | 7.61 | 7.27 | 6.69 | 6.26 | 5.87 | 5.42 | 5.02 | 4.68 | 4.33 | 4.04 |
| 13..... | 7.58 | 7.24 | 6.66 | 6.24 | 5.85 | 5.40 | 5.00 | 4.66 | 4.32 | 4.03 |
| 14..... | 7.56 | 7.22 | 6.64 | 6.22 | 5.83 | 5.38 | 4.99 | 4.64 | 4.30 | 4.01 |
| 15..... | 7.54 | 7.20 | 6.62 | 6.20 | 5.81 | 5.36 | 4.97 | 4.63 | 4.29 | 4.00 |
| 16..... | 7.52 | 7.18 | 6.60 | 6.19 | 5.79 | 5.35 | 4.96 | 4.62 | 4.28 | 3.99 |
| 17..... | 7.50 | 7.16 | 6.59 | 6.17 | 5.78 | 5.34 | 4.95 | 4.61 | 4.27 | 3.98 |
| 18..... | 7.49 | 7.15 | 6.58 | 6.16 | 5.77 | 5.33 | 4.94 | 4.60 | 4.26 | 3.98 |
| 19..... | 7.47 | 7.14 | 6.57 | 6.15 | 5.76 | 5.32 | 4.93 | 4.59 | 4.26 | 3.97 |
| 20..... | 7.46 | 7.13 | 6.56 | 6.14 | 5.75 | 5.31 | 4.92 | 4.59 | 4.25 | 3.96 |
| 21..... | 7.45 | 7.11 | 6.55 | 6.13 | 5.74 | 5.30 | 4.92 | 4.58 | 4.24 | 3.96 |
| 22..... | 7.44 | 7.11 | 6.54 | 6.12 | 5.74 | 5.30 | 4.91 | 4.57 | 4.24 | 3.95 |
| 23..... | 7.43 | 7.10 | 6.53 | 6.11 | 5.73 | 5.29 | 4.90 | 4.57 | 4.23 | 3.95 |
| 24..... | 7.42 | 7.09 | 6.52 | 6.11 | 5.72 | 5.28 | 5.90 | 4.56 | 4.23 | 3.94 |
| 25..... | 7.42 | 7.08 | 6.51 | 6.10 | 5.72 | 5.28 | 4.89 | 4.56 | 4.22 | 3.94 |
| 26..... | 7.41 | 7.08 | 6.51 | 6.10 | 5.71 | 5.27 | 4.89 | 4.55 | 4.22 | 3.94 |
| 27..... | 7.41 | 7.07 | 6.51 | 6.10 | 5.71 | 5.27 | 4.89 | 4.55 | 4.22 | 3.94 |
| 28..... | 7.40 | 7.06 | 6.50 | 6.09 | 5.70 | 5.27 | 4.88 | 4.55 | 4.21 | 3.93 |
| 29..... | 7.39 | 7.06 | 6.49 | 6.08 | 5.70 | 5.26 | 4.88 | 4.54 | 4.21 | 3.93 |
| 30..... | 7.39 | 7.05 | 6.49 | 6.08 | 5.69 | 5.26 | 4.87 | 4.54 | 4.21 | 3.92 |
| 31..... | 7.38 | 7.05 | 6.48 | 6.07 | 5.69 | 5.25 | 4.87 | 4.54 | 4.20 | 3.92 |
| 32..... | 7.38 | 7.05 | 6.48 | 6.07 | 5.69 | 5.25 | 4.87 | 4.53 | 4.20 | 3.92 |
| 33..... | 7.37 | 7.04 | 6.48 | 6.07 | 5.68 | 5.25 | 4.86 | 4.53 | 4.20 | 3.92 |
| 34..... | 7.37 | 7.04 | 6.47 | 6.06 | 5.68 | 5.25 | 4.86 | 4.53 | 4.20 | 3.92 |
| 35..... | 7.37 | 7.03 | 6.47 | 6.06 | 5.68 | 5.24 | 4.86 | 4.53 | 4.20 | 3.91 |
| 36..... | 7.36 | 7.03 | 6.47 | 6.06 | 5.68 | 5.24 | 4.86 | 4.53 | 4.19 | 3.91 |
| 37..... | 7.36 | 7.03 | 6.46 | 6.06 | 5.67 | 5.24 | 4.85 | 4.52 | 4.19 | 3.91 |
| 38..... | 7.36 | 7.02 | 6.46 | 6.05 | 5.67 | 5.24 | 4.85 | 4.52 | 4.19 | 3.91 |
| 39..... | 7.35 | 7.02 | 6.46 | 6.05 | 5.67 | 5.23 | 4.85 | 4.52 | 4.19 | 3.91 |
| 40..... | 7.35 | 7.02 | 6.46 | 6.05 | 5.67 | 5.23 | 4.85 | 4.52 | 4.19 | 3.90 |
| 50..... | 7.33 | 7.00 | 6.44 | 6.03 | 5.65 | 5.22 | 4.84 | 4.50 | 4.17 | 3.89 |
| 60..... | 7.31 | 6.99 | 6.43 | 6.02 | 5.64 | 5.21 | 4.83 | 4.50 | 4.17 | 3.89 |
| 70..... | 7.30 | 6.97 | 6.42 | 6.01 | 5.63 | 5.20 | 4.82 | 4.49 | 4.16 | 3.88 |
| 80..... | 7.30 | 6.97 | 6.41 | 6.01 | 5.63 | 5.19 | 4.81 | 4.49 | 4.16 | 3.88 |
| 90..... | 7.29 | 6.96 | 6.41 | 6.00 | 5.62 | 5.19 | 4.81 | 4.48 | 4.15 | 3.87 |
| 100..... | 7.29 | 6.96 | 6.40 | 6.00 | 5.62 | 5.19 | 4.81 | 4.48 | 4.15 | 3.87 |
| Infinite number.. | 7.24 | 6.92 | 6.36 | 5.96 | 5.58 | 5.16 | 4.78 | 4.45 | 4.12 | 3.85 |

TABLE XXII.

PERCENTAGE OF HITS TO BE EXPECTED FROM AVERAGE SHOTS WITH THE LEAF SIGHT
ON LINES OF KNEELING FIGURES WITH AN INTERVAL OF 1 YARD EDGE TO EDGE AND
WITH CENTER OF IMPACT AT CENTER OF TARGET.

| Number of targets. | Range (in yards). | | | | | | | | | |
|--------------------|-------------------|-------|-------|------|------|------|------|------|------|-------|
| | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1,000 |
| 1 | 7.69 | 6.63 | 5.82 | 5.03 | 4.34 | 3.71 | 3.26 | 2.76 | 2.44 | 2.07 |
| 2 | 11.83 | 10.63 | 9.56 | 8.46 | 7.52 | 6.59 | 5.83 | 5.17 | 4.50 | 3.91 |
| 3 | 12.15 | 11.25 | 10.44 | 9.54 | 8.74 | 7.90 | 7.22 | 6.54 | 5.83 | 5.19 |
| 4 | 11.65 | 10.89 | 10.24 | 9.53 | 8.83 | 8.17 | 7.62 | 7.05 | 6.46 | 5.86 |
| 5 | 11.27 | 10.53 | 9.90 | 9.22 | 8.65 | 8.08 | 7.66 | 7.13 | 6.62 | 6.11 |
| 6 | 11.03 | 10.30 | 9.69 | 9.02 | 8.47 | 7.91 | 7.49 | 7.07 | 6.63 | 6.14 |
| 7 | 10.86 | 10.15 | 9.55 | 8.89 | 8.34 | 7.79 | 7.38 | 6.97 | 6.53 | 6.12 |
| 8 | 10.74 | 10.03 | 9.44 | 8.79 | 8.24 | 7.70 | 7.30 | 6.89 | 6.45 | 6.05 |
| 9 | 10.65 | 9.95 | 9.36 | 8.71 | 8.17 | 7.64 | 7.23 | 6.83 | 6.40 | 6.00 |
| 10 | 10.57 | 9.88 | 9.29 | 8.65 | 8.12 | 7.58 | 7.18 | 6.78 | 6.35 | 5.95 |
| 11 | 10.51 | 9.82 | 9.24 | 8.60 | 8.07 | 7.54 | 7.14 | 6.74 | 6.32 | 5.92 |
| 12 | 10.47 | 9.78 | 9.20 | 8.56 | 8.03 | 7.51 | 7.11 | 6.71 | 6.29 | 5.89 |
| 13 | 10.43 | 9.74 | 9.16 | 8.53 | 8.00 | 7.48 | 7.08 | 6.69 | 6.27 | 5.87 |
| 14 | 10.39 | 9.71 | 9.13 | 8.50 | 7.98 | 7.45 | 7.06 | 6.66 | 6.25 | 5.85 |
| 15 | 10.36 | 9.68 | 9.11 | 8.48 | 7.96 | 7.43 | 7.04 | 6.65 | 6.23 | 5.84 |
| 16 | 10.33 | 9.66 | 9.08 | 8.46 | 7.93 | 7.41 | 7.02 | 6.63 | 6.21 | 5.82 |
| 17 | 10.31 | 9.63 | 9.06 | 8.44 | 7.92 | 7.40 | 7.00 | 6.61 | 6.20 | 5.81 |
| 18 | 10.29 | 9.62 | 9.04 | 8.42 | 7.90 | 7.38 | 6.99 | 6.60 | 6.19 | 5.80 |
| 19 | 10.28 | 9.60 | 9.03 | 8.41 | 7.89 | 7.37 | 6.98 | 6.59 | 6.18 | 5.79 |
| 20 | 10.26 | 9.59 | 9.02 | 8.39 | 7.88 | 7.36 | 6.97 | 6.58 | 6.17 | 5.78 |
| 21 | 10.24 | 9.57 | 9.00 | 8.38 | 7.86 | 7.35 | 6.96 | 6.57 | 6.16 | 5.77 |
| 22 | 10.23 | 9.56 | 8.99 | 8.37 | 7.86 | 7.34 | 6.95 | 6.56 | 6.15 | 5.76 |
| 23 | 10.22 | 9.55 | 8.98 | 8.36 | 7.84 | 7.33 | 6.94 | 6.55 | 6.14 | 5.75 |
| 24 | 10.21 | 9.54 | 8.97 | 8.35 | 7.84 | 7.32 | 6.93 | 6.55 | 6.14 | 5.75 |
| 25 | 10.20 | 9.53 | 8.96 | 8.34 | 7.83 | 7.31 | 6.93 | 6.54 | 6.13 | 5.74 |
| 26 | 10.19 | 9.52 | 8.95 | 8.34 | 7.82 | 7.31 | 6.92 | 6.54 | 6.12 | 5.74 |
| 27 | 10.19 | 9.52 | 8.95 | 8.33 | 7.82 | 7.30 | 6.92 | 6.53 | 6.12 | 5.74 |
| 28 | 10.17 | 9.51 | 8.94 | 8.32 | 7.81 | 7.30 | 6.91 | 6.53 | 6.11 | 5.73 |
| 29 | 10.17 | 9.50 | 8.93 | 8.32 | 7.80 | 7.29 | 6.91 | 6.52 | 6.11 | 5.72 |
| 30 | 10.16 | 9.49 | 8.93 | 8.31 | 7.80 | 7.28 | 6.90 | 6.52 | 6.10 | 5.72 |
| 31 | 10.15 | 9.48 | 8.92 | 8.30 | 7.79 | 7.28 | 6.89 | 6.51 | 6.10 | 5.72 |
| 32 | 10.15 | 9.48 | 8.92 | 8.30 | 7.79 | 7.28 | 6.89 | 6.51 | 6.10 | 5.71 |
| 33 | 10.14 | 9.47 | 8.91 | 8.29 | 7.78 | 7.27 | 6.89 | 6.50 | 6.09 | 5.71 |
| 34 | 10.13 | 9.47 | 8.91 | 8.29 | 7.78 | 7.27 | 6.88 | 6.50 | 6.09 | 5.71 |
| 35 | 10.13 | 9.46 | 8.90 | 8.29 | 7.78 | 7.26 | 6.88 | 6.50 | 6.09 | 5.70 |
| 36 | 10.13 | 9.46 | 8.90 | 8.28 | 7.77 | 7.26 | 6.88 | 6.49 | 6.09 | 5.70 |
| 37 | 10.12 | 9.45 | 8.89 | 8.28 | 7.77 | 7.26 | 6.87 | 6.49 | 6.08 | 5.70 |
| 38 | 10.11 | 9.45 | 8.89 | 8.27 | 7.76 | 7.25 | 6.87 | 6.49 | 6.08 | 5.70 |
| 39 | 10.11 | 9.45 | 8.88 | 8.27 | 7.76 | 7.25 | 6.87 | 6.48 | 6.08 | 5.69 |
| 40 | 10.11 | 9.44 | 8.88 | 8.27 | 7.76 | 7.25 | 6.86 | 6.48 | 6.07 | 5.69 |
| 50 | 10.08 | 9.42 | 8.86 | 8.25 | 7.74 | 7.23 | 6.85 | 6.46 | 6.06 | 5.68 |
| 60 | 10.06 | 9.40 | 8.84 | 8.23 | 7.72 | 7.21 | 6.83 | 6.45 | 6.05 | 5.66 |
| 70 | 10.04 | 9.38 | 8.83 | 8.22 | 7.71 | 7.20 | 6.82 | 6.44 | 6.04 | 5.66 |
| 80 | 10.03 | 9.38 | 8.82 | 8.21 | 7.70 | 7.20 | 6.82 | 6.44 | 6.03 | 5.65 |
| 90 | 10.03 | 9.37 | 8.81 | 8.20 | 7.70 | 7.19 | 6.81 | 6.43 | 6.03 | 5.65 |
| 100 | 10.02 | 9.36 | 8.80 | 8.20 | 7.69 | 7.19 | 6.81 | 6.43 | 6.02 | 5.64 |
| Infinite number.. | 9.96 | 9.31 | 8.75 | 8.15 | 7.65 | 7.14 | 6.77 | 6.39 | 5.99 | 5.61 |

**EXTRACTS FROM TABLES OF
ORGANIZATION**

**UNITED STATES ARMY
THAT PERTAIN TO INFANTRY AT WAR STRENGTH.**

1917

War Department,
Washington, May 3, 1917.

The following Tables of Organization, approved by the Secretary of War, include the typical Infantry and Cavalry divisions authorized under the national defense act approved June 3, 1916, with the detailed tables of the component units. Departures from the prescribed organization will be authorized by the War Department only.

The bases on which the tables have been prepared are, as regards supply, the same as those prescribed in Tables of Organization, 1914. Rifle ammunition with troops and combat trains has been fixed at 220 rounds per rifle for all rifles in the division, with an equal amount in the divisional ammunition train. The machine-gun ammunition with troops is duplicated in the ammunition train.

The bases for the artillery-ammunition supply are 464 rounds per 3-inch gun and 432 rounds per 3.8-inch howitzer with the divisional artillery.

Alternative animal and motor drawn transport is provided for the divisional trains, and these will be organized according to the special circumstances in each case.

The allotment of personnel and transport from Headquarters and Supply companies for detached organizations is shown in *italics* in the corresponding columns, and these allotments will always be made when an organization is detached.

The letter *h* placed at the upper right hand of any number in the tables indicates "mounted on a horse"; if the letter is preceded by a numeral, the latter indicates the number of men of that grade who are so mounted. In like manner, the letter *m* indicates "mounted on a mule."

These tables will be used as a basis for the equipment manuals of the several arms, and the latter will be made to conform thereto.

BY ORDER OF THE SECRETARY OF WAR:

H. L. SCOTT,
Major General, Chief of Staff.

Official:

H. P. McCAIN,
The Adjutant General.

EXTRACTS FROM TABLES OF ORGANIZATION

TABLE 1.—Headquarters of a brigade.
INFANTRY, CAVALRY, OR FIELD ARTILLERY.
MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---------------------------|------------------|------------------|----------------|--------------------------|--------|---|
| Units. | Commander. | Adjutant. | Aids. | Headquarters detachment. | Total. | Remarks. |
| Brigadier general..... | 1 ^a | | | | 1 | |
| Major..... | | a 1 ^b | | | 1 | |
| Lieutenant..... | | | 2 ^b | | 2 | a From adjutant general's department. |
| Total commissioned..... | 1 | 1 | 2 | | 4 | |
| Field clerk..... | | | | (d1) | (1) | b Orderly to commander. |
| Sergeant major..... | c 1 ^b | | | | 1 | |
| Sergeant..... | | | | b1 ^b | 1 | |
| Wagoner..... | | | | 2 | 2 | |
| Cook..... | | | | 1 | 1 | |
| Private, first class..... | | | | c10 ^b | 10 | c 6 on motorcycles. |
| Total enlisted..... | 1 | | | 14 | 15 | |
| Aggregate..... | 2 | 1 | 2 | 14 | 19 | d May be included in lieu of sergeant major. Not totaled. |
| Field train, wagons..... | | | | 2 | 2 | |
| Motorcycles..... | | | | 6 | 6 | |
| Horses, riding..... | 3 | 2 | 2 | 5 | 12 | |
| Mules, draft..... | | | | 8 | 8 | |
| Rifles..... | | | | 13 | 13 | |
| Pistols..... | 2 | 1 | 2 | 1 | 6 | e Clerk at brigade headquarters. |
| Net length, yards..... | | | | | 80 | |

TABLE 2.—*Infantry brigade.*

MAXIMUM STRENGTH.

| 1 | 2 | Battalion. | | | | Regiment. | | | | | | | | Brigade. | | | | Remarks. | |
|------------------|-----------------------------|---------------|--------------|--------|---------------|-----------------------|------------------------|-----------------|---------------|--------|----------------------------------|------------|---------------|--------------|--------|----------------------------------|------------|----------|--|
| | Company in battalion. | Headquarters. | 4 companies. | Total. | Headquarters. | Headquarters company. | Machine - gun company. | Supply company. | 3 battalions. | Total. | Medical Department and Chaplain. | Aggregate. | Headquarters. | 3 regiments. | Total. | Medical Department and Chaplain. | Aggregate. | | |
| Units. | Brigadier general. | | | | | | | | | | | | | | | | | | |
| | Colonel. | | | | | | | | | | | | | | | | | | |
| | Lieutenant colonel. | | | | | | | | | | | | | | | | | | |
| | Major. | | | | | | | | | | | | | | | | | | |
| | Captain. | | | | | | | | | | | | | | | | | | |
| | First Lieutenant. | | | | | | | | | | | | | | | | | | |
| | Second Lieutenant. | | | | | | | | | | | | | | | | | | |
| | Medical Department. | | | | | | | | | | | | | | | | | | |
| | Chaplain. | | | | | | | | | | | | | | | | | | |
| | Total commissioned. | | | | | | | | | | | | | | | | | | |
| | Field clerk. | | | | | | | | | | | | | | | | | | |
| | Regimental sergeant major. | | | | | | | | | | | | | | | | | | |
| | Regimental supply sergeant. | | | | | | | | | | | | | | | | | | |
| | Battalion sergeant major. | | | | | | | | | | | | | | | | | | |
| | First sergeant. | | | | | | | | | | | | | | | | | | |
| Color sergeant. | | | | | | | | | | | | | | | | | | | |
| Music sergeant. | | | | | | | | | | | | | | | | | | | |
| Supply sergeant. | | | | | | | | | | | | | | | | | | | |
| Stable sergeant. | | | | | | | | | | | | | | | | | | | |
| Sergeant. | | | | | | | | | | | | | | | | | | | |
| Corporal. | | | | | | | | | | | | | | | | | | | |
| Horseholder. | | | | | | | | | | | | | | | | | | | |
| Mechanic. | | | | | | | | | | | | | | | | | | | |
| Saddler. | | | | | | | | | | | | | | | | | | | |
| Wagoner. | | | | | | | | | | | | | | | | | | | |
| Cook. | | | | | | | | | | | | | | | | | | | |
| Bugler. | | | | | | | | | | | | | | | | | | | |

• From headquarters company. For regular duty with battalion and accompany it when detached. Not totaled, but totaled in headquarters company.

^a From headquarters company. For regular duty with battalion and attached. Not totaled, but totaled in headquarters company.

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1973

| | | | | | | | | | | | | | | | | | |
|--|------|-----|-----|-----|-----|-----|-----|-------|-------|----|-------|----|-------|-------|-----|-------|-------|
| Private, first class..... | 28 | 112 | 112 | 112 | 48 | 12 | 37 | 1,800 | 1,969 | 33 | 2,002 | 15 | 5,907 | 5,922 | 99 | 6,021 | 1,066 |
| Private..... | 87 | 345 | 348 | 348 | 128 | 36 | 39 | 1,044 | 1,062 | 33 | 1,992 | 10 | 3,076 | 3,076 | 88 | 3,276 | 3,276 |
| Band (all grades)..... | | | | | 28 | | | | 28 | 33 | | | | 84 | 99 | 99 | 99 |
| Medical department..... | | | | | | | | | | | | | | | | | |
| Total enlisted..... | 150 | 600 | 600 | 600 | 58 | 74 | 37 | 1,800 | 1,969 | 33 | 2,002 | 15 | 5,907 | 5,922 | 99 | 6,021 | 1,066 |
| Aggregate..... | 153 | 612 | 614 | 614 | 59 | 78 | 39 | 1,842 | 2,020 | 38 | 2,058 | 19 | 6,060 | 6,079 | 114 | 6,193 | 1,066 |
| Combat train..... | | | | | | | | | | | | | | | | | |
| Field train, ration..... | b 3 | | | | | | | | 71 | | 11 | | 33 | 33 | | 33 | 33 |
| Field train, baggage..... | b 3 | | | | | | | | 11 | | 11 | | 33 | 33 | | 33 | 33 |
| Field train, baggage..... | b 1 | | | | | | | | 5 | | 5 | | 15 | 17 | | 17 | 17 |
| Total wagons..... | | | | | | | 27 | | 27 | | 27 | 2 | 81 | 83 | | 83 | 83 |
| Motorcycles..... | | | | | | | | | | | | 6 | | 6 | | 6 | 6 |
| Horses, riding..... | 3 | | 3 | 4 | 26 | 9 | 7 | 9 | 55 | 14 | 69 | 12 | 165 | 177 | 42 | 219 | 18 |
| Mules, riding..... | | | | | | 2 | 4 | | 6 | | 6 | | 18 | 18 | | 18 | 18 |
| Mules, pack..... | | | | | | 24 | | | 24 | 1 | 25 | | 72 | 72 | 3 | 75 | 75 |
| Mules, draft..... | b 28 | | | | | 112 | 112 | | 112 | | 112 | 8 | 336 | 344 | | 344 | 344 |
| Total mules..... | | | | | | 26 | 116 | | 142 | 1 | 143 | 8 | 426 | 434 | 3 | 437 | 437 |
| Machine guns..... | | | | | | 6 | | | 6 | | 6 | | 18 | 18 | | 18 | 18 |
| Rifles..... | 147 | 588 | 588 | 588 | 28 | 6 | 33 | 1,764 | 1,820 | | 1,820 | 13 | 5,460 | 5,473 | | 5,473 | 5,473 |
| Pistols..... | 6 | 24 | 26 | 26 | 36 | 78 | 6 | 78 | 200 | | 200 | 6 | 600 | 606 | | 606 | 606 |
| Net length in column of squad, yards..... | 51 | 232 | 232 | 232 | | | | | 879 | | | | | 2,712 | | 2,712 | 2,712 |
| + Field train..... | | 268 | 268 | 268 | | | | | 1,011 | | | | | 3,108 | | 3,108 | 3,108 |
| + Field train..... | | | | | | | | | 1,203 | | | | | 3,708 | | 3,708 | 3,708 |

b From supply company.
Will accompany battalion
when detached. Not
totaled except in supply
company.

c From supply company.
Not totaled except in
supply company.

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1975

| | 2 | 8 | 8 | 2 | 2 | 2 ^a | 24 | 30 | 30 | 1 | 90 | 91 | 91 |
|---|-----|-----|-----|----|----|----------------|-------|-------|-----|-------|-------|-------|-------|
| Cook..... | 2 | 8 | 8 | 2 | 2 | 2 | 24 | 30 | 30 | 1 | 90 | 91 | 91 |
| Bugler..... | 2 | 8 | 8 | 2 | 2 | 2 | 24 | 30 | 30 | 1 | 90 | 91 | 91 |
| Private, first class..... | 20 | 80 | 80 | 7 | 13 | 13 | 240 | 260 | 260 | 10 | 780 | 780 | 780 |
| Private..... | 61 | 244 | 244 | 27 | 49 | 49 | 732 | 808 | 808 | 2 | 2,424 | 2,424 | 2,424 |
| Band (all grades)..... | | | | 28 | 28 | 28 | 28 | 28 | 28 | | 84 | 84 | 84 |
| Medical Department..... | | | | | | | | 33 | 33 | | | 99 | 99 |
| Total enlisted..... | 103 | 420 | 420 | 85 | 91 | 51 | 1,260 | 1,487 | 33 | 1,520 | 4,461 | 4,476 | 4,575 |
| Aggregate..... | 108 | 2 | 432 | 2 | 86 | 95 | 1,302 | 1,539 | 40 | 1,579 | 4,617 | 4,636 | 4,756 |
| Combat train..... | | | | | | 8 | 8 | 8 | 8 | | 24 | 24 | 24 |
| Field train, ration..... | | | | | | 13 | 13 | 13 | 13 | | 39 | 39 | 39 |
| Field train, baggage..... | | | | | | 16 | 16 | 16 | 16 | 2 | 48 | 50 | 50 |
| Total wagons..... | | | | | | 37 | 37 | 37 | 37 | 2 | 111 | 113 | 113 |
| Motorcycles..... | | | | | | | | | | 6 | | 6 | 6 |
| Horses, riding..... | 108 | 3 | 432 | 4 | 86 | 95 | 1,305 | 1,501 | 40 | 1,541 | 4,503 | 4,515 | 4,635 |
| Mules, riding..... | | | | | | 6 | 6 | 6 | 6 | | 18 | 18 | 18 |
| Mules, pack..... | | | | | | 24 | 27 | 27 | 27 | | 81 | 81 | 87 |
| Mules, draft..... | | | | | | 152 | 152 | 152 | 152 | 8 | 456 | 464 | 464 |
| Total mules..... | | | | | | 3 | 185 | 185 | 2 | 187 | 555 | 563 | 560 |
| Machine guns..... | | | | | | 6 | 6 | 6 | 6 | | 18 | 18 | 18 |
| Rifles..... | 103 | 412 | 412 | 53 | 6 | 51 | 1,236 | 1,340 | | 1,340 | 4,020 | 4,033 | 4,033 |
| Pistols..... | 108 | 2 | 432 | 2 | 86 | 95 | 1,302 | 1,502 | 2 | 1,504 | 4,506 | 4,512 | 4,518 |
| Net length in column of four, yards..... | 132 | | | | | | | | | | | | 6,429 |
| + Combat train..... | | | | | | | | | | | | | 6,740 |
| + Field train..... | | | | | | | | | | | | | 7,784 |

^a From supply troop. Not totaled except in supply troop.

^d For demolition outfit. From headquarters troop. Not totaled except in headquarters troop.

TABLE 6.—*Field Artillery brigade (divisional).*
TWO REGIMENTS OF 3-INCH FIELD GUNS AND ONE REGIMENT OF 2½-INCH HOWITZERS.
MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---------------------------------|-----------------|---------------|--------|---------------|--------------|--------|---------------|-----------------------|----------------|---------------|--------|----------------------------------|------------|---------------|--------------|--------|----------------------------------|------------|--|
| Units. | Battery. | | | Battalion. | | | Regiment. | | | | | | Brigade. | | | | | | Remarks. |
| | Firing battery. | Combat train. | Total. | Headquarters. | 3 batteries. | Total. | Headquarters. | Headquarters com-pany | Supply company | 2 battalions. | Total. | Medical Department and Chaplain. | Aggregate. | Headquarters. | 3 regiments. | Total. | Medical Department and Chaplain. | Aggregate. | |
| | | | | | | | | | | | | | | | | | | | |
| Brigadier general..... | 4 | 1 | 5 | 2 | 15 | 17 | 3 | 2 | 2 | 34 | 41 | 6 | 47 | 4 | 123 | 127 | 18 | 145 | * From headquarters company. For regular duty with battalion and company it when detached. Not totaled, but totaled in headquarters company. |
| Colonel..... | | | | | | | | | | | | | | | | | | 1 | |
| Lieutenant colonel..... | | | | | | | | | | | | | | | | | | 3 | |
| Major..... | | | | | | | | | | | | | | | | | | 2 | |
| Captain..... | 1 | | 1 | 1 | 3 | 4 | 1 | 1 | 1 | 2 | 11 | 2 | 11 | 1 | 3 | 3 | 2 | 7 | |
| First Lieutenant..... | 2 | | 2 | 1 | 6 | 6 | 1 | 1 | 1 | 8 | 14 | 14 | 14 | 2 | 43 | 33 | 44 | 33 | |
| Second Lieutenant..... | 1 | 1 | 2 | 2 | 6 | 6 | | | | 12 | 12 | 12 | 12 | 1 | 36 | 36 | 44 | 44 | |
| Medical Department..... | | | | | | | | | | | | 5 | 5 | | | | | 15 | |
| Chaplain..... | | | | | | | | | | | | 1 | 1 | | | | 3 | 3 | |
| Total commissioned..... | | | | | | | | | | | | | | | | | | | |
| Field clerk..... | | | | | | | | | | | | | | | | | | | |
| Regimental sergeant major..... | | | | | | | | | | | | | | | | | | | |
| Regimental supply sergeant..... | | | | | | | | 1 | | | | | | | | | | | |
| Battalion sergeant major..... | | | | | | | | | 2 | | | | | | | | | | |
| First sergeant..... | 1 | | 1 | 1 | 3 | 3 | | | | 6 | 8 | 2 | 8 | 2 | 6 | 6 | | 6 | |
| Color sergeant..... | | | | | | | | | | | | | | | | | | | |
| Mass sergeant..... | | 1 | 1 | 1 | 3 | 3 | | | | 6 | 8 | 2 | 8 | 2 | 6 | 6 | | 6 | |
| Supply sergeant..... | | 1 | 1 | 1 | 3 | 3 | | | | 6 | 8 | 2 | 8 | 2 | 6 | 6 | | 6 | |
| Stable sergeant..... | | 1 | 1 | 1 | 3 | 3 | | | | 6 | 8 | 2 | 8 | 2 | 6 | 6 | | 6 | |
| Sergeant..... | 6 | 1 | 7 | 9 | 27 | 27 | | | | 54 | 58 | 7 | 58 | 7 | 174 | 175 | 21 | 21 | |
| Corporal..... | 13 | 7 | 20 | 26 | 60 | 60 | | | | 120 | 136 | | 136 | | 408 | 408 | | 408 | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1977

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 | 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 | 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 | 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 | 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 | 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 | 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 | 196 | 197 | 198 | 199 | 200 | 201 | 202 | 203 | 204 | 205 | 206 | 207 | 208 | 209 | 210 | 211 | 212 | 213 | 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230 | 231 | 232 | 233 | 234 | 235 | 236 | 237 | 238 | 239 | 240 | 241 | 242 | 243 | 244 | 245 | 246 | 247 | 248 | 249 | 250 | 251 | 252 | 253 | 254 | 255 | 256 | 257 | 258 | 259 | 260 | 261 | 262 | 263 | 264 | 265 | 266 | 267 | 268 | 269 | 270 | 271 | 272 | 273 | 274 | 275 | 276 | 277 | 278 | 279 | 280 | 281 | 282 | 283 | 284 | 285 | 286 | 287 | 288 | 289 | 290 | 291 | 292 | 293 | 294 | 295 | 296 | 297 | 298 | 299 | 300 | 301 | 302 | 303 | 304 | 305 | 306 | 307 | 308 | 309 | 310 | 311 | 312 | 313 | 314 | 315 | 316 | 317 | 318 | 319 | 320 | 321 | 322 | 323 | 324 | 325 | 326 | 327 | 328 | 329 | 330 | 331 | 332 | 333 | 334 | 335 | 336 | 337 | 338 | 339 | 340 | 341 | 342 | 343 | 344 | 345 | 346 | 347 | 348 | 349 | 350 | 351 | 352 | 353 | 354 | 355 | 356 | 357 | 358 | 359 | 360 | 361 | 362 | 363 | 364 | 365 | 366 | 367 | 368 | 369 | 370 | 371 | 372 | 373 | 374 | 375 | 376 | 377 | 378 | 379 | 380 | 381 | 382 | 383 | 384 | 385 | 386 | 387 | 388 | 389 | 390 | 391 | 392 | 393 | 394 | 395 | 396 | 397 | 398 | 399 | 400 | 401 | 402 | 403 | 404 | 405 | 406 | 407 | 408 | 409 | 410 | 411 | 412 | 413 | 414 | 415 | 416 | 417 | 418 | 419 | 420 | 421 | 422 | 423 | 424 | 425 | 426 | 427 | 428 | 429 | 430 | 431 | 432 | 433 | 434 | 435 | 436 | 437 | 438 | 439 | 440 | 441 | 442 | 443 | 444 | 445 | 446 | 447 | 448 | 449 | 450 | 451 | 452 | 453 | 454 | 455 | 456 | 457 | 458 | 459 | 460 | 461 | 462 | 463 | 464 | 465 | 466 | 467 | 468 | 469 | 470 | 471 | 472 | 473 | 474 | 475 | 476 | 477 | 478 | 479 | 480 | 481 | 482 | 483 | 484 | 485 | 486 | 487 | 488 | 489 | 490 | 491 | 492 | 493 | 494 | 495 | 496 | 497 | 498 | 499 | 500 | 501 | 502 | 503 | 504 | 505 | 506 | 507 | 508 | 509 | 510 | 511 | 512 | 513 | 514 | 515 | 516 | 517 | 518 | 519 | 520 | 521 | 522 | 523 | 524 | 525 | 526 | 527 | 528 | 529 | 530 | 531 | 532 | 533 | 534 | 535 | 536 | 537 | 538 | 539 | 540 | 541 | 542 | 543 | 544 | 545 | 546 | 547 | 548 | 549 | 550 | 551 | 552 | 553 | 554 | 555 | 556 | 557 | 558 | 559 | 560 | 561 | 562 | 563 | 564 | 565 | 566 | 567 | 568 | 569 | 570 | 571 | 572 | 573 | 574 | 575 | 576 | 577 | 578 | 579 | 580 | 581 | 582 | 583 | 584 | 585 | 586 | 587 | 588 | 589 | 590 | 591 | 592 | 593 | 594 | 595 | 596 | 597 | 598 | 599 | 600 | 601 | 602 | 603 | 604 | 605 | 606 | 607 | 608 | 609 | 610 | 611 | 612 | 613 | 614 | 615 | 616 | 617 | 618 | 619 | 620 | 621 | 622 | 623 | 624 | 625 | 626 | 627 | 628 | 629 | 630 | 631 | 632 | 633 | 634 | 635 | 636 | 637 | 638 | 639 | 640 | 641 | 642 | 643 | 644 | 645 | 646 | 647 | 648 | 649 | 650 | 651 | 652 | 653 | 654 | 655 | 656 | 657 | 658 | 659 | 660 | 661 | 662 | 663 | 664 | 665 | 666 | 667 | 668 | 669 | 670 | 671 | 672 | 673 | 674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686 | 687 | 688 | 689 | 690 | 691 | 692 | 693 | 694 | 695 | 696 | 697 | 698 | 699 | 700 | 701 | 702 | 703 | 704 | 705 | 706 | 707 | 708 | 709 | 710 | 711 | 712 | 713 | 714 | 715 | 716 | 717 | 718 | 719 | 720 | 721 | 722 | 723 | 724 | 725 | 726 | 727 | 728 | 729 | 730 | 731 | 732 | 733 | 734 | 735 | 736 | 737 | 738 | 739 | 740 | 741 | 742 | 743 | 744 | 745 | 746 | 747 | 748 | 749 | 750 | 751 | 752 | 753 | 754 | 755 | 756 | 757 | 758 | 759 | 760 | 761 | 762 | 763 | 764 | 765 | 766 | 767 | 768 | 769 | 770 | 771 | 772 | 773 | 774 | 775 | 776 | 777 | 778 | 779 | 780 | 781 | 782 | 783 | 784 | 785 | 786 | 787 | 788 | 789 | 790 | 791 | 792 | 793 | 794 | 795 | 796 | 797 | 798 | 799 | 800 | 801 | 802 | 803 | 804 | 805 | 806 | 807 | 808 | 809 | 810 | 811 | 812 | 813 | 814 | 815 | 816 | 817 | 818 | 819 | 820 | 821 | 822 | 823 | 824 | 825 | 826 | 827 | 828 | 829 | 830 | 831 | 832 | 833 | 834 | 835 | 836 | 837 | 838 | 839 | 840 | 841 | 842 | 843 | 844 | 845 | 846 | 847 | 848 | 849 | 850 | 851 | 852 | 853 | 854 | 855 | 856 | 857 | 858 | 859 | 860 | 861 | 862 | 863 | 864 | 865 | 866 | 867 | 868 | 869 | 870 | 871 | 872 | 873 | 874 | 875 | 876 | 877 | 878 | 879 | 880 | 881 | 882 | 883 | 884 | 885 | 886 | 887 | 888 | 889 | 890 | 891 | 892 | 893 | 894 | 895 | 896 | 897 | 898 | 899 | 900 | 901 | 902 | 903 | 904 | 905 | 906 | 907 | 908 | 909 | 910 | 911 | 912 | 913 | 914 | 915 | 916 | 917 | 918 | 919 | 920 | 921 | 922 | 923 | 924 | 925 | 926 | 927 | 928 | 929 | 930 | 931 | 932 | 933 | 934 | 935 | 936 | 937 | 938 | 939 | 940 | 941 | 942 | 943 | 944 | 945 | 946 | 947 | 948 | 949 | 950 | 951 | 952 | 953 | 954 | 955 | 956 | 957 | 958 | 959 | 960 | 961 | 962 | 963 | 964 | 965 | 966 | 967 | 968 | 969 | 970 | 971 | 972 | 973 | 974 | 975 | 976 | 977 | 978 | 979 | 980 | 981 | 982 | 983 | 984 | 985 | 986 | 987 | 988 | 989 | 990 | 991 | 992 | 993 | 994 | 995 | 996 | 997 | 998 | 999 | 1000 | 1001 | 1002 | 1003 | 1004 | 1005 | 1006 | 1007 | 1008 | 1009 | 1010 | 1011 | 1012 | 1013 | 1014 | 1015 | 1016 | 1017 | 1018 | 1019 | 1020 | 1021 | 1022 | 1023 | 1024 | 1025 | 1026 | 1027 | 1028 | 1029 | 1030 | 1031 | 1032 | 1033 | 1034 | 1035 | 1036 | 1037 | 1038 | 1039 | 1040 | 1041 | 1042 | 1043 | 1044 | 1045 | 1046 | 1047 | 1048 | 1049 | 1050 | 1051 | 1052 | 1053 | 1054 | 1055 | 1056 | 1057 | 1058 | 1059 | 1060 | 1061 | 1062 | 1063 | 1064 | 1065 | 1066 | 1067 | 1068 | 1069 | 1070 | 1071 | 1072 | 1073 | 1074 | 1075 | 1076 | 1077 | 1078 | 1079 | 1080 | 1081 | 1082 | 1083 | 1084 | 1085 | 1086 | 1087 | 1088 | 1089 | 1090 | 1091 | 1092 | 1093 | 1094 | 1095 | 1096 | 1097 | 1098 | 1099 | 1100 | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119 | 1120 | 1121 | 1122 | 1123 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129 | 1130 | 1131 | 1132 | 1133 | 1134 | 1135 | 1136 | 1137 | 1138 | 1139 | 1140 | 1141 | 1142 | 1143 | 1144 | 1145 | 1146 | 1147 | 1148 | 1149 | 1150 | 1151 | 1152 | 1153 | 1154 | 1155 | 1156 | 1157 | 1158 | 1159 | 1160 | 1161 | 1162 | 1163 | 1164 | 1165 | 1166 | 1167 | 1168 | 1169 | 1170 | 1171 | 1172 | 1173 | 1174 | 1175 | 1176 | 1177 | 1178 | 1179 | 1180 | 1181 | 1182 | 1183 | 1184 | 1185 | 1186 | 1187 | 1188 | 1189 | 1190 | 1191 | 1192 | 1193 | 1194 | 1195 | 1196 | 1197 | 1198 | 1199 | 1200 | 1201 | 1202 | 1203 | 1204 | 1205 | 1206 | 1207 | 1208 | 1209 | 1210 | 1211 | 1212 | 1213 | 1214 | 1215 | 1216 | 1217 | 1218 | 1219 | 1220 | 1221 | 1222 | 1223 | 1224 | 1225 | 1226 | 1227 | 1228 | 1229 | 1230 | 1231 | 1232 | 1233 | 1234 | 1235 | 1236 | 1237 | 1238 | 1239 | 1240 | 1241 | 1242 | 1243 | 1244 | 1245 | 1246 | 1247 | 1248 | 1249 | 1250 | 1251 | 1252 | 1253 | 1254 | 1255 | 1256 | 1257 | 1258 | 1259 | 1260 | 1261 | 1262 | 1263 | 1264 | 1265 | 1266 | 1267 | 1268 | 1269 | 1270 | 1271 | 1272 | 1273 | 1274 | 1275 | 1276 | 1277 | 1278 | 1279 | 1280 | 1281 | 1282 | 1283 | 1284 | 1285 | 1286 | 1287 | 1288 | 1289 | 1290 | 1291 | 1292 | 1293 | 1294 | 1295 | 1296 | 1297 | 1298 | 1299 | 1300 | 1301 | 1302 | 1303 | 1304 | 1305 | 1306 | 1307 | 1308 | 1309 | 1310 | 1311 | 1312 | 1313 | 1314 | 1315 | 1316 | 1317 | 1318 | 1319 | 1320 | 1321 | 1322 | 1323 | 1324 | 1325 | 1326 | 1327 | 1328 | 1329 | 1330 | 1331 | 1332 | 1333 | 1334 | 1335 | 1336 | 1337 | 1338 | 1339 | 1340 | 1341 | 1342 | 1343 | 1344 | 1345 | 1346 | 1347 | 1348 | 1349 | 1350 | 1351 | 1352 | 1353 | 1354 | 1355 | 1356 | 1357 | 1358 | 1359 | 1360 | 1361 | 1362 | 1363 | 1364 | 1365 | 1366 | 1367 | 1368 | 1369 | 1370 | 1371 | 1372 | 1373 | 1374 | 1375 | 1376 | 1377 | 1378 | 1379 | 1380 | 1381 | 1382 | 1383 | 1384 | 1385 | 1386 | 1387 | 1388 | 1389 | 1390 | 1391 | 1392 | 1393 | 1394 | 1395 | 1396 | 1397 | 1398 | 1399 | 1400 | 1401 | 1402 | 1403 | 1404 | 1405 | 1406 | 1407 | 1408 | 1409 | 1410 | 1411 | 1412 | 1413 | 1414 | 1415 | 1416 | 1417 | 1418 | 1419 | 1420 | 1421 | 1422 | 1423 | 1424 | 1425 | 1426 | 1427 | 1428 | 1429 | 1430 | 1431 | 1432 | 1433 | 1434 | 1435 | 1436 | 1437 | 1438 | 1439 | 1440 | 1441 | 1442 | 1443 | 1444 | 1445 | 1446 | 1447 | 1448 | 1449 | 1450 | 1451 | 1452 | 1453 | 1454 | 1455 | 1456 | 1457 | 1458 | 1459 | 1460 | 1461 | 1462 | 1463 | 1464 | 1465 | 1466 | 1467 | 1468 | 1469 | 1470 | 1471 | 1472 | 1473 | 1474 | 1475 | 1476 | 1477 | 1478 | 1479 | 1480 | 1481 | 1482 | 1483 | 1484 | 1485 | 1486 | 1487 | 1488 | 1 |
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
|--|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|

TABLE 6.—*Field Artillery brigade (divisional).*
TWO REGIMENTS OF 3-INCH FIELD GUNS AND ONE REGIMENT OF 28-INCH HOWITZERS.
MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|--------------------------------------|-----------------|---------------|--------|---------------|--------------|--------|---------------|---------------------------|-----------------|---------------|--------|-------------------------------------|------------|---------------|--------------|--------|-------------------------------------|------------|---|
| Units. | Battery. | | | Battalion. | | | Regiment. | | | | | | | Brigade. | | | | | Remarks. |
| | Firing battery. | Combat train. | Total. | Headquarters. | 3 batteries. | Total. | Headquarters. | Headquarters com- pany | Supply company. | 2 battalions. | Total. | Medical Department and Chaplain. | Aggregate. | Headquarters. | 3 regiments. | Total. | Medical Department and Chaplain. | Aggregate. | |
| | | | | | | | | | | | | | | | | | | | |
| Brigadier general..... | | | | | | | 1 | | | | 1 | | 1 | 1 | | 1 | | 1 | From headquarters company. For regular duty with bat- talion and se- company it when detached. Not totaled, but totalled in head- quarters com- pany. |
| Colonel..... | | | | | | | 1 | | | | 1 | | 1 | | | 1 | | 1 | |
| Lieutenant colonel..... | | | | | | | 1 | | | | 1 | | 1 | | | 1 | | 1 | |
| Major..... | | | | | | | 1 | | | 2 | 1 | | 2 | 1 | | 3 | | 3 | |
| Captain..... | 1 | | 1 | 1 | 3 | 4 | 1 | | | 3 | 11 | | 11 | | 33 | 33 | | 33 | |
| First Lieutenant..... | 2 | | 2 | | 6 | 8 | 1 | 1 | 1 | 12 | 14 | | 14 | 2 | 42 | 44 | | 44 | |
| Second Lieutenant..... | 1 | 1 | 2 | | 6 | 8 | | | | 12 | 12 | | 12 | 1 | 36 | 36 | | 36 | |
| Medical Department..... | | | | | | | | | | | | 5 | 5 | | | | 15 | 15 | |
| Chaplain..... | | | | | | | | | | | | 1 | 1 | | | | 3 | 3 | |
| Total commis- sioned..... | 4 | 1 | 5 | 2 | 15 | 17 | 3 | 2 | 2 | 34 | 41 | 6 | 47 | 4 | 123 | 127 | 18 | 145 | |
| Field clerk..... | | | | | | | | | | | | | | 1 | | 1 | | 1 | |
| Regimental sergeant major..... | | | | | | | | | | | | | | | | | | | |
| Regimental supply ser- geant..... | | | | b / | | | | 1 | | | 1 | | 1 | 1 | 3 | 4 | | 4 | |
| Battalion sergeant ma- jor..... | | | | a / | | | | | 2 | | | | 2 | | 6 | 6 | | 6 | |
| First sergeant..... | 1 | | 1 | | 3 | 3 | | | | | 2 | | 2 | | 6 | 6 | | 6 | |
| Color sergeant..... | | | | | | | | 2 | 1 | 6 | 8 | 8 | 8 | | 24 | 24 | | 24 | |
| Music sergeant..... | | 1 | 1 | | 3 | 3 | | 2 | 2 | 2 | 2 | 2 | 2 | | 6 | 6 | | 6 | |
| Supply sergeant..... | | 1 | 1 | | 3 | 3 | | 1 | 1 | 6 | 8 | 8 | 8 | | 24 | 24 | | 24 | |
| Stable sergeant..... | | 1 | 1 | | 3 | 3 | | 1 | 1 | 6 | 7 | 7 | 7 | | 21 | 21 | | 21 | |
| Sergeant..... | 6 | 3 | 9 | a / | 27 | 37 | | 4 | | 64 | 55 | 7 | 53 | 1 | 174 | 175 | | 175 | |
| Corporal..... | 13 | 7 | 20 | a / | 60 | 60 | | 14 | 2 | 120 | 135 | | 135 | | 408 | 408 | | 408 | |

TABLE 16.—*Regiment of engineers.*

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|------------------------------------|-----------------------|----------------|--------------|--------|----------------|---------------|--------|----------------------------------|------------|---|
| Units. | Company in battalion. | Battalion. | | | Regiment. | | | | | Remarks. |
| | | Headquarters. | 3 companies. | Total. | Headquarters. | 2 battalions. | Total. | Medical Department and Chaplain. | Aggregate. | |
| Colonel..... | | | | | 1 ^b | | 1 | | 1 | |
| Lieutenant colonel..... | | | | | 1 ^b | | 1 | | 1 | |
| Major..... | | 1 ^b | | 1 | | 2 | 2 | | 2 | |
| Captain..... | 1 ^b | 1 ^b | 3 | 4 | 3 ^b | 8 | 11 | | 11 | |
| First Lieutenant..... | 2 ^b | | 6 | 6 | | 12 | 12 | | 12 | |
| Second Lieutenant..... | 1 ^b | | 3 | 3 | | 6 | 6 | | 6 | |
| Medical Department..... | | | | | | | | 3 ^b | 3 | |
| Chaplain..... | | | | | | | | 1 ^b | 1 | |
| Total commissioned..... | 4 | 2 | 12 | 14 | 5 | 28 | 33 | 4 | 37 | |
| Master engineer, senior grade..... | | | | | 4 ^b | | 4 | | 4 | * 2 wagons of small-arms ammunition per battalion march ordinarily with the divisional engineer train. |
| Master engineer, junior grade..... | | 2 ^b | | 6 | | 12 | 12 | | 12 | |
| Regimental sergeant major..... | | | | | 1 ^b | | 1 | | 1 | |
| Regimental supply sergeant..... | | | | | 2 ^b | | 2 | | 2 | |
| Battalion sergeant major..... | | 1 ^b | | 1 | | 2 | 2 | | 2 | |
| First sergeant..... | 1 | | 3 | 3 | | 6 | 6 | | 6 | |
| Sergeant, first class..... | 3 ^b | | 9 | 9 | | 18 | 18 | | 18 | |
| Sergeant bugler..... | | | | | 1 ^b | | 1 | | 1 | |
| Color sergeant..... | | | | | 2 | | 2 | | 2 | |
| Supply sergeant..... | 1 | | 3 | 3 | | 6 | 6 | | 6 | |
| Mess sergeant..... | 1 | | 3 | 3 | | 6 | 6 | | 6 | |
| Stable sergeant..... | 1 ^b | | 3 | 3 | | 6 | 6 | | 6 | |
| Sergeant..... | 2 ^b | | 24 | 24 | 2 ^b | 48 | 50 | | 50 | |
| Corporal..... | 18 ^a | | 54 | 54 | | 108 | 108 | | 108 | |
| Horseshoer..... | 1 ^b | | 3 | 3 | | 6 | 6 | | 6 | |
| Saddler..... | 1 | | 3 | 3 | | 6 | 6 | | 6 | |
| Wagoner..... | 1 ^b | 7 | 6 | 27 | | 27 | 27 | | 27 | * Assigned to companies and battalions from headquarters detachments and accompany them when detached. Totalled in headquarters of the regiment. Combat wagons are furnished by the Engineer Department and are permanently assigned to companies and battalions. |
| Cook..... | 3 ^b | | 9 | 9 | 1 | 18 | 19 | | 19 | |
| Bugler..... | 2 ^b | | 6 | 6 | | 12 | 12 | | 12 | |
| Private, first class..... | 31 ^a | | 93 | 93 | | 186 | 186 | | 186 | |
| Private..... | 93 ^b | | 279 | 279 | | 558 | 558 | | 558 | |
| Medical department..... | | | | | | | | 23 ^a | 23 | |
| Total enlisted..... | 164 | 7 | 492 | 499 | 40 | 998 | 1,038 | 23 | 1,061 | |
| Aggregate..... | 168 | 9 | 504 | 513 | 45 | 1,026 | 1,071 | 27 | 1,098 | |
| Combat train..... | 2 ^b | 1 ^b | 6 | 7 | 16 | | 16 | | 16 | |
| Field train, ration..... | 1 ^b | 1 ^b | | 1 | 8 | | 8 | | 8 | |
| Field train, baggage..... | 1 ^b | 1 ^b | | 1 | 3 | | 3 | | 3 | |
| Total wagons..... | | | | | 27 | | 27 | | 27 | |
| Horses, riding..... | 40 | 10 | 120 | 130 | 17 | 280 | 277 | 15 | 292 | |
| Mules, pack..... | 8 | | 24 | 24 | | 48 | 48 | 1 | 49 | |
| Mules, draft..... | 16 | 28 | 24 | 68 | 112 | | 112 | | 112 | |
| Total mules..... | 8 | | 24 | 24 | 112 | 48 | 160 | 1 | 161 | |
| Rifles..... | 158 | | 474 | 474 | 30 | 948 | 978 | | 978 | |
| Pistols..... | 52 | 9 | 156 | 165 | 18 | 330 | 348 | | 348 | |
| Net length, yards..... | 112 | | | 361 | | | | | 816 | |
| + Combat train..... | 136 | | | 445 | | | | | 1,008 | |
| + Field train..... | 160 | | | 517 | | | | | 1,140 | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1979

TABLE 18.—*Battalion of mounted engineers.*

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|------------------------------------|-----------------------|---------------|--------------|--------|---------------------|------------|----------|
| Units. | Company in battalion. | Battalion. | | | | | Remarks. |
| | | Headquarters. | 3 companies. | Total. | Medical department. | Aggregate. | |
| Major..... | | 1 | | 1 | | 1 | |
| Captain..... | 1 | 2 | 3 | 5 | | 5 | |
| First Lieutenant..... | 2 | 1 | 3 | 7 | | 7 | |
| Second Lieutenant..... | 1 | | 3 | 3 | | 3 | |
| Medical department..... | | | | | 2 | 2 | |
| Total commissioned..... | 4 | 4 | 12 | 16 | 2 | 18 | |
| Master engineer, senior grade..... | | 2 | | 2 | | 2 | |
| Master engineer, junior grade..... | | 6 | | 6 | | 6 | |
| Battalion sergeant major..... | | 1 | | 1 | | 1 | |
| Battalion supply sergeant..... | | 1 | | 1 | | 1 | |
| First sergeant..... | 1 | | 3 | 3 | | 3 | |
| Sergeant, first class..... | 2 | | 6 | 6 | | 6 | |
| Supply sergeant..... | 1 | | 3 | 3 | | 3 | |
| Mess sergeant..... | 1 | | 3 | 3 | | 3 | |
| Stable sergeant..... | 1 | | 3 | 3 | | 3 | |
| Sergeant..... | 6 | 2 | 18 | 20 | | 20 | |
| Corporal..... | 11 | 1 | 33 | 34 | | 34 | |
| Horseshoer..... | 2 | | 6 | 6 | | 6 | |
| Saddler..... | 1 | | 3 | 3 | | 3 | |
| Wagoner..... | 4 | 12 | 12 | 12 | | 12 | |
| Cook..... | 2 | | 6 | 6 | | 6 | |
| Bugler..... | 2 | | 6 | 6 | | 6 | |
| Private, first class..... | 20 | | 60 | 60 | | 60 | |
| Private..... | 61 | | 183 | 183 | | 183 | |
| Medical department..... | | | | | 11 | 11 | |
| Total enlisted..... | 111 | 25 | 333 | 358 | 11 | 369 | |
| Aggregate..... | 115 | 29 | 345 | 374 | 13 | 387 | |
| Combat train *..... | b 1 | 5 | | 5 | | 5 | |
| Field train, ration..... | b 2 | 5 | | 5 | | 5 | |
| Field train, baggage..... | b 1 | 2 | | 2 | | 2 | |
| Total wagons..... | | 12 | | 12 | | 12 | |
| Horses, riding..... | 115 | 18 | 345 | 363 | 13 | 376 | |
| Mules, pack..... | 12 | | 36 | 36 | 1 | 37 | |
| Mules, draft..... | b 16 | 52 | | 52 | | 52 | |
| Total mules..... | 12 | 52 | 36 | 88 | 1 | 89 | |
| Rifles..... | 106 | 15 | 318 | 333 | | 333 | |
| Pistols..... | 115 | 17 | 345 | 362 | 1 | 363 | |
| Net length, yards..... | 140 | | | 460 | | 460 | |
| + Combat train..... | 132 | | | 520 | | 520 | |
| + Field train..... | | | | 604 | | 604 | |

* 2 wagons of small-arms ammunition per battalion march ordinarily with the divisional engineer train.

b Assigned to companies and battalions from headquarters detachment and accompany them when detached. Totaled in headquarters of the regiment. Combat wagons are furnished by the Engineer Department and are permanently assigned to companies and battalions.

TABLE 20.—*Field signal battalion.*

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|--------------------------------|----------------|-----------------|------------------|------------------|------------------|--------|---------------------|------------|----------|
| Units. | Headquarters. | Supply section. | Wire company. | Radio company. | Outpost company. | Total. | Medical Department. | Aggregate. | Remarks. |
| Major..... | 1 | | 1 | 1 | 1 | 3 | | 1 | |
| Captain..... | | | 1 | 1 | 1 | 3 | | 3 | |
| First Lieutenant..... | 1 | | 2 | 2 | 4 | 9 | | 9 | |
| Medical Department..... | | | | | | | 1 | 1 | |
| Total commissioned..... | 2 | | 3 | 3 | 5 | 13 | 1 | 14 | |
| Master signal electrician..... | | | 1 ^b | 1 ^b | 1 ^b | 3 | | 3 | |
| Sergeant, first class: | | | | | | | | | |
| Sergeant major..... | 1 ^b | | | | | 1 | | 1 | |
| Supply sergeant..... | | 1 ^b | | | | 1 | | 1 | |
| First sergeant..... | | | 1 ^b | 1 ^b | 1 ^b | 3 | | 3 | |
| With companies..... | | | 4 ^b | 5 ^b | 2 ^b | 11 | | 11 | |
| Sergeant: | | | | | | | | | |
| Color sergeant..... | 1 ^b | | | | | 1 | | 1 | |
| Clerk..... | 1 | | | | | 1 | | 1 | |
| With companies..... | | | 7 ^b | 9 ^b | 5 ^b | 21 | | 21 | |
| Corporals..... | | | 12 ^{ab} | 15 ^{ab} | 14 | 41 | | 41 | |
| Horseshoer..... | | | 1 | 1 | 1 | 3 | | 3 | |
| Cook..... | | | 2 | 2 | 2 | 6 | | 6 | |
| Private, first class: | | | | | | | | | |
| Orderlies..... | 4 ^b | | | | | 4 | | 4 | |
| Teamster..... | 1 | 5 | | | | 6 | | 6 | |
| With companies..... | | | 35 ^{ab} | 35 ^{ab} | 37 ^{ab} | 111 | | 111 | |
| Private..... | | | 8 ^a | 6 ^a | 12 | 26 | | 26 | |
| Medical Department..... | | | | | | | 6 ^a | 6 | |
| Total enlisted..... | 8 | 6 | 75 | 75 | 75 | 239 | 6 | 245 | |
| Aggregate..... | 10 | 6 | 78 | 78 | 80 | 252 | 7 | 259 | |
| Combat train..... | 1 | | 5 | 2 | 1 | 9 | | 9 | |
| Field train, ration..... | | 3 | | | | 3 | | 3 | |
| Field train, baggage..... | | 2 | 2 | | | 4 | | 4 | |
| Total wagons..... | 1 | 5 | 7 | 2 | 1 | 16 | | 16 | |
| Horses, riding..... | 9 | 1 | 65 | 70 | 18 | 163 | 7 | 170 | |
| Horses, draft..... | | | 12 | 4 | | 16 | | 16 | |
| Total horses..... | 9 | 1 | 77 | 74 | 18 | 179 | 7 | 186 | |
| Mules, pack..... | | | | 12 | 4 | 16 | 1 | 17 | |
| Mules, draft..... | 4 | 20 | 4 | 4 | 4 | 36 | | 36 | |
| Total mules..... | 4 | 20 | 4 | 16 | 8 | 52 | 1 | 53 | |
| Pistols..... | 10 | 5 | 78 | 78 | 80 | 251 | | 251 | |
| Net length, yards..... | | | | | | | | 276 | |
| + Combat train..... | | | | | | | | 372 | |
| + Field train..... | | | | | | | | 450 | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1981

TABLE 21.—*Aero squadron.*

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------------------------------|-----------------------|-----------------|----------------------|-------------------|--------|---------------------|------------|----------|
| Units. | Headquarters section. | Supply section. | Engineering section. | 12 aero sections. | Total. | Medical department. | Aggregate. | Remarks. |
| Major..... | 1 | | | | 1 | | 1 | |
| Captain..... | 1 | 2 | 2 | 12 | 17 | | 17 | |
| First lieutenant..... | | | | | | 1 | 1 | |
| Medical Department..... | | | | | | | | |
| Total commissioned..... | 2 | 2 | 2 | 12 | 18 | 1 | 19 | |
| Master signal electrician..... | | | 4 | | 4 | | 4 | |
| Sergeant, first class: | | | | | | | | |
| Sergeant major..... | 1 | | | | 1 | | 1 | |
| First sergeant..... | 1 | | | | 1 | | 1 | |
| Clerk..... | | 2 | | | 2 | | 2 | |
| Truckmaster..... | | 1 | | | 1 | | 1 | |
| Mechanician..... | | | 4 | 12 | 16 | | 16 | |
| Sergeant: | | | | | | | | |
| Assistant truckmaster..... | | 1 | | | 1 | | 1 | |
| Mess..... | | 1 | | | 1 | | 1 | |
| Supply..... | | 1 | | | 1 | | 1 | |
| Mechanic..... | | 1 | | | 1 | | 1 | |
| Photographer..... | 1 | | | | 1 | | 1 | |
| Chauffeur..... | 1 | | | | 1 | | 1 | |
| Mechanician..... | | | 5 | 6 | 11 | | 11 | |
| Corporal..... | 4 | 8 | 3 | 18 | 33 | | 33 | |
| Cook..... | | 6 | | | 6 | | 6 | |
| Private, first class..... | 2 | 10 | 3 | 24 | 39 | | 39 | |
| Private..... | | 6 | | 24 | 30 | | 30 | |
| Medical Department..... | | | | | | 4 | 4 | |
| Total enlisted..... | 10 | 37 | 19 | 84 | 150 | 4 | 154 | |
| Aggregate..... | 12 | 39 | 21 | 96 | 168 | 5 | 173 | |
| Motor cars..... | 1 | | | | 1 | | 1 | |
| Motor trucks..... | 1 | 8 | 2 | 12 | 23 | | 23 | |
| Trailers..... | | 8 | 4 | 12 | 24 | | 24 | |
| Repair trucks..... | | | 2 | | 2 | | 2 | |
| Motorcycles..... | 2 | 2 | 2 | | 6 | | 6 | |
| Aeroplanes..... | | | | 12 | 12 | | 12 | |
| Rifles..... | 10 | 37 | 19 | 84 | 150 | 4 | 154 | |
| Pistols..... | 12 | 39 | 21 | 96 | 168 | 5 | 173 | |
| Machine guns..... | | | | 12 | 12 | | 12 | |

TABLE 22.—*Headquarters of a division.*

INFANTRY OR CAVALRY.

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------------|----------------|----------------|---------------------|--------|--|
| Units. | Commander. | Aids. | General Staff. | Adjutant. | Inspector. | Judge advocate. | Quartermaster. | Medical Department. | Ordnance. | Signal Corps. | Headquarters troop. | Total. | Remarks. |
| Major general..... | 1 ^a | | 1 ^b | | | | | | | | | 1 | The functions of chief of artillery and chief engineer on the staff of the division commander will be performed by the commander of the divisional artillery and the commander of the engineer troops, respectively. |
| Colonel..... | | | 1 ^b | ..... | ..... | ..... | 1 ^b | 2 ^b | ..... | ..... | ..... | 1 | |
| Lieutenant colonel..... | | | 1 ^b | 1 ^b | 1 ^b | ..... | 1 ^b | 2 ^b | 1 ^b | 1 ^b | ..... | 2 | |
| Major..... | | 2 ^a | 1 ^b | ..... | ..... | ..... | 2 ^a | ..... | ..... | ..... | 1 ^b | 2 | |
| Captain..... | | 1 ^a | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 ^b | 2 | |
| First lieutenant..... | | | | | | | | | | | | 4 | |
| Second lieutenant..... | | | | | | | | | | | | 4 | <p>^a Supply duty only.</p> <p>^b Clerks at division headquarters.</p> <p>^c 2 sergeants, Q. M. C., and 1 sergeant, headquarters troop, on motorcycles.</p> <p>^d Teamsters.</p> <p>^e 6 chauffeurs; 6 motorcyclists.</p> <p>^f 31 on horses; 12 on motorcycles.</p> |
| Total commissioned..... | 1 | 3 | 3 | 2 | 1 | 1 | 8 | 3 | 1 | 1 | 3 | 27 | |
| Field clerk..... | 1 | ..... | 1 | 1 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 3 | |
| Sergeant major..... | | | | 2 ^a | 1 ^b | 1 ^b | ..... | ..... | ..... | ..... | ..... | 4 | |
| Sergeant, first class..... | | | | | | | 5 ^a | 1 ^b | ..... | 1 ^b | ..... | 7 | |
| First sergeant..... | | | | | | | | | | | 1 ^b | 1 | |
| Mess sergeant..... | | | | | | | | | | | 1 ^b | 1 | |
| Supply sergeant..... | | | | | | | | | | | 1 ^b | 1 | |
| Stables sergeant..... | | | | | | | | | | | 1 ^b | 1 | |
| Sergeant..... | | | | | | | | 5 ^a | 1 ^b | 1 ^b | ..... | 13 | |
| Corporal..... | | | | | | | | | | | | 8 | |
| Horseshoer..... | | | | | | | | | | | | 2 | |
| Mechanic..... | | | | | | | | | | | | 1 | |
| Saddler..... | | | | | | | | | | | | 1 | |
| Cook..... | | | | | | | | | | | | 2 | |
| Bugler..... | | | | | | | | | | | | 2 | |
| Private, first class..... | | | | | | | 4 ^c | 4 ^c | ..... | ..... | ..... | 33 | |
| Private..... | | | | | | | | 3 ^d | ..... | ..... | ..... | 46 | |
| Total enlisted..... | | | | 2 | 1 | 1 | 15 | 9 | 1 | 1 | 93 | 123 | |
| Aggregate..... | 2 | 3 | 4 | 5 | 2 | 2 | 23 | 12 | 2 | 2 | 96 | 153 | |
| Field train, ration..... | | | | | | | 3 | ..... | ..... | ..... | ..... | 3 | |
| Field train, baggage..... | | | | | | | 2 | ..... | ..... | ..... | ..... | 2 | |
| Total wagons..... | | | | | | | 5 | ..... | ..... | ..... | ..... | 5 | |
| Motor cars..... | | | | | | | | | | | 5 | 5 | 6 chauffeurs; 6 motorcyclists. |
| Motor trucks..... | | | | | | | | | | | 1 | 1 | |
| Motorcycles..... | | | | | | | 2 | | | | 19 | 21 | 31 on horses; 12 on motorcycles. |
| Horses, riding..... | 2 | 3 | 5 | 6 | 3 | 3 | 16 | 15 | 2 | 3 | 71 | 130 | |
| Mules, draft..... | | | | | | | 20 | ..... | ..... | ..... | ..... | 20 | |
| Rifles..... | | | | | | | 5 | ..... | ..... | ..... | 93 | 98 | |
| Pistols..... | 2 | 3 | 4 | 5 | 2 | 2 | 18 | ..... | 2 | 2 | 90 | 130 | |
| Net length in column of route, yards..... | | | | | | | | | | | | 200 | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1983

TABLE 23.—Infantry Division.

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--|---------------|----------------------|----------------------------|------------------------|--------------------------|---------------------------|------------------|-----------------|--------------------------------------|--------------------------------------|----------|
| Units. | Headquarters. | 3 infantry brigades. | 1 field artillery brigade. | 1 regiment of cavalry. | 1 regiment of engineers. | 1 field signal battalion. | 1 aero squadron. | Total division. | Aggregate division and trains—wagon. | Aggregate division and trains—motor. | Remarks. |
| Combatant..... | 24 | 471 | 127 | 52 | 33 | 13 | 18 | 738 | 768 | 778 | |
| Medical Department..... | 3 | 36 | 15 | 6 | 3 | 1 | 1 | 65 | 125 | 117 | |
| Chaplain..... | ..... | 9 | 3 | 1 | 1 | ..... | ..... | 14 | 14 | 14 | |
| Total commis- sioned..... | 27 | 516 | 145 | 59 | 37 | 14 | 19 | 817 | 907 | 909 | |
| Field clerk..... | 3 | 3 | 1 | ..... | ..... | ..... | ..... | 3 | 3 | 3 | |
| Combatant..... | 114 | 17,766 | 3,816 | 1,487 | 1,038 | 239 | 150 | 24,610 | 26,014 | 26,090 | |
| Medical Department..... | 9 | 267 | 69 | 33 | 23 | 6 | 4 | 441 | 1,332 | 1,332 | |
| Total enlisted..... | 123 | 18,063 | 3,885 | 1,520 | 1,061 | 245 | 154 | 25,051 | 27,346 | 27,422 | |
| Aggregate combat- ant..... | 138 | 18,237 | 3,943 | 1,539 | 1,071 | 252 | 168 | 25,348 | 26,782 | 26,868 | |
| Aggregate..... | 153 | 18,579 | 4,030 | 1,579 | 1,096 | 259 | 173 | 25,871 | 28,256 | 28,334 | |
| Combat train..... | ..... | 99 | ..... | 8 | 16 | 9 | ..... | 132 | 518 | 194 | |
| Field train, ration..... | 3 | 99 | 54 | 13 | 8 | 3 | ..... | 180 | 360 | 180 | |
| Field train, baggage..... | 2 | 51 | 11 | 16 | 3 | 4 | ..... | 87 | 131 | 119 | |
| Total wagons..... | 5 | 249 | 65 | 37 | 27 | 16 | ..... | 399 | 1,009 | 493 | |
| Guns (3-inch field..... | ..... | ..... | 48 | ..... | ..... | ..... | ..... | 48 | 50 | 50 | |
| 3.8-inch howitzer..... | ..... | ..... | 24 | ..... | ..... | ..... | ..... | 24 | 25 | 25 | |
| Motor cars..... | 5 | ..... | ..... | ..... | ..... | 1 | ..... | 6 | 12 | 34 | |
| Motor trucks..... | 1 | ..... | ..... | ..... | ..... | 25 | ..... | 26 | 67 | 637 | |
| Motorcycles, with side cars..... | 21 | 18 | 6 | ..... | ..... | 6 | ..... | 51 | 64 | 106 | |
| Aeroplanes..... | ..... | ..... | ..... | ..... | ..... | 12 | ..... | 12 | 12 | 12 | |
| Ambulances..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 48 | 48 | |
| Other carriages..... | ..... | ..... | 282 | ..... | ..... | 24 | ..... | 306 | 323 | ..... |  |
| Horses, riding..... | 130 | 687 | 1,233 | 1,541 | 292 | 170 | ..... | 4,053 | 4,616 | 4,525 | |
| Horses, draft..... | ..... | ..... | 2,160 | ..... | ..... | 16 | ..... | 2,176 | 2,230 | 2,188 | |
| Total horses..... | 130 | 687 | 3,393 | 1,541 | 292 | 186 | ..... | 6,229 | 6,846 | 6,713 | |
| Mules, riding..... | ..... | 54 | 12 | 6 | ..... | ..... | ..... | 72 | 224 | 72 | |
| Mules, pack..... | ..... | 225 | 6 | 29 | 49 | 17 | ..... | 326 | 837 | 337 | |
| Mules, draft..... | 20 | 1,032 | 272 | 152 | 112 | 36 | ..... | 1,624 | 4,314 | 2,178 | |
| Total mules..... | 20 | 1,311 | 290 | 187 | 161 | 53 | ..... | 2,022 | 4,875 | 2,587 | |
| Machine guns..... | ..... | 54 | ..... | 6 | ..... | 12 | ..... | 72 | 92 | 92 | |
| Rifles..... | 98 | 16,419 | 13 | 1,340 | 978 | ..... | ..... | 19,002 | 20,283 | 20,345 | |
| Pistols..... | 130 | 1,818 | 3,936 | 1,504 | 348 | 251 | 173 | 8,160 | 8,633 | 8,651 | |
| Net length in column of route, yards..... | 200 | 11,200 | 9,000 | 2,500 | 1,200 | 500 | 500 | 25,100 114.2 | 34,500 120 | 32,800 119 | |

1 Miles.

TABLE 24.—Infantry division—Trains.

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---------------|---------------------|-----------------|-------------------|-------------------|-----------------|---------------|---------------------|-----------------|-------------------|-------------------|-----------------|----------|
| Units. | Wagon. | | | | | | Motor. | | | | | | Remarks. |
| | Headquarters. | 1 ammunition train. | 1 supply train. | 1 sanitary train. | 1 engineer train. | Total. | Headquarters. | 1 ammunition train. | 1 supply train. | 1 sanitary train. | 1 engineer train. | Total. | |
| Combatant..... | 10 | 12 | 4 | ..... | 4 | 30 | 10 | 18 | 8 | ..... | 4 | 40 | |
| Medical Department..... | 3 | 4 | 4 | 40 | ..... | 60 | 3 | ..... | ..... | 40 | ..... | 52 | |
| Total commissioned. | 13 | 16 | 8 | 40 | 4 | 90 | 13 | 18 | 8 | 40 | 4 | 92 | |
| Combatant..... | 306 | 631 | 301 | ..... | 166 | 1,383 | 306 | 684 | 324 | ..... | 166 | 1,480 | |
| Medical Department..... | 13 | ..... | ..... | 878 | ..... | 891 | 13 | ..... | ..... | 878 | ..... | 891 | |
| Total enlisted. | 319 | 631 | 301 | 878 | 166 | 2,274 | 319 | 684 | 324 | 878 | 166 | 2,371 | |
| Aggregate combatant..... | 316 | 622 | 306 | ..... | 170 | 1,413 | 316 | 702 | 332 | ..... | 170 | 1,520 | |
| Aggregate .. | 332 | 636 | 309 | 927 | 170 | 2,364 | 332 | 702 | 332 | 927 | 170 | 2,463 | |
| Combat train..... | ..... | 324 | ..... | ..... | 62 | 386 | ..... | ..... | ..... | ..... | 62 | 62 | |
| Field train, ration. | ..... | ..... | 180 | ..... | ..... | 180 | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Field train, baggage..... | 2 | 9 | 3 | 26 | 4 | 44 | 2 | ..... | ..... | 26 | 4 | 33 | |
| Total wagons..... | 2 | 333 | 183 | 26 | 66 | 610 | 2 | ..... | ..... | 26 | 66 | 94 | |
| Guns: | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |  |
| 3-inch field..... | ..... | 2 | ..... | ..... | ..... | 2 | ..... | 2 | ..... | ..... | ..... | 2 | |
| 3.9-inch howitzer..... | ..... | 1 | ..... | ..... | ..... | 1 | ..... | 1 | ..... | ..... | ..... | 1 | |
| Motor cars..... | ..... | ..... | ..... | 4 | 2 | 6 | ..... | 15 | 7 | 4 | 2 | 28 | |
| Motor trucks..... | ..... | ..... | ..... | 28 | 13 | 41 | ..... | 373 | 187 | 28 | 13 | 601 | |
| Motorcycles, with side cars..... | ..... | ..... | ..... | 10 | 3 | 13 | ..... | 41 | 1 | 10 | 3 | 55 | |
| Ambulances..... | ..... | 9 | ..... | 48 | ..... | 48 | ..... | ..... | ..... | 48 | ..... | 48 | |
| Other carriages..... | ..... | 9 | ..... | 8 | ..... | 17 | ..... | 6 | ..... | ..... | 8 | 14 | |
| Horses, riding..... | 332 | 68 | 23 | 116 | 24 | 563 | 332 | ..... | ..... | 116 | 24 | 472 | |
| Horses, draft..... | ..... | 54 | ..... | ..... | ..... | 54 | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Total horses | 332 | 122 | 23 | 116 | 24 | 617 | 332 | ..... | ..... | 116 | 24 | 472 | |
| Mules, riding..... | ..... | 102 | 50 | ..... | ..... | 152 | ..... | ..... | ..... | ..... | ..... | ..... |  |
| Mules, pack..... | 3 | ..... | ..... | 8 | ..... | 11 | 3 | ..... | ..... | 8 | ..... | 11 | |
| Mules, draft..... | 8 | 1,380 | 756 | 208 | 338 | 2,690 | 8 | ..... | ..... | 208 | 338 | 554 | |
| Total mules | 11 | 1,482 | 806 | 216 | 338 | 2,853 | 11 | ..... | ..... | 216 | 338 | 565 | |
| Machine guns..... | ..... | 20 | ..... | ..... | ..... | 20 | ..... | 80 | ..... | ..... | ..... | 20 | |
| Rifles..... | 298 | 549 | 281 | ..... | 153 | 1,281 | 298 | 596 | 297 | ..... | 153 | 1,343 | |
| Pistols..... | 316 | 98 | 26 | ..... | 33 | 473 | 316 | 107 | 35 | ..... | 33 | 491 | |
| Net length in column of route, yards..... | 400 | 4,100 | 2,200 | 1,200 | 1,500 | (9,400 15.4) | 400 | 3,000 | 1,600 | 1,200 | 1,500 | (7,700 14.4) | |

1 Miles.

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1985

TABLE 27.—*Trains—Infantry Division—Headquarters and Military Police.*

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|--------------------------------------|----------|---------------|--------------|--------|---------------------|------------|----------|
| Units. | Company. | Headquarters. | 2 companies. | Total. | Medical Department. | Aggregate. | Remarks. |
| ..... |  | * 1 | | 1 | | 1 | |
| ..... |  | 1 | | 1 | | 1 | |
| ..... | 1 | 1 | 2 | 3 | | 3 | |
| tenant..... | 1 | 1 | 2 | 3 | | 3 | |
| subtenant..... | 1 | | 2 | 2 | | 2 | |
| Department..... | | | | | 3 | 3 | |
| Total commissioned..... | 3 | 4 | 6 | 10 | 3 | 13 | |
| Total sergeant major..... | | 1 | | 1 | | 1 | |
| Sergeant major..... | | 1 | | 1 | | 1 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 8 | | 16 | 16 | | 16 | |
| Sergeant..... | 17 | | 34 | 34 | | 34 | |
| Sergeant..... | 3 | | 6 | 6 | | 6 | |
| Sergeant..... | 2 | | 4 | 4 | | 4 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 1 | | 2 | 2 | | 2 | |
| Sergeant..... | 3 | | 6 | 6 | | 6 | |
| Sergeant..... | 2 | | 4 | 4 | | 4 | |
| First class..... | 24 | | 48 | 48 | | 48 | |
| Department..... | 85 | 4 | 170 | 174 | | 174 | |
| Total enlisted..... | 150 | 6 | 300 | 306 | 13 | 319 | |
| Aggregate..... | 153 | 10 | 306 | 316 | 16 | 332 | |
| In wagons..... | | | 2 | 2 | | 2 | |
| Lading..... | 152 | 12 | 304 | 316 | 16 | 332 | |
| Wagon..... | | | | | 3 | 3 | |
| Wagon..... | | | 8 | 8 | | 8 | |
| Total mules..... | | | 8 | 8 | 3 | 11 | |
| ..... | 147 | 4 | 294 | 298 | | 298 | |
| ..... | 153 | 10 | 306 | 316 | | 316 | |
| in column of fours, yards..... | 177 | 20 | 355 | 375 | | 375 | |

* Commander of
trains. See par.
412, F. S. R.

TABLE 23.—*Troops—Infantry Division—Ammunition—Wagon.*
MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--|---------------------------|---------------------------|--------------|--------|-----------------|-----------------|----------------|--------|-----------------|----------------------|--------------------------|--------|------------|----------|
| Unit. | Ammunition train section. | Ammunition train company. | | | Head-quar-tern. | Small arms. | | | Artillery. | | | | Aggregate. | Remarks. |
| | | Head-quar-tern. | 2 sec-tions. | Total. | | Head-quar-tern. | 3 com-pa-nies. | Total. | Head-quar-tern. | 3-inch, 1 com-pa-ny. | 2.9-inch, 2 com-pa-nies. | Total. | | |
| Lieutenant colonel..... | | | | | 1 ¹ | | | 1 | 1 ¹ | | | 1 | 1 | |
| Major..... | | | | | | 1 ¹ | | | | | | 1 | 2 | |
| Captain or..... | | | | | | 1 ¹ | 3 | 4 | 1 ¹ | 1 | 2 | 4 | 9 | |
| Lieutenant..... | | 1 ¹ | | 1 | | | | 2 | | | | 2 | 4 | |
| Medical Department veterina- rians..... | | | | | | 2 ² | | 2 | 2 ² | | | | | |
| Total commissioned..... | | 1 | | 1 | 1 | 2 | 3 | 7 | 4 | 1 | 2 | 7 | 16 | |
| Battalion sergeant major..... | | | | | 1 ¹ | 1 ¹ | | 1 | 1 ¹ | | | 1 | 3 | |
| Regimental supply sergeant..... | | | | | | | | | | | | | | |
| Clerk..... | | 1 ¹ | | 1 | | | | 3 | | 1 | | 2 | 3 | |
| Wagonmaster..... | | 1 ¹ | | 1 | | | | 3 | | 1 | | 2 | 3 | |
| Sergeant..... | | | | | | | | | | | | | | |
| Assistant wagonmaster..... | 1 ¹ | | 2 | 2 | | | | 6 | | 2 | | 4 | 6 | |
| Mess..... | | 1 ¹ | | | | | | 3 | | 1 | | 2 | 3 | |
| Horsehoof..... | | | 4 | 4 | | | | 12 | | 1 | | 4 | 6 | |
| Farrier..... | 2 ² | | | | | | | 3 | | 4 | | 8 | 12 | |
| Saddler..... | 1 ¹ | | 2 | 2 | | | | 6 | | 2 | | 4 | 6 | |
| Mechanic..... | 1 ¹ | | | | | | | 6 | | 2 | | 4 | 6 | |
| Agent..... | | 1 ¹ | | 1 | | 2 ² | | 3 | | 1 | | 2 | 3 | |
| Corporal..... | | | | | | | | | | | | | | |
| Assistant wagonmaster..... | 2 ² | | 4 | 4 | | | | 12 | | 4 | | 8 | 12 | |
| Agent..... | | 1 ¹ | | | | 2 ² | | 3 | | 2 | | 2 | 5 | |
| Cook..... | | 2 | | | | | | 6 | | 1 | | 2 | 6 | |
| Private, first-class..... | | | | | | | | | | | | | | |
| Ordnance..... | | 1 ¹ | | | | | | | | | | | | |
| Teamster..... | 29 | 1 | 58 | 59 | 1 | 4 ⁴ | | 7 | 4 ⁴ | 1 | | 2 | 7 | |
| Private, laborer..... | 6 | | 12 | 12 | | 1 | 177 | 178 | 1 | 59 | 118 | 178 | 357 | |
| Total enlisted..... | 42 | 10 | 84 | 94 | 8 | 10 | 282 | 292 | 49 | 94 | 189 | 331 | 681 | |
| Aggregate..... | 42 | 11 | 84 | 95 | 10 | 14 | 285 | 299 | 53 | 95 | 190 | 320 | 647 | |

* Includes 27 drivers for extra artillery vehicles. Not present if vehicles not supplied.

TABLE 29.—*Trains—Infantry Division—Ammunition—Wagon—Continued.*
MAXIMUM STRENGTH—Continued.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|------------------------------|---------------------------|---------------------------|-------------|---------|----------------|----------------|--------------|--------|----------------|--------------------|------------------------|---------|------------|----------|
| Units. | Ammunition train section. | Ammunition train company. | | | Head-quarters. | Small arms. | | | Head-quarters. | Artillery. | | | Aggregate. | Remarks. |
| | | Head-quarters. | 2 sections. | Total. | | Head-quarters. | 3 companies. | Total. | | 3-inch, 1 company. | 3.8-inch, 2 companies. | Total. | | |
| Wagons, cargo..... | 27 | 1 | 54 | 54 | 1 | 1 | 162 | 162 | 1 | 54 | 108 | 162 | 324 | |
| Wagons, field train..... | | | | 1 | | | 3 | 4 | | | 2 | 4 | 9 | |
| Spare guns..... | | | | | | | | | | 2 | 1 | 3 | 3 | |
| Spare battery wagons..... | | | | | | | | | | 2 | 1 | 3 | 3 | |
| Spare store wagons..... | | | | | | | | | | 2 | 1 | 3 | 3 | |
| Horses, riding..... | | 5 | | 5 | 10 | 14 | 15 | 29 | 14 | 36 | 10 | 29 | 68 | |
| Horses, draft..... | | 5 | | 5 | 10 | 14 | 15 | 29 | 14 | 41 | 18 | 54 | 54 | |
| Total horses..... | | | | | | | | | | | 28 | 83 | 122 | |
| Mules, riding..... | 7 | 3 | 14 | 17 | | | 51 | 51 | | 17 | 34 | 51 | 102 | |
| Mules, draft..... | 112 | 4 | 224 | 228 | 4 | 4 | 684 | 688 | 4 | 228 | 456 | 688 | 1,390 | |
| Total mules..... | 119 | 7 | 234 | 245 | 4 | 4 | 735 | 739 | 4 | 245 | 490 | 739 | 1,492 | |
| Net cargo capacity..... lbs. | 74,655 | | | 149,310 | | | 447,930 | | | 149,310 | 298,620 | 447,930 | 895,860 | |
| Machine guns..... | | | | | | | 20 | 20 | | | | | 20 | |
| Rifles..... | 42 | 7 | 84 | 91 | 1 | 1 | 273 | 274 | 1 | 91 | 182 | 274 | 549 | |
| Pistols..... | | 4 | | 4 | 9 | 13 | 12 | 25 | 53 | 4 | 8 | 64 | 68 | |
| Net road length..... yards. | 324 | | | 660 | | | | 1,962 | | | | 2,064 | 4,088 | |

TABLE 31.—*Trains—Infantry Division—Ammunition—Motor.*
MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|--|----------------|----------------|----------------|--------------------|--------|----------------|----------------------------|------------------------------|--------|------------|--|
| Units. | Truck company. | Head-quarters. | Small arms. | | | Head-quarters. | Artillery. | | | Aggregate. | Remarks. |
| | | | Head-quarters. | 6 truck companies. | Total. | | 3-inch, 2 truck companies. | 3.9-inch, 4 truck companies. | Total. | | |
| Lieutenant colonel..... | | 1 | | | | | | | | 1 | |
| Major..... | | | 1 | | 1 | 1 | | | 1 | 2 | |
| Captain..... | | 1 | | | | | | | | 1 | |
| Lieutenant..... | 1 | | 1 | 6 | 7 | 1 | 2 | 4 | 7 | 14 | |
| Total commissioned..... | 1 | 2 | 2 | 6 | 8 | 2 | 2 | 4 | 8 | 18 | a 1 chauffeur in each company to be assigned as messenger. |
| Battalion sergeant major..... | | 1 | 1 | | 1 | 1 | | | 1 | 3 | |
| Regimental supply sergeant: | | | | | | | | | | | |
| Clerk..... | 1 | | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Truckmaster..... | 1 | | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Sergeant: | | | | | | | | | | | |
| Assistant truckmaster..... | 2 | | | 12 | 12 | | 6 | 12 | 18 | 26 | |
| Mess..... | 1 | | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Mechanics..... | 1 | | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Agent..... | 1 | 2 | 2 | 6 | 8 | 3 | 2 | 4 | 9 | 19 | b Transported as trailers to trucks. |
| Corporal, agent..... | 1 | 2 | 2 | 6 | 8 | 3 | 2 | 4 | 9 | 19 | |
| Cook..... | 2 | | | 12 | 12 | | 4 | 8 | 12 | 24 | |
| Private, first class: | | | | | | | | | | | |
| Chauffeur *..... | 23 | 2 | 1 | 198 | 199 | 1 | 66 | 122 | 199 | 400 | |
| Assistant mechanic..... | 2 | | | 12 | 12 | | 4 | 8 | 12 | 24 | |
| Private, assistant chauffeur..... | 6 | 1 | 1 | 54 | 55 | 1 | 18 | 36 | 55 | 111 | |
| Total enlisted..... | 55 | 8 | 7 | 320 | 327 | 9 | 110 | 220 | 339 | 664 | All division trains, in whole or in part, may be assigned to the line of communications if conditions warrant. |
| Aggregate..... | 56 | 10 | 9 | 326 | 345 | 11 | 112 | 224 | 347 | 702 | |
| Trucks, cargo..... | 27 | | | 162 | 162 | | 54 | 108 | 162 | 324 | |
| Trucks, tank..... | 2 | | | 12 | 12 | | 4 | 8 | 12 | 24 | |
| Trucks, mess, records, spare parts, etc..... | 1 | 1 | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Trucks, repair, light..... | 1 | | | 6 | 6 | | 2 | 4 | 6 | 12 | |
| Motor cars..... | 1 | 1 | | 6 | 7 | 1 | 2 | 4 | 7 | 15 | |
| Motorcycles..... | 1 | 5 | 5 | 12 | 17 | 7 | 4 | 8 | 19 | 41 | Under ordinary conditions 1 tank truck will be sufficient. |
| Motorcycles, with side cars..... | 2 | | | 12 | 12 | | 4 | 8 | 16 | 34 | |
| Spare guns..... | | | | | | | 2 | 4 | 6 | 12 | |

TABLE 31.—*Trains—Infantry Division—Ammunition—Motor—Continued.*
MAXIMUM AND MINIMUM STRENGTHS—Continued.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|----------------|---------------|---------------|--------------------|--------|---------------|----------------------------|------------------------------|--------|--------------|---|
| Units. | Truck company. | Headquarters. | Small arms. | | | Artillery. | | | Total. | Aggre. gage. | Remarks. |
| | | | Headquarters. | 6 truck companies. | Total. | Headquarters. | 3-inch, 2 truck companies. | 3.8-inch, 4 truck companies. | | | |
| Spore battery wagons ^b | | | | | | | 2 | 1 | 3 | 3 | Truckmasters to use a light repair truck. Agents to use motorcycles with side cars. For space multiply by 4. |
| Spore store wagons ^b..... | ..... | ..... | ..... | ..... | ..... | ..... | 2 | 1 | 3 | 3 | |
| Net cargo capacity, pounds..... | 81,000 | ..... | ..... | 485,000 | ..... | ..... | 162,000 | 324,000 | ..... | ..... |  |
| Machine guns..... | ..... | ..... | ..... | 20 | 20 | ..... | ..... | 100 | 20 | 20 | |
| Rifles..... | 49 | 3 | 7 | 20 | 20 | 2 | 16 | 28 | 20 | 107 | |
| Pistols..... | 7 | 7 | 7 | 42 | 49 | 9 | ..... | ..... | 41 | 107 | |
| Net road length, yards..... | 203 | 31 | ..... | ..... | 1,666 | ..... | ..... | ..... | 1,635 | 2,404 | |

TABLE 32.—*Trains—Infantry Division—Supply—Wagon.*

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--|----------------|----------------|-------------|---------|----------------|--------------|------------------|----------|
| Units. | Section. | Company. | | | Supply train. | | | Remarks. |
| | | Headquarters. | 3 sections. | Total. | Headquarters. | 2 companies. | Total. | |
| Major..... | | | | | 1 | | 1 | |
| Captain..... | | 1 ^a | | 1 | 1 ^a | 2 | 3 | |
| Medical Department (veterinarians)..... | | | | | 4 ^a | | 4 | |
| Total commissioned..... | | 1 | | 1 | 6 | 2 | 8 | |
| Quartermaster sergeant, Quartermaster Corps..... | | | | | 2 ^a | | 2 | |
| Sergeant, first class, Quartermaster Corps..... | | | | | | | | |
| Clock..... | | 1 ^a | | 1 | 2 ^a | 2 | 4 | |
| Wagonmaster..... | | 1 ^a | | 1 | 2 ^a | 2 | 2 | |
| Trainmaster..... | | | | | 2 ^a | | 2 | |
| Sergeant: | | | | | | | | |
| Assistant wagonmaster..... | 1 ^a | | 3 | 3 | | 6 | 6 | |
| Mass..... | | 1 ^a | | 1 | | 2 | 2 | |
| Horseshoer..... | 2 ^a | | 6 | 6 | | 12 | 12 | |
| Farrier..... | 1 ^a | | 3 | 3 | | 6 | 6 | |
| Saddler..... | 1 ^a | | 3 | 3 | | 6 | 6 | |
| Mechanic..... | 1 ^a | | 1 | 1 | | 2 | 2 | |
| Corporal, assistant wagonmaster..... | 2 ^a | | 6 | 6 | | 12 | 12 | |
| Cook..... | | 3 | | 3 | | 6 | 6 | |
| Private, first class: | | | | | | | | |
| Orderly..... | | 1 ^a | | 1 | 6 ^a | 2 | 8 | |
| Teamster..... | 32 | 1 | 96 | 97 | 1 | 194 | 195 | |
| Private, laborer..... | 6 | | 18 | 18 | | 36 | 36 | |
| Total enlisted..... | 45 | 9 | 135 | 144 | 13 | 288 | 301 | |
| Aggregate..... | 45 | 10 | 135 | 145 | 19 | 390 | 390 | |
| Wagons, cargo..... | 30 | | 90 | 90 | | 180 | ^a 180 | |
| Wagons, feed..... | | 1 | | 1 | 1 | 2 | 3 | |
| Total wagons..... | 30 | 1 | 90 | 91 | 1 | 182 | 183 | |
| Horses, riding..... | | 3 | | 3 | 17 | 6 | 23 | |
| Mules, riding..... | 7 | 3 | 21 | 24 | 2 | 48 | 50 | |
| Mules, draft..... | 124 | 4 | 372 | 376 | 4 | 752 | 756 | |
| Total mules..... | 131 | 7 | 393 | 400 | 6 | 800 | 806 | |
| Net cargo capacity, pounds..... | 82,950 | | | 245,850 | | | 497,700 | |
| Rifles..... | 45 | 5 | 135 | 140 | 1 | 280 | 281 | |
| Pistols..... | | 4 | | 4 | 18 | 8 | 26 | |
| Net road length, yards..... | 360 | | | 1,092 | | | 2,196 | |

^a Or the equivalent in pack trains when the division is operating in areas where pack transportation is necessary.

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1991

TABLE 34.—*Trains—Infantry Division—Supply—Motor.*

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 |
|--|----------------|----------------|--------------------------|---------|--|
| Units. | Truck company. | Head-quarters. | 6 motor-truck companies. | Total. | Remarks. |
| Major..... | | 1 | | 1 | |
| Lieutenant..... | 1 | 1 | 6 | 7 | |
| Total commissioned..... | 1 | 2 | 6 | 8 | |
| Quartermaster sergeant, Quartermaster Corps..... | | 2 | | 2 | * 1 chauffeur in each company to be assigned as messenger. |
| Sergeant, first class: | | | | | |
| Clerk..... | | 1 | | 1 | |
| Truckmaster..... | 1 | | 6 | 6 | All division trains, in whole or in part, may be assigned to the line of communications if conditions warrant. |
| Sergeant: | | | | | |
| Clerk..... | 1 | | 6 | 6 | |
| Assistant truckmaster..... | 3 | | 18 | 18 | |
| Mess..... | 1 | | 6 | 6 | |
| Mechanic..... | 1 | | 6 | 6 | |
| Cook..... | 2 | | 12 | 12 | |
| Private, first class: | | | | | Under ordinary conditions, one tank truck will be sufficient. |
| * Chauffeur..... | 33 | 2 | 198 | 200 | |
| Assistant mechanic..... | 2 | | 12 | 12 | |
| Private, assistant chauffeur..... | 9 | 1 | 54 | 55 | Truckmasters to use a light repair truck. |
| Total enlisted..... | 53 | 6 | 318 | 324 | |
| Aggregate..... | 54 | 8 | 324 | 332 | |
| Trucks, cargo..... | 27 | | 162 | 162 | |
| Trucks, tank..... | 2 | | 12 | 12 | |
| Trucks, mess, records, spare parts, etc..... | 1 | 1 | 6 | 7 | |
| Trucks, repair, light..... | 1 | | 6 | 6 | Truckmasters to use a light repair truck. |
| Motorcars..... | 1 | 1 | 6 | 7 | |
| Motorcycles, with side cars..... | | 1 | | 1 | |
| Net cargo capacity, pounds..... | 81,000 | | 486,000 | 486,000 | For space multiply by 4. |
| Rifles..... | | 3 | 294 | 297 | |
| Pistols..... | | 5 | 30 | 35 | |
| Net road lengths, yards..... | 286 | | | 1,530 | |

TABLE 35.—*Trains—Infantry Division—Engineer.*

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------------|-----------------------------------|-----------------------|--------------------|--------|---|
| Units. | Head-quarters and supply section. | Search-light section. | * Pon-ton section. | Total. | Remarks. |
| Captain..... | 1 ^b | | | 1 | |
| First lieutenant..... | | 1 ^b | 1 ^b | 2 | |
| Second lieutenant..... | | 1 ^b | | 1 | |
| Total commissioned..... | 1 | 2 | 1 | 4 | |
| Master engineer, senior grade..... | | 2 ^a | | 2 | * 2 heavy (wooden) bridge divisions, each capable of making 225 feet of normal bridge for vehicles weighing up to 6,000 pounds, or 150 feet of bridge with close intervals for vehicles up to 12,000 pounds. |
| Master engineer, junior grade..... | | 4 ^b | | 4 | |
| First sergeant..... | 1 ^b | | | 1 | |
| Sergeant, first class..... | | 2 | | 2 | |
| Battalion supply sergeant..... | 1 ^b | | | 1 | |
| Supply sergeant..... | | 1 ^b | 1 | 2 | |
| Stable sergeant..... | | 1 | 1 | 2 | |
| Sergeant..... | | 4 | 2 ^a | 6 | |
| Corporal..... | 2 ^a | 4 | 4 ^b | 10 | |
| Horseshoer..... | 1 | 1 | 2 | 5 | |
| Saddler..... | | | 1 | 1 | |
| Wagoner..... | 33 | 20 | 37 | 90 | * 10 wagons carrying tools, 1 wagon for each Infantry and Cavalry regiment, and 4 wagons carrying small arms ammunition for Engineer regiment. |
| Cook..... | 1 | 1 | 1 | 3 | |
| Bugler..... | 1 ^b | 1 ^b | 1 ^b | 3 | |
| Private, first class..... | 12 | 8 | | 20 | |
| Private..... | | 14 | | 14 | |
| Total enlisted..... | 52 | 63 | 51 | 166 | |
| Aggregate..... | 53 | 65 | 52 | 170 | |
| Combat train, wagons..... | 14 | 18 | 30 | 62 | * Number based on the following equipment: 6 power units, 6 searchlight units, 3 tool and supply wagons, and 3 trench-light wagons with batteries and flares; all 4-mule wagons. Number will vary with change in type of equipment. |
| Field train, wagons..... | 1 | 1 | 2 | 4 | |
| Technical supply train, wagons..... | 4 | | 4 | 8 | |
| Motor trucks..... | 12 | 1 | | 13 | |
| Motor cars..... | 2 | | | 2 | |
| Motor cycles, with side cars..... | | 3 | | 3 | |
| Horses, riding..... | 6 | 10 | 8 | 24 | |
| Mules, draft..... | 80 | 76 | 190 | 346 | |
| Rifles..... | 49 | 54 | 50 | 153 | |
| Pistols..... | 6 | 17 | 10 | 33 | |
| Net length, yards..... | | | | 1,500 | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1993

TABLE 36.—Trains—Infantry Division—Sanitary.

MAXIMUM STRENGTH.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|----------------------------|---------------------------------|---------------------------------|----------------------|--------|-----|-----|------------------------------|------------------------------|------------------|--------|-----|-----|---------------------|------------|--|
| Units. | Motor-driven ambulance company. | Animal-drawn ambulance company. | Ambulance companies. | | | | Motor-driven field hospital. | Animal-drawn field hospital. | Field hospitals. | | | | 4 camp infirmaries. | Aggregate. | Remarks. |
| | Headquarters. | 2 motor-driven. | 2 animal-drawn. | Total. | | | Headquarters. | 2 motor-driven. | 2 animal-drawn. | Total. | | | | | |
| Major..... | | | 1 | | 1 | 1 | 1 | 1 | 2 | 2 | 5 | | 6 | | |
| Captain..... | 5 | 5 | 1 | 10 | 10 | 21 | 5 | 5 | 1 | 10 | 10 | 21 | | 42 | |
| First lieutenant..... | | | | | | | | | | | | | | | |
| Veterinarian..... | | | 1 | | 1 | | | | | | | | | 1 | |
| Total commissioned..... | 5 | 5 | 3 | 10 | 10 | 23 | 6 | 6 | 2 | 12 | 12 | 26 | | 49 | |
| Sergeant, first class..... | 2 | 2 | | 4 | 4 | 8 | 3 | 3 | | 6 | 6 | 12 | | 20 | |
| Sergeant..... | 11 | 11 | 1 | 22 | 22 | 45 | 6 | 6 | 1 | 12 | 12 | 25 | 4 | 74 | |
| Corporal..... | 6 | 6 | | 12 | 12 | 24 | | | | | | | | 24 | |
| Horseshoer..... | | 1 | | | 2 | 2 | | 1 | | 2 | 2 | | | 4 | |
| Saddler..... | | 1 | | | 2 | 2 | | 1 | | 2 | 2 | | | 4 | |
| Farrier..... | | 1 | | | 2 | 2 | | 1 | | 2 | 2 | | | 4 | |
| Mechanic..... | 1 | 1 | | 2 | 2 | 4 | 1 | 1 | | 2 | 2 | 4 | | 8 | |
| Cook..... | 3 | 3 | 6 | 6 | 12 | 2 | 2 | | 4 | 4 | 8 | | | 20 | |
| Private, first class..... | 96 | 124 | 5 | 192 | 248 | 445 | 68 | 65 | 5 | 136 | 130 | 271 | 4 | 720 | An officer of the Quartermaster Corps as supply officer. |
| Private..... | | | | | | | | | | | | | | | |
| Total enlisted..... | 119 | 150 | 6 | 238 | 300 | 544 | 80 | 80 | 6 | 160 | 160 | 326 | 8 | 878 | |
| Aggregate..... | 124 | 155 | 9 | 248 | 310 | 567 | 86 | 86 | 8 | 172 | 172 | 352 | 8 | 927 | |
| Motor ambulances..... | 12 | | | 24 | | 24 | | | | | | | | 24 | |
| Motor trucks..... | 3 | | | 6 | | 6 | 11 | | | 22 | | 23 | | 28 | |
| Motor cars..... | | | 2 | | | 2 | | | 2 | | | 2 | | 4 | |
| Motorcycles..... | 3 | | | 6 | | 6 | 2 | | | 4 | | 4 | | 10 | |
| Ambulances..... | | 12 | | 24 | 24 | 24 | | | | | | | | 24 | |
| Wagons..... | | 4 | | 8 | 8 | 8 | | 7 | | 14 | 14 | 4 | | 26 | |
| Equipment..... | | 28 | 8 | 56 | 64 | 64 | | 22 | 8 | 44 | 52 | | | 116 | |
| Mules, pack..... | | 4 | | | 8 | 8 | | | | | | | | 8 | |
| Mules, draft..... | | | | 132 | 132 | | | 30 | | 60 | 60 | 16 | | 208 | |
| Total mules..... | | 70 | | | | | | 30 | | 60 | 60 | 16 | | 216 | |
| Net length, yards..... | | | 30 | 230 | 400 | 660 | | 80 | 130 | 220 | 430 | 80 | 1,160 | | |

TABLE 53.—*Medical department personnel attached to mobile organizations.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|--|------------------------|------|-----------|------|-----------|------|-----------------------|------|-----------------------|------|
| | Division headquarters. | | Infantry. | | Cavalry. | | Field Artillery. | | | |
| | | | Regiment. | | Regiment. | | 2-battalion regiment. | | 3-battalion regiment. | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| Lieutenant colonel..... | 2 | 2 | | | | | | | | |
| Major..... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Captain or lieutenant..... | | | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 |
| Veterinarian..... | | | | | 2 | 2 | 2 | 2 | 2 | 2 |
| Total commissioned.. | 3 | 3 | 4 | 4 | 6 | 6 | 5 | 5 | 6 | 6 |
| Sergeant, first class..... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Sergeant..... | 1 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 |
| Private, first class, and private..... | 7 | 7 | 17 | 20 | 17 | 20 | 12 | 20 | 17 | 20 |
| Total enlisted..... | 9 | 9 | 21 | 33 | 21 | 33 | 15 | 23 | 21 | 33 |
| Aggregate..... | 12 | 12 | 25 | 37 | 27 | 39 | 20 | 28 | 27 | 39 |
| Horses, riding..... | 15 | 15 | 13 | 13 | 28 | 40 | 21 | 20 | 28 | 40 |
| Mules, pack..... | | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| Pistols..... | | | | | 2 | 2 | 2 | 2 | 2 | 2 |

| | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|--|------------|------|--------------------|------|------------------|------|----------------|------|----------------------|------|----------------------------|------|
| | Engineers. | | | | Signal troops. | | | | | | Train and military police. | |
| | Regiment. | | Mounted battalion. | | Field battalion. | | Aero squadron. | | Telegraph battalion. | | | |
| | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. |
| Lieutenant colonel..... | | | | | | | | | | | | |
| Major..... | 1 | 1 | | | | | | | | | | |
| Captain or lieutenant..... | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 |
| Veterinarian..... | | | 1 | 1 | | | | | | | | |
| Total commissioned.. | 3 | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 3 | 3 |
| Sergeant, first class..... | 1 | 1 | 1 | 1 | | | | | | | 1 | 1 |
| Sergeant..... | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Private, first class, and private..... | 12 | 20 | 5 | 9 | 5 | 5 | 3 | 3 | 5 | 5 | 10 | 20 |
| Total enlisted..... | 15 | 23 | 7 | 11 | 6 | 6 | 4 | 4 | 6 | 6 | 13 | 23 |
| Aggregate..... | 18 | 26 | 9 | 13 | 7 | 7 | 5 | 5 | 7 | 7 | 16 | 26 |
| Horses, riding..... | 14 | 14 | 11 | 13 | 7 | 7 | | | 7 | 7 | 16 | 16 |
| Mules, pack..... | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 3 | 3 |
| Pistols..... | | | 1 | 1 | | | | | | | | |

TABLES OF ORGANIZATION, UNITED STATES ARMY, 1917. 1995

TABLE 54.—*Bands.*

MAXIMUM AND MINIMUM STRENGTH.

| 1 | 2 | 3 | 4 |
|------------------------------|------------------------------|--|----------|
| Units. | Engineer or Coast Artillery. | Band section, headquarters company, Infantry, Cavalry, or Field Artillery. | Remarks. |
| Band leader..... | 1 | 1 | |
| Assistant band leader..... | 1 | 1 | |
| First sergeant..... | 1 | 1 | |
| Sergeant buglar..... | 1 | 1 | |
| Band sergeants..... | 2 | 2 | |
| Band corporals..... | 4 | 4 | |
| Musicians, first class..... | 2 | 2 | |
| Musicians, second class..... | 4 | 4 | |
| Musicians, third class..... | 13 | 13 | |
| Cooks..... | 2 | 2 | |
| Total enlisted..... | 30 | 28 | |

MODEL REMARKS FOR MUSTER ROLLS.

Note: These Model Remarks are intended as a guide for placing data on the muster rolls required by the printed instructions for the preparation of those rolls.

Absence. (a) Civil Authorities. In hands CAuth fr Jan 10 to Feb 3/14. Offense: Drunk and disorderly. Convicted (acquitted, released on bail, or released without trial).

(b) Detached Service. DS since Jan 15/14 at HQE Dept. Par 15 SO 20 E Dept. 1914.

(c) Furlough. On one mos furlough since Aug 10/14. AR 106.

(d) Sick. (1) Sick in Walter Reed Gen Hosp July 5 to Aug 20/14. (2) Sick in PH Ft Jay, N Y, since May 10/14.

(e) In Confinement. In confinement since Apr 20/14 at Ft Ontario, N Y. See Roll for Mar and Apr 1914.

(f) With Leave. On 10 days' leave July 20-30/14. SOP 100 1914.

(g) Without Leave. AWOL Aug 10 to 15/14 (or since Aug 10/14).

Note: Absence of less than 24 hours will not be noted.

Appointments Continued in Force. (a) Reenl Wrnt as Sgt, and Apmt as 1st Sgt contd.

(b) Reenl Wrnt as Sgt (or Corp) contd.

(c) Reenl Apmt as Ck contd.

Note: Warrants and appointments may be continued only when reenlistment is accomplished on the next day after discharge.

Apprehension. (See Desertion.)

Assignment. (a) Assigned to Co RSO 10 Mar 5/14, not yet joined.

(b) Joined by assignment May 14/14, SOP 20, 1914.

(c) Assigned to Co May 20/14 D and A Card joined Sd (or not yet joined).

Attached. (In case of officers only.)

Attached to Co. Par 1 RSO 40, 1914 joined Aug 10/14.

Certificate of Merit. Awarded C of M for saving the life of a comrade in a skirmish with Filipinos at Tayug, P I, Aug 10/13. GO 20 WD 1914.

Note: To be noted only on first roll after receipt of notice of award.

Change of Name. Name changed fr John A Smith to Robert A Jones. Letter AGO July 10/14.

Changes of Rank or Grade. (a) Aptd Sgt Maj fr July 2/14. RO 20, 1914.

(b) Aptd Bn Sgt Maj fr Aug 2/14. Bn O 12, 1914, under AR 256.

(c) Aptd 1st Sgt fr Sgt Aug 5/14. CO 5, 1914.

(d) Aptd Sgt fr Corp Aug 1/14. RO 10, 1914.

(e) Aptd Corp fr Pvt July 5/14. CO 7, 1914, under AR 271, 275.

(f) Aptd Ck fr Pvt July 5/14. CO 6, 1914.

(g) Rd fr 1st Sgt to Sgt Aug 5/14. CO 5, 1914.

(h) Rd fr Sgt to Pvt and forfeit one mos pay SC July 20/14.

Note: All other changes of rank or grade will be reported in like manner.

Command. (a) Comdg Co.

(b) Comdg Co since Aug 15/14. SOP 25, 1914.

(c) Comdg Co Aug 10 to 13/14.

(d) Relieved fr command of Co Aug 15/14. Par 5, SO 100 WD, 1914.

Confinement. In confinement July 2 to 6/14. SC July 2/14.

Note: See also under headings "Absence," "Desertion," and "Sentences."

Death. Died July 15/14, at Ft Jay, N Y.

Desertion. (a) Deserted July 5/14, at Ft Porter, N Y.

(b) Deserted July 5/14, at Ft Jay, N Y, apprehended July 19/14, by CAUTH, Chicago, Ill, returned to Mil control at Ft Sheridan, Ill, July 20/14. Tried for desertion, found guilty, and sentenced to be confined at hard labor for 4 mos. GCMO 460 C Dept, 1914 (or tried for desertion and acquitted; or, tried for desertion and found guilty of AWOL only and sentenced to forfeit 2 mos pay and suffer a stoppage of \$50 reward for apprehension and delivery). In confinement serving sentence.

(c) Apprehended Aug 5/14, at Albany, N Y, by Mil Auth. In confinement since that date awaiting trial or result of trial.

(d) Restoration to Duty Without Trial. In confinement fr July 4 to Aug 10/14 awaiting trial for desertion. Restored to duty without trial. Par 3, SO 64 E Dept, 1914.

(e) Removal of Charge. In confinement fr July 4 to Aug 10/14 awaiting trial for desertion. Charge removed as having been erroneously made. Par 5 SO 64 E Dept, 1914.

(f) Desertion and Fraudulent Enlistment. (1) Upon the first roll following apprehension will be noted as follows:

On the roll of the organization from which he deserted: "Apprehended (or surrendered) July 1/14 while serving in ——— under the name of John A Jones; in confinement at Ft Logan, Colo, awaiting trial." On the roll of the organization in which serving fraudulent enlistment: "Apprehended (or surrendered) July 1/14 as Martin Brown, who deserted Nov 2/12 from ———; in confinement awaiting trial."

(2) See heading "Dropped" (a) for remarks in case of conviction of desertion and fraudulent enlistment and sentenced to be dishonorably discharged.

(3) See heading "Dropped" (b) for remarks if soldier is not dishonorably discharged, but held to serve out balance of legal enlistment.

(4) If such soldier be held to service as of his fraudulent enlistment and is ordered to be discharged from his enlistment from which he deserted, he will be discharged from the organization from which he deserted and held to service as of the date and the name under which he fraudulently enlisted.

Discharge. 1. Honorable.

(a) Expiration of Service. Hon disch Aug 9/15, at Ft Jay, N Y, per ETS. Character: Excellent. Service honest and faithful. AWOL May 5 to 9/14 (or no AWOL). Absent fr duty Feb 5 to 10/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914). Retained in service to make good AWOL (or absence fr duty under GO 45 WD 1914, or for convenience of Government).

(b) By Purchase. Hon disch Dec 30/15, at Ft Jay, N Y, par 2 SO 95 E Dept 1915. Character: Excellent. Service honest and faithful. AWOL Apr 11 to May 10/15 (or no AWOL). Absent fr duty July 6 to 20/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914).

(c) By Order. Hon disch Sep 30/15, at Ft Jay, N Y, par 15 SO 98 WD 1915. Character: Very good. Service honest and faithful. AWOL July 3 to 10/15 (or no AWOL). Absent fr duty Aug 12 to 20/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914).

(d) On Surgeon's Certificate of Disability. Hon disch Nov 30/15, at Ft Jay N Y, on SCD. Character: Good. Service honest and faithful. AWOL July 16 to 20/15 (or no AWOL). Absent fr duty Oct 16 to 30/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914).

2. Discharge (Sec. 3, Par. 150, A. R.). Disch Nov 8/15, at Ft Jay N Y, par 4 SO 21 E Dept 1915 (or SCD, or ETS). Character: (That which may have been recorded on discharge certificate.) Service honest and faithful (or not honest and faithful). Is not recommended for reenlistment (stating the reason therefor). AWOL Feb 3 to 10/15 (or no AWOL). Absent fr duty May 11 to 20/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914).

3. Dishonorable. Dishon disch Dec 20/15, at Ft Jay, N Y, per GCMO 378 E Dept 1915. Service not honest and faithful. Character: (That which may have been recorded on discharge certificate.) Service not honest and faithful. AWOL June 3 to 20/15 (or no AWOL). Absent fr duty Oct 21 to 30/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914).

(a) Dishonorable Discharge Suspended. Tried by GCM and sentenced to be dishonorably discharged, etc., per GCMO 1812 E Dept 1915. Sentence of dishon disch suspended. In conf at

Dropped. (a) Apprehended (or surrendered) May 20/14 as Martin Brown, who deserted Nov 2/12 fr —; convicted of desertion and fraudulent enlistment and sentenced to be dishonorably discharged, etc. GCMO 450, E Dept, 1914. Dropped fr records July 1/14.

(b) Apprehended (or surrendered) May 20/14 as Martin Brown, who deserted Nov 2/12 fr —; held to serve out balance of his legal enlistment. Par 4 SO 75, WD, 1914. Dropped fr records July 1/14.

(c) Discovered to be a deserter fr the Navy (or Marine Corps) Aug 2/14. Dropped fr records Aug 20/14. Letter AGOWD Aug. 17/14. (See par 133, AR.)

Injuries or Wounds. Sick in PH Ft Jay, N Y, Aug 5 to 11/14 inc. Injured (or wounded) on target range Aug 4/14 LD (or not LD).

Joining, Date of. (See "Assignment," "Desertion," "Return from absence," and "Transfer.")

Medal of Honor. Awarded Medal of Honor for gallant and meritorious conduct at the battle of San Juan, Cuba, July 2/11. GO 40, WD, 1914.

Note: To be noted only on first roll after receipt of notice of award.

Return from Absence. (In cases of absence reported on last muster roll.) Returned fr leave (or furlough, or AWOL, or absent, sick, or confinement, or DS) Aug 25/14.

Retirement. Retired Aug 10/15, at Ft Jay, N Y, par 1 SO 125 WD 1915.

Sentences. (a) Forfeit \$5 SC May 5/14.

(b) Forfeit \$10 per mo for 6 mos and to be confined for same period fr Aug 2/14. GCMO 420, E Dept, 1914.

Transfer. (a) Transferred as Sgt fr Sgt Co B this Regt July 10/14. RSO 7, 1914. Joined Sd.

(b) Transferred as Pvt fr Sgt Co B this Regt Aug 15/14. RSO 40, 1914. Joined Aug 17/14.

(c) Transferred to Co A 1st Inf Aug 20/14. Par 1, SO, 150 WD, 1914.

(d) Furloughed and transferred to Army Reserve Dec 20/15, under GO 11 WD 1913. Character: Excellent. Service honest and faithful. AWOL May 5 to 9/14 (or no AWOL). Absent fr duty Feb 11 to 20/15 under GO 45 WD 1914 (or no absence fr duty under GO 45 WD 1914). Retained to make good AWOL (of absence fr duty under GO 45 WD 1914).

MANUAL OF THE BAYONET
UNITED STATES ARMY
1913

**War Department,
Office of the Chief of Staff,
Washington, February 20, 1913.**

The following Manual of the Bayonet, prepared by a board consisting of Capt. Herschel Tupes, First Infantry, and Capt. Grosvenor L. Townsend, First Infantry, is approved and issued for the information and government of the Regular Army and the Organized Militia of the United States.

By order of the Secretary of War:

**LEONARD WOOD,
Major General, Chief of Staff.**

MANUAL OF THE BAYONET.

UNITED STATES ARMY.

1. The infantry soldier relies mainly on fire action to disable the enemy, but he should know that personal combat is often necessary to obtain success. Therefore, he must be instructed in the use of the rifle and bayonet in hand-to-hand encounters.

2. The object of this instruction is to teach the soldier how to make effective use of the rifle and bayonet in personal combat; to make him quick and proficient in handling his rifle; to give him an accurate eye and a steady hand; and to give him confidence in the bayonet in offense and defense. When skill in these exercises has been acquired, the rifle will still remain a most formidable weapon at close quarters should the bayonet be lost or disabled.

3. Efficiency of organizations in bayonet fighting will be judged by the skill shown by individuals in personal combat. For this purpose pairs or groups of opponents, selected at random from among recruits and trained soldiers, should engage in assaults, using the fencing equipment provided for the purpose.

4. Officers and specially selected and thoroughly instructed noncommissioned officers will act as instructors.

5. Instruction in bayonet combat should begin as soon as the soldier is familiar with the handling of his rifle and will progress, as far as practicable, in the order followed in the text.

6. Instruction is ordinarily given on even ground; but practice should also be had on uneven ground, especially in the attack and defense of intrenchments.

7. These exercises will not be used as a calisthenic drill.

8. The principles of the commands are the same as those given in paragraphs 9, 15, and 38, Infantry Drill Regulations. Intervals and distances will be taken as in paragraphs 109 and 111, Infantry Drill Regulations, except that, in formations for bayonet exercises, the men should be at least four paces apart in every direction.

9. Before requiring soldiers to take a position or execute a movement for the first time, the instructor executes the same for the purpose of illustration, after which he requires the soldiers to execute the movement individually. Movements prescribed in this manual will not be executed in cadence, as the attempt to do so results in incomplete execution and lack of vigor. Each movement will be executed correctly as quickly as possible by every man. As soon as the movements are executed accurately, the commands are given rapidly, as expertness with the bayonet depends chiefly upon quickness of motion.

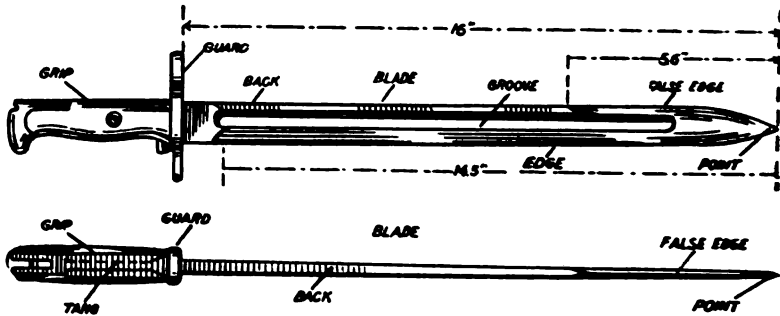
10. The exercises will be interrupted at first by short and frequent rests. The rests will be less frequent as proficiency is attained. Fatigue and exhaustion will be specially guarded against, as they prevent proper interest being taken in the exercises and delay the progress of the instruction. Rests will be given from the position of order arms in the manner prescribed in Infantry Drill Regulations.

THE BAYONET.

NOMENCLATURE AND DESCRIPTION.

11. The bayonet is a cutting and thrusting weapon consisting of three principal parts, viz., the blade, guard, and grip.

12. The blade has the following parts: Edge, false edge, back, grooves, point, and tang. The length of the blade from guard to point is 16 inches, the edge



14.5 inches, and the false edge 5.6 inches. Length of the rifle, bayonet fixed, is 59.4 inches. The weight of the bayonet is 1 pound; weight of rifle without bayonet is 8.69 pounds. The center of gravity of the rifle, with bayonet fixed, is just in front of the rear sight.

I. INSTRUCTION WITHOUT THE RIFLE.

13. The instructor explains the importance of good footwork and impresses on the men the fact that quickness of foot and suppleness of body are as important for attack and defense as is the ability to parry and deliver a strong point or cut.

14. All foot movements should be made from the position of guard. As far as practicable, they will be made on the balls of the feet to insure quickness and agility. No hard and fast rule can be laid down as to the length of the various foot movements; this depends entirely on the situations occurring in combat.

15. The men having taken intervals or distances, the instructor commands:

1. Bayonet exercise, 2. GUARD.

At the command **guard**, half face to the right, carry back and place the right foot about once and a half its length to the rear and about 3 inches to the right, the feet forming with each other an angle of about 60°, weight of the body balanced equally on the balls of the feet, knees slightly bent, palms of hands on hips, fingers to the front, thumbs to the rear, head erect, head and eyes straight to the front.

16. To resume the attention, 1. Squad, 2. ATTENTION. The men take the position of the soldier and fix their attention.

17. **ADVANCE.** Advance the left foot quickly about once its length, follow immediately with the right foot the same distance.

18. **RETIRE.** Move the right foot quickly to the rear about once its length, follow immediately with the left foot the same distance.

19. 1. Front, 2. **PASS.** Place the right foot quickly about once its length in front of the left, advance the left foot to its proper position in front of the right.

20. 1. Rear, 2. **PASS.** Place the left foot quickly about once its length in rear of the right, retire the right foot to its proper position in rear of the left.

The passes are used to get quickly within striking distance or to withdraw quickly therefrom.

21. 1. **Right**, 2. **STEP**. Step to the right with the right foot about once its length and place the left foot in its proper relative position.

22. 1. **Left**, 2. **STEP**. Step to the left with the left foot about once its length and place the right foot in its proper relative position.

These steps are used to circle around an enemy, to secure a more favorable line of attack, or to avoid the opponent's attack. Better ground or more favorable light may be gained in this way. In bayonet fencing and in actual combat the foot first moved in stepping to the right or left is the one which at the moment bears the least weight.

II. INSTRUCTION WITH THE RIFLE.

23. The commands for and the execution of the foot movements are the same as already given for movements without the rifle.

24. The men having taken intervals or distances, the instructor commands:

1. **Bayonet exercise**, 2. **GUARD**.

At the second command take the position of guard (see par. 15); at the same



time throw the rifle smartly to the front, grasp the rifle with the left hand just below the lower band, fingers between the stock and gun sling, barrel turned slightly to the left, the right hand grasping the small of the stock about 6 inches in front of the right hip, elbows free from the body, bayonet point at the height of the chin.

25. 1. **Order**, 2. **ARMS**.

Bring the right foot up to the left and the rifle to the position of order arms, at the same time resuming the position of attention.

26. During the preliminary instruction, attacks and defenses will be executed from guard until proficiency is attained, after which they may be executed from any position in which the rifle is held.

ATTACKS.**27. 1. THRUST.**

Thrust the rifle quickly forward to the full length of the left arm, turning the barrel to the left, and direct the point of the bayonet at the point to be attacked, butt covering the right forearm. At the same time straighten the right leg vigorously and throw the weight of the body forward and on the left leg, the ball of the right foot always on the ground. Guard is resumed immediately without command.

The force of the thrust is delivered principally with the right arm, the left being used to direct the bayonet. The points at which the attack should be directed are, in order of their importance, stomach, chest, head, neck, and limbs.

28. 1. LUNGE.

Executed in the same manner as the thrust, except that the left foot is carried forward about twice its length. The left heel must always be in rear of the left knee. Guard is resumed immediately without command. Guard may also

*Par. 28*

be resumed by advancing the right foot if, for any reason, it is desired to hold the ground gained in lunging. In the latter case, the preparatory command **forward** will be given. Each method should be practiced.

29. 1. Butt, 2. STRIKE.

Straighten right arm and right leg vigorously and swing butt of rifle against point of attack, pivoting the rifle in the left hand at about the height of the left shoulder, allowing the bayonet to pass to the rear on the left side of the head. Guard is resumed without command.

The points of attack in their order of importance are, head, neck, stomach, and crotch.

30. 1. Cut, 2. DOWN.

Execute a quick downward stroke, edge of bayonet directed at point of attack. Guard is resumed without command.

31. 1. Cut, 2. RIGHT (LEFT).

With a quick extension of the arms execute a cut to the right (left), directing the edge toward the point attacked. Guard is resumed without command.

The cuts are especially useful against the head, neck, and hands of an enemy. In executing left cut it should be remembered that the false, or back edge, is only 5.6 inches long. The cuts can be executed in continuation of strokes, thrusts, lunges, and parries.

32. To direct an attack to the right, left, or rear the soldier will change front as quickly as possible in the most convenient manner, for example: 1. **To the right rear**, 2. **Cut**, 3. **DOWN**; 1. **To the right**, 2. **LUNGE**; 1. **To the left**, 2. **THRUST**, etc.

Whenever possible the impetus gained by the turning movement of the body should be thrown into the attack. In general this will be best accomplished by turning on the ball of the right foot.

These movements constitute a change of front in which the position of guard is resumed at the completion of the movement.

33. Good judgment of distance is essential. Accuracy in thrusting and lunging is best attained by practicing these attacks against rings or other convenient openings, about 3 inches in diameter, suitably suspended at desired heights.

34. The thrust and lunges at rings should first be practiced by endeavoring to hit the opening looked at. This should be followed by directing the attack against one opening while looking at another.

35. The soldier should also experience the effect of actual resistance offered



to the bayonet and the butt of the rifle in attacks. This will be taught by practicing attacks against a dummy.

36. Dummies should be constructed in such a manner as to permit the execution of attacks without injury to the point or edge of the bayonet or to the barrel or stock of the rifle. A suitable dummy can be made from pieces of rope about 5 feet in length plaited closely together into a cable between 6 and 12 inches in diameter. Old rope is preferable. Bags weighted and stuffed with hay, straw, shavings, etc., are also suitable.

DEFENSES.

37. In the preliminary drills in the defenses the position of guard is resumed, by command, after each parry. When the men have become proficient, the instructor will cause them to resume the position of guard instantly without command after the execution of each parry.

38. 1. Parry, 2. RIGHT.

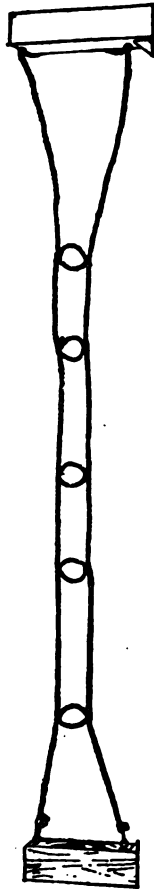
Keeping the right hand in the guard position, move the rifle sharply to the right with the left arm, so that the bayonet point is about 6 inches to the right.

39. 1. Parry, 2. LEFT.

Move the rifle sharply to the left front with both hands so as to cover the point attacked.

40. 1. Parry, 2. HIGH.

Raise the rifle with both hands high enough to clear the line of vision, barrel downward, point of the bayonet to the left front.

**Par. 33.****Par. 36.**

When necessary to raise the rifle well above the head, it may be supported between the thumb and forefinger of the left hand. This position will be necessary against attacks from higher elevations, such as men mounted or on top of parapets.

41. 1. Low parry, 2. RIGHT (LEFT).

Carry the point of the bayonet down until it is at the height of the knee, moving the point of the bayonet sufficiently to the right (left) to keep the opponent's attacks clear of the point threatened.

These parries are rarely used, as an attack below the waist leaves the head and body exposed.

42. Parries must not be too wide or sweeping, but sharp, short motions, finished with a jerk or quick catch. The hands should, as far as possible, be kept in the line of attack. Parries against butt strike are made by quickly moving the guard so as to cover the point attacked.

43. To provide against attack from the right, left, or rear the soldier will



Par. 40



Par. 41

change front as quickly as possible in the most convenient manner; for example:

1. **To the left rear**, 2. **Parry**, 3. **HIGH**; 1. **To the right**, 2. **Parry**, 3. **RIGHT**, etc.

These movements constitute a change of front in which the position of guard is resumed at the completion of the movement.

In changing front for the purpose of attack or defense, if there is danger of wounding a comrade, the rifle should first be brought to a vertical position.

III. INSTRUCTION WITHOUT THE BAYONET.

44. 1. **Club rifle**, 2. **SWING**.

Being at order arms, at the preparatory command quickly raise and turn the rifle, regrasping it with both hands between the rear sight and muzzle, barrel down, thumbs around the stock and toward the butt; at the same time raise the rifle above the shoulder farthest from the opponent, butt elevated and to the rear, elbows slightly bent and knees straight. Each individual takes such position of the feet, shoulders, and hands as best accords with his natural dexterity. **SWING**. Tighten the grasp of the hands and swing the rifle to the front and downward, directing it at the head of the opponent, and immediately return to the position of club rifle by completing the swing of the rifle downward and to the rear. Repeat by the command, **SWING**.

The rifle should be swung with sufficient force to break through any guard or parry that may be interposed.

Being at club rifle, order arms is resumed by command.

The use of this attack against dummies or in fencing is prohibited.

45. The position of club rifle may be taken from any position of the rifle prescribed in the Manual of Arms. It will not be taken in personal combat unless the emergency is such as to preclude the use of the bayonet.

IV. COMBINED MOVEMENTS.

46. The purpose of combined movements is to develop more vigorous attacks and more effective defenses than are obtained by the single movements; to develop skill in passing from attack to defense and the reverse. Every movement to the front should be accompanied by an attack, which is increased in effectiveness by the forward movement of the body. Every movement to the rear should ordinarily be accompanied by a parry and should always be followed by an attack. Movements to the right or left may be accompanied by attacks or defenses.

47. Not more than three movements will be used in any combination. The



Par. 41

Par. 44

instructor should first indicate the number of movements that are to be combined as two movements or three movements. The execution is determined by one command of execution, and the position of guard is taken upon the completion of the last movement only.

EXAMPLES.

Front pass and LUNGE.
 Right step and THRUST.
 Left step and low parry RIGHT.
 Rear pass, parry left and LUNGE.
 Lunge and cut RIGHT.
 Parry right and parry HIGH.
 Butt strike and cut DOWN.
 Thrust and parry HIGH.
 Parry high and LUNGE.

Advance, thrust and cut RIGHT.

Right step, parry left and cut DOWN.

To the left, butt strike and cut DOWN.

To the right rear, cut down and butt STRIKE.

48. Attacks against dummies will be practiced. The approach will be made against the dummies both in quick time and double time.

V. PRACTICAL BAYONET COMBAT.

49. The principles of practical bayonet combat should be taught as far as possible during the progress of instruction in bayonet exercises.

50. The soldier must be continually impressed with the extreme importance of the offensive due to its moral effect. Should an attack fail, it should be followed immediately by another attack before the opponent has an opportunity



Par. 44

to assume the offensive. Keep the opponent on the defensive. If, due to circumstances, it is necessary to take the defensive, constantly watch for an opportunity to assume the offensive and take immediate advantage of it.

51. Observe the ground with a view to obtaining the best footing. Time for this will generally be too limited to permit more than a single hasty glance.

52. In personal combat watch the opponent's eyes if they can be plainly seen, and do not fix the eyes on his weapon nor upon the point of your attack. If his eyes can not be plainly seen, as in night attacks, watch the movements of his weapon and of his body.

53. Keep the body well covered and deliver attacks vigorously. The point of the bayonet should always be kept as nearly as possible in the line of attack. The less the rifle is moved upward, downward, to the right, or to the left, the better prepared the soldier is for attack or defense.

54. Constantly watch for a chance to attack the opponent's left hand. His position of guard will not differ materially from that described in paragraph 24. If his bayonet is without a cutting edge, he will be at a great disadvantage.

55. The butt is used for close and sudden attacks. It is particularly useful in riot duty. From the position of port arms a sentry can strike a severe blow with the butt of the rifle.

56. Against a man on foot, armed with a sword, be careful that the muzzle of the rifle is not grasped. All the swordsman's energies will be directed toward getting past the bayonet. Attack him with short, stabbing thrusts, and keep him beyond striking distance of his weapon.

57. The adversary may attempt a greater extension in the thrust and lunge by quitting the grasp of his piece with the left hand and advancing the right as far as possible. When this is done, a sharp parry may cause him to lose control of his rifle, leaving him exposed to a counter attack, which should follow promptly.

58. Against odds a small number of men can fight to best advantage by grouping themselves so as to prevent their being attacked from behind.

59. In fighting a mounted man armed with a saber every effort must be made to get on his near or left side, because here his reach is much shorter and his parries much weaker. If not possible to disable such an enemy, attack his horse and then renew the attack on the horseman.

60. In receiving night attacks the assailant's movements can be best observed from the kneeling or prone position, as his approach generally brings him against the sky line. When he arrives within attacking distance rise quickly and lunge well forward at the middle of his body.

VI. FENCING EXERCISES.

61. Fencing exercises in two lines consist of combinations of thrusts, parries, and foot movements executed at command or at will, the opponent replying with suitable parries and returns.

62. The instructor will inspect the entire fencing equipment before the exercise begins and assure himself that everything is in such condition as will prevent accidents.

63. The men equip themselves and form in two lines at the order, facing each other, with intervals of about 4 paces between files and a distance of about 2 paces between lines. One line is designated as number 1; the other, number 2. Also as attack and defense.

64. The opponents being at the order facing each other, the instructor commands: **SALUTE.**

Each man, with eyes on his opponent, carries the left hand smartly to the right side, palm of the hand down, thumb and fingers extended and joined, forearm horizontal, forefinger touching the bayonet. (Two.) Drop the arm smartly by the side.

This salute is the fencing salute.

All fencing exercises and all fencing at will between individuals will begin and terminate with the formal courtesy of the fencing salute.

65. After the fencing salute has been rendered the instructor commands: 1. **Fencing exercise,** 2. **GUARD.**

At the command **guard** each man comes to the position of guard, heretofore defined, bayonets crossed, each man's bayonet bearing lightly to the right against the corresponding portion of the opponent's bayonet. This position is known as the engage or engage right.

66. Being at the engage right: **ENGAGE LEFT.**

The attack drops the point of his bayonet quickly until clear of his opponent's rifle and describes a semicircle with it upward and to the right; bayonets are crossed similarly as in the engaged position, each man's bayonet bearing lightly to the left against the corresponding portion of the opponent's bayonet.

67. Being at engage left: ENGAGE RIGHT.

The attack quickly drops the point of his bayonet until clear of his opponent's rifle and describes a semicircle with it upward and to the left and engages.

68. Being engaged: ENGAGE LEFT AND RIGHT.

The attack engages left and then immediately engages right.

69. Being engaged left: ENGAGE RIGHT AND LEFT.

The attack engages right and then immediately engages left.

70. 1. Number one, ENGAGE RIGHT (LEFT); 2. Number two, COUNTER.

Number one executes the movement ordered, as above; number two quickly drops the point of his bayonet and circles it upward to the original position.

71. In all fencing while maintaining the pressure in the engage, a certain freedom of motion of the rifle is allowable, consisting of the play, or up-and-down motion, of one bayonet against the other. This is necessary to prevent the opponent from divining the intended attack. It also prevents his using the point of contact as a pivot for his assaults. In changing from one engage to the other the movement is controlled by the left hand, the right remaining stationary.

72. After some exercise in engage, engage left, and counter, exercises will be given in the assaults.

ASSAULTS.

73. The part of the body to be attacked will be designated by name, as head, neck, chest, stomach, legs. No attacks will be made below the knees. The commands are given and the movements for each line are first explained thoroughly by the instructor; the execution begins at the command assault. Number one executes the attack, and number two parries; conversely, at command, number two attacks and number one parries.

74. For convenience in instruction assaults are divided into simple attacks, counter attacks, attacks on the rifle, and feints.

SIMPLE ATTACKS.

75. Success in these attacks depends on quickness of movement. There are three simple attacks—the straight, the disengagement, and the counter disengagement. They are not preceded by a feint.

76. In the straight the bayonet is directed straight at an opening from the engaged position. Contact with the opponent's rifle may or may not be abandoned while making it. If the opening be high or low, contact with the rifle will usually be abandoned on commencing the attack. If the opening be near his guard, the light pressure used in the engage may be continued in the attack.

Example: Being at the engage right, 1. Number one, at neck (head, chest, right leg, etc.), thrust; 2. Number two, parry right; 3. ASSAULT.

77. In the disengagement, contact with the opponent's rifle is abandoned and the point of the bayonet is circled under or over his bayonet or rifle and directed into the opening attacked. This attack is delivered by one continuous spiral movement of the bayonet from the moment contact is abandoned.

Example: Being at the engage right, 1. Number one, at stomach (left chest, left leg, etc.), thrust; 2. Number two, parry left (etc.); 3. ASSAULT.

78. In the counter disengagement a swift attack is made into the opening disclosed while the opponent is attempting to change the engagement of his rifle. It is delivered by one continuous spiral movement of the bayonet into the opening.

Example: Being at the engage right, 1. Number two, engage left; 2. Number one, at chest, thrust; 3. Number two, parry left; 4. ASSAULT.

Number two initiates the movement, number one thrusts as soon as the opening is made, and number two then attempts to parry.

79. A counter attack or return is one made instantly after or in continuation of a parry. The parry should be as narrow as possible. This makes it more difficult for the opponent to recover and counter parry. The counter attack should also be made at, or just before, the full extension of the opponent's attack, as when it is so made a simple extension of the arms will generally be sufficient to reach the opponent's body.

Example: Being at **engage**, 1. **Number two**, at chest, lunge; 2. **Number one**, parry right, and at stomach (chest, head, etc.), thrust; 3. **ASSAULT**.

ATTACKS ON THE RIFLE.

80. These movements are made for the purpose of forcing or disclosing an opening into which an attack can be made. They are the press, the beat, and the twist.

81. In the press the attack quickly presses against the opponent's bayonet or rifle with his own and continues the pressure as the attack is delivered.

Example: Being at the **engage**, 1. **Number one**, press, and at chest, thrust; 2. **Number two**, parry right; 3. **ASSAULT**.

82. The attack by **disengagement** is particularly effective following the **press**.

Example: Being at the **engage**, 1. **Number one**, press, and at stomach, thrust; 2. **Number two**, low parry left; 3. **ASSAULT**.

83. The beat is an attack in which a sharp blow is struck against the opponent's rifle for the purpose of forcing him to expose an opening into which an attack immediately follows. It is used when there is but slight opposition or no contact of rifles.

Example: Being at the **engage**, 1. **Number one**, beat, and at stomach (chest, etc.), thrust; 2. **Number two**, parry left; 3. **ASSAULT**.

84. In the twist the rifle is crossed over the opponent's rifle or bayonet and his bayonet forced downward with a circular motion, and a straight attack made into the opening. It requires superior strength on the part of the attack.

Example: Being at the **engage**, 1. **Number one**, twist, and at stomach, thrust; 2. **Number two**, low parry, left; 3. **ASSAULT**.

FEINTS.

85. Feints are movements which threaten or simulate attacks and are made with a view to inducing an opening or parry that exposes the desired point of attack. They are either single or double, according to the number of such movements made by the attack.

86. In order that the attack may be changed quickly, as little force as possible is put into a feint.

Example: Being at the **engage**, **Number one**, feint head thrust; at stomach, lunge; 2. **Number two**, parry right and low parry right; 3. **ASSAULT**.

Number one executes the feint and then the attack. **Number two** executes both parries.

87. In double feints first one part of the body and then another is threatened and a third attacked.

Example: Being at the **engage**, 1. **Number one**, feint straight thrust at chest; **disengagement** at chest; at stomach; lunge; 2. **Number two**, parry right, parry left, and low parry left; 3. **ASSAULT**.

88. An opening may be offered or procured by opposition as in the press or beat.

89. In fencing exercises every feint should at first be parried. When the defense is able to judge or divine the character of the attack the feint is not necessarily parried, but may be nullified by a counter feint.

90. A counter feint is a feint following the opponent's feint or following a parry of his attack and generally occurs in combined movements.

COMBINED MOVEMENTS.

91. When the men have become thoroughly familiar with the various foot movements, parries, guards, attacks, feints, etc., the instructor combines several of them and gives the commands in quick succession, increasing the rapidity and number of movements as the men become more skillful. Opponents will be changed frequently.

1. Example: Being at the engage, 1. Number one, by disengagement at chest, thrust; 2. Number two, parry left, right step (left foot first), and lunge; 3. **ASSAULT.**

2. Example: being at engage left, Number one, press and lunge; 2. Number two, parry right, left step, and thrust; 3. **ASSAULT.**

3. Example: Being at the engage, Number one, by disengagement at chest, thrust; 2. Number two, parry left, front pass, and at head butt strike; 3. Number one, right step; 4. **ASSAULT.**

92. Examples 1 and 2 are typical of movements known as cross counters, and example No. 3 of movements known as close counters.

93. A chancery is an attack by means of which the opponent is disarmed, which causes him to lose control of his rifle, or which disables his weapon.

94. When the different combinations are executed with sufficient skill the instructor will devise series of movements to be memorized and executed at the command assault. The accuracy and celerity of the movements will be carefully watched by the instructor, with a view to the correction of faulty execution.

95. It is not intended to restrict the number of movements, but to leave to the discretion of company commanders and the ingenuity of instructors the selection of such other exercises as accord with the object of the drill.

VII. FENCING AT WILL.

96. As satisfactory progress is made, the instructor will proceed to the exercises at will, by which is meant assaults between two men, each endeavoring to hit the other and to avoid being hit himself. Fencing at will should not be allowed to degenerate into random attacks and defenses.

97. The instructor can supervise but one pair of combatants at a time. Frequent changes should be made so that the men may learn different methods of attack and defense from each other.

98. The contest should begin with simple, careful movements, with a view to forming a correct opinion of the adversary; afterwards everything will depend on coolness, rapid and correct execution of the movements and quick perception of the adversary's intentions.

99. Continual retreat from the adversary's attack and frequent dodging to escape attacks should be avoided. The offensive should be continually encouraged.

100. In fencing at will, when no commands are given, opponents facing each other at the position of order arms, salute. They then immediately and simultaneously assume the position of guard, rifles engaged. Neither man may take the position of guard before his opponent has completed his salute. The choice of position is decided before the salute.

101. The opponents being about two paces apart and the fencing salute having been rendered, the instructor commands, **At will, 2. ASSAULT**, after which either party has the right to attack. To interrupt the contest the instructor will command **HALT**, at which the combatants will immediately come to the

order. To terminate the contest the instructor will command, 1. **Halt**, 2. **SALUTE**, at which the combatants will immediately come to the order salute, and remove their masks.

102. When men have acquired confidence in fencing at will, one opponent should be required to advance upon the other in quick time at charge bayonet, from a distance not to exceed 10 yards, and deliver an attack. As soon as a hit is made by either opponent the instructor commands, **HALT**, and the assault terminates. Opponents alternate in assaulting. The assailant is likewise required to advance at double time from a distance not exceeding 20 yards and at a run from a distance not exceeding 30 yards.

103. The instructor will closely observe the contest and decide doubtful points. He will at once stop the contest upon the slightest indication of temper. After conclusion of the combat he will comment on the action of both parties, point out errors and deficiencies and explain how they may be avoided in the future.



104. As additional instruction, the men may be permitted to wield the rifle left handed, that is on the left side of the body, left hand at the small of the stock. Many men will be able to use this method to advantage. It is also of value in case the left hand is wounded.

105. After men have fenced in pairs, practice should be given in fencing between groups, equally and unequally divided. When practicable, intrenchments will be used in fencing of this character.

In group fencing it will be necessary to have a sufficient number of umpires to decide hits. An individual receiving a hit is withdrawn at once from the bout, which is decided in favor of the group having the numerical superiority at the end. The fencing salute is not required in group fencing.

RULES FOR FENCING AT WILL.

106. 1. Hits on the legs below the knees will not be counted. No hit counts unless, in the opinion of the instructor, it has sufficient force to disable.

2. Upon receiving a hit, call out "hit."

3. After receiving a fair hit a counter attack is not permitted. A position of engage is taken.

4. A second or third hit in a combined attack will be counted only when the first hit was not called.

5. When it is necessary to stop the contest—for example, because of breaking of weapons or displacement of means of protection—take the position of the order.

6. When it is necessary to suspend the assault for any cause, it will not be resumed until the adversary is ready and in condition to defend himself.

7. Attacks directed at the crotch are prohibited in fencing.

8. Stepping out of bounds, when established, counts as a hit.

SUGGESTIONS FOR FENCING AT WILL.

107. When engaging in an assault, first study the adversary's position and proceed by false attacks, executed with speed, to discover, if possible, his instinctive parries. In order to draw the adversary out and induce him to expose that part of the body at which the attack is to be made, it is advisable to simulate an attack by a feint and then make the real attack.

108. Return attacks should be frequently practiced, as they are difficult to parry, and the opponent is within easier reach and more exposed. The return can be made a continuation of the parry, as there is no previous warning of its delivery, although it should always be expected. Returns are made without lunging if the adversary can be reached by thrusts or cuts.

109. Endeavor to overcome the tendency to make a return without knowing where it will hit. Making returns blindly is a bad habit and leads to instinctive returns—that is, habitual returns with certain attacks from certain parries—a fault which the skilled opponent will soon discover.

110. Do not draw the rifle back preparatory to thrusting and lunging.

111. The purpose of fencing at will is to teach the soldier as many forms of simple, effective attacks and defenses as possible. Complicated and intricate movements should not be attempted.

HINTS FOR INSTRUCTORS.

112. The influence of the instructor is great. He must be master of his weapon, not only to show the various movements, but also to lead in the exercises at will. He should stimulate the zeal of the men and arouse pleasure in the work. Officers should qualify themselves as instructors by fencing with each other.

113. The character of each man, his bodily conformation, and his degree of skill must always be taken into account. When the instructor is demonstrating the combinations, feints, returns, and parries, the rapidity of his attack should be regulated by the skill of the pupil, and no more force than is necessary should be used. If the pupil exposes himself too much in the feints and parries, the instructor will, by an attack, convince him of his error; but if these returns be too swiftly or too strongly made the pupil will become overcautious and the precision of his attack will be impaired. The object is to teach the pupil, not to give exhibitions of superior skill.

114. Occasionally the instructor should leave himself uncovered and fail to parry, in order to teach the pupil to take quick advantage of such opportunities.

VIII. COMPETITIONS.

115. In competitions between different organizations none but skillful fencers will be allowed to participate.

116. In contests between two men judges may assign values to hits as follows:

| | Thrusts and lunes. | Cuts. | Butt of rifle. |
|----------------------|--------------------------|-------|----------------------|
| Stomach. | 4 | .. | 1 |
| Chest. | 3 | .. | .. |
| Head. | 3 | 2 | 3 |
| Neck. | 2 | 2 | 2 |
| Legs. | 1 | 1 | .. |
| Arms and hands. | 1 | 1 | .. |

Stepping out of bounds, 4 points.

117. When superiority between two men is decided by bouts, each bout will be decided by itself, i.e., points won in one bout can not be carried over to another.

118. Details other than those mentioned above will be arranged by the officials of the competition.

INDEX

ABBREVIATIONS

- (A.R.) Army Regulations.
- (A.P.) Automatic Pistol, Description of.
- (B.D.) Manual of the Bayonet.
- (C.E.) Care and Repair of Small Arms and Equipment.
- (C.M.) Court-Martial, Manual of.
- (F.A.) Personal Hygiene and First Aid.
- (F.E.) Engineer Field Manual.
- (F.F.) Field Firing and Proficiency Test, Regulations for.
- (F.M.) Field Maneuvers, Regulations for.
- (F.S.R.) Field Service Regulations.
- (G.M.) Manual of Interior Guard.
- (G.O.) General Orders, Circulars, Bulletins, including Compilations of General Orders, 1915.
- (I.D.) Infantry Drill Regulations.
- (I.E.) Infantry Equipment, Instructions for Assembling.
- (L.W.) Rules for Land Warfare.
- (M.G.) Machine-gun Drill Regulations.
- (M.R.) Model Remarks for Muster Roll.
- (O.T.) Tables of Organizations.
- (P.T.) Manual of Physical Training.
- (R.C.) Army Ration and Conversion Table.
- (S.A.F.) Small Arms Firing Manual.
- (Sig.) Signal Book, U. S. A.
- (U.A.) Unit Accountability Manual.
- (U.S.R.) U. S. Rifle, Description and Rules for.
- (U.R.) Uniform Regulations.

INDEX

Note: Each general heading in the index is followed by an abbreviation in parenthesis indicating in which book or manual the subject is treated.

A

- Abatement: (A.R.)**
term of confinement, 942, 192, 943, 193
- Abbreviations, List of (F.S.R.), Appendix 4,**
1687; Appendix 9, 1707
- Absence on account of disease (G.O.), 229, 976**
- Absence without leave (C.M.), 412, 1415**
- Absence without leave: (A.R.)**
clothing account, 1162, 231
convictions, 127, 32, 132, 34
forfeitures, 132, 34
less than one day, 132, 34
time lost to be made good, 130, 33, 132, 34,
141, 36
transportation to proper station, 110, 28
- Abusive language: (A.R.)**
use of, by superiors, 3, 11
- Accepting presents (G.O.), 3, 901**
- Accomplices (C.M.). See Evidence, Testimonial (C.M.)**
- Accountability: (A.R.)**
certificates, quartermaster supplies, 1091,
214, 1092, 215
money. *See* Money Accountability (A.R.)
property. *See* Property Accountability, etc.
(A.R.)
- Accounts, company fund: (A.R.)**
audit and inspection, 316, 79, 328, 82
duties, company commander, 328, 82
- Accounts, deceased soldiers (A.R.). See Deceased Soldiers (A.R.)**
- Accounts, Mess Fund: (A.R.)**
audit and inspection, 316, 79, 330, 82
- Accounts, pay, etc.: (A.R.)**
clothing, 1157-1166, 229-232, 1169, 233, 1415,
287
deserters, 124, 32
detached enlisted men, 104, 26
officers, 1254, 256, 1258, 256, 1259, 257, 1262,
257
- Accounts, Regimental Fund: (A.R.)**
record, 325, 81
- Accounts, current: (A.R.)**
See Money Accounts (A.R.)
- Accouterments: (A.R.)**
See Arms and Accouterments. (A.R.)
- Accused: (C.M.)**
copy of record for, 117, 1315
effect of plea of guilty to be explained,
154, 1325, 357, 1396
evidence regarding character of, 205, 1343
insanity, 219, 1346
not to be tried in irons, 88, 1308
refusal to plead, 153, 1327
- Accuser: (C.M.)**
as appointing authority, 17, 1287, 22, 1289
as member of court, 129, 1317, 131, 1318
- Acting dental surgeons (A.R.), 1395-1403, 284-285**
- Acting judge advocates: (A.R.)**
duties, etc., 916, 189, 918, 189
mounted pay, 1272, 259
- Action, withdrawing from (I.D.), 531-535, 403-404**
- Adjutant General's Department (A.R.), 774, 159**
- Adjutants of battalions: (A.R.)**
appointments, etc., 248, 67
assignments to duty, 255, 68
qualifications and pay, 248-250, 67-68
tenure of office, 249, 67
- Adjutants of posts: (A.R.)**
detachment formation, 367, 87
detail and duties, 206, 56
office rooms, fuel, and stoves, 1044, 206
recruiting service, 874, 179
summary court records, 957, 962, 194
- Adjutants of regiments: (A.R.)**
appointment, etc., 248, 67
assignments to company or staff duty, 255,
68
band instruments, 262, 70
general duties and responsibilities, 251-
253, 68
noncommissioned officers, 274, 71
office rooms, fuel, and stoves, 1044, 206
qualifications and pay, 248-250, 67-68
tenure of office, 249, 67
treasurer of regimental fund, 325, 81
- Administration, general (F.S.R.), 247-249, 1640**
- Admissions: (C.M.)**
against interest, 226, 1352
in connection with closing statement, 292,
1371
- Advance guards (F.S.R.), 14, 1576, 15, 1576, 19,
1577, 37, 1582, 40-52, 1583-1587, 162, 1620**
- Advance, zone of (F.S.R.). See Zone of the Advance (F.S.R.)**
- Advertisements: (A.R.), 506-514, 115-116**
- Advertising and printing (A.R.), 499-514, 113-116**
- Advice to riflemen (S.A.F.). See Riflemen, Advice to (S.A.F.)**
- Affidavits: (C.M.)**
not admissible as evidence, exception, 269,
1363
- Agents of firms, etc.: (A.R.)**
proposals signed by, 532, 118
receipts for money, 642-644, 136
- Aids: (A.R.)**
captains eligible for appointment, 265, 70
general officers, general staff corps, not
entitled to, 41, 17
general officers changing station, 71, 22
general officers commanding brigades, dis-
tricts, or posts, 198, 54
mounted pay, 1272, 259
- Aiming device for the rifle (U.S.R.), 711**
- Air craft (F.S.R.), 21, 1578, 30, 1580, 31, 1580**
- Aliens: (A.R.)**
enlistment or acceptance prohibited, 849,
175
- Allotments of pay by enlisted men (A.R.),
1347-1360, 275-277**
- Alterations: (A.R.)**
blank forms, 1571, 318
checks, 609, 131
muster and pay rolls, 810, 166
transportation requests, 1119, 221
- Ambulances: (A.R.), 1427-1432, 289-290**
field service, 1435, 291

Black face numbers refer to paragraph and the light face numbers to the page

- Ambulances: (A.R.)**—Continued
 flags and guidons, 225, 60
 furnished by Quartermaster Corps, 1105,
 219, 1427, 289
- Ammunition: (A.R.)**
 expenditures, 1528-1531, 310
 hunting purposes, 350, 85, 354, 85, 1526, 310,
 1531, 310
 issues, 1526, 310
 lost or damaged, 1530, 310
 machine-gun target practice, 353, 85
 sales, 354, 85, 1530, 308, 1521, 309, 1526, 310
 small-arms practice, 350, 85, 353, 85
 storage of powder, etc., 1199, 238
- Ammunition: (U.S.R.)**
 cartridges, description and kinds of, 712
 packing, description of colors and mark-
 ings, 716
 variations and corrections, 715
- Ammunition service (F.S.R.), 313-328, 1653-1655**
- Ammunition supply (I.D.), 547-553, 405-406**
- Animal transportation (F.E.).** See Transpor-
 tation, Animal (F.E.)
- Applicants for enlistment: (A.R.), 840-877, 173-179**
 commutation of rations, 1224, 250, 1230,
 251, 1232, 251
 examination, etc., 1404, 300
 hospital corps, 1410, 287
 married men, 852, 176
 medical attendance, etc., 1473, 298, 1476,
 299
 physical examination, 1404, 300
 rations, 1203, 240, 1208, 242, 1209, 243, 1212,
 243
 toilet articles, etc., 1218, 246
 transportation, etc., 1115, 220, 1124, 222
 travel rations, 1224, 250, 1225, 251
- Appointing authority: (C.M.)**
 action on proceedings, 369-377, 1401-1403
 general court-martial, 14, 1287
 power of, how limited, 20, 1289
 special court-martial, 21, 1289
 summary court-martial, 25, 1289
- Appointments: (A.R.)**
 battalion and regimental staff and non-
 commissioned staff, 248-250, 67-68, 256,
 68
 commissioned officers, 21, 14, 22, 14, 24, 14,
 25, 14
 company noncommissioned officers, 270, 71,
 271, 71, 273, 71, 275, 72, 278, 72, 480, 106
 dates determine precedence, 9, 12
 general noncommissioned staff, 103, 26,
 1557, 315
 general officers, 22, 14
 lance corporals, 272, 71
 personal staff, general officer, 41, 17
 Quartermaster Corps noncommissioned
 officers, 1009, 197
 transfer or exchange of officers, 47, 18
 veterinarians. See Candidates for Ap-
 pointment, etc. (A.R.); Examination for
 Appointment, etc. (A.R.)
- Arguments: (C.M.)**
 in closing, 293, 1371
- Arm chests: (A.R.)**
 accountability, 1542, 313
 disposition of surplus, 1542, 313
 packing for transportation, 1544-1546, 313
- Armed forces of belligerents (L.W.), 29-42, 1720-1723**
- Armistices (L.W.), 256a-275, 1770-1775**
 forms for, 1775-1779
- Arm repair chest, model of 1910 (U.S.R.), 707**
- Arms and accouterments: (A.R.)**
 alterations, taking apart of arms, etc.,
 292, 74
 barrack regulations, 285, 74, 292, 74
 care and preservation, 287, 288, 292, 74
 furloughed soldiers, 113, 29
 issues, 1526, 310
 leather dressing or polishing-material, 293,
 74
 militia, 1143, 227
 packing for transportation, 1544, 313
 patients in hospitals, 1450, 294
 repairs, 1537, 1538, 312
 sales, 1520, 308, 1521, 309
 tompons in small arms, 292, 74
 transportation of loaded arms, 1544, 313
 use of raw linseed oil on wood parts of,
 292, 74
- Arms and accouterment, care of (C.E.), 639**
- Arms and equipment for field service (U.A.), 1845-1853**
- Arms and equipment, to be in possession of officer (U.R.), 1901**
- Arms of service: (A.R.)**
 precedence on occasions of ceremony, 6,
 11
 transfer or exchange of officers, 47, 18
- Army and navy hospital, Hot Springs, Ark. (A.R.).** See General Hospitals, 1439-1492, 292-301
- Army bands, competition of (G.O.), 75, 907**
- Army dispensaries: (A.R.)**
 supply of medicines, 1473, 298, 1474, 299
- Army (field) commanders: (A.R.)**
 furloughs to enlisted men, 107, 108, 27
 Hospital Corps, 1409, 287
 mounted officers, 1272, 259
 returns of troops, 811, 815, 167
 surveying officers, 711, 147
- Army field engineer school (A.R.).** See Army War College (A.R.)
- Army field service and correspondence school for medical officers: (A.R.).** See Army War College (A.R.)
- Army list and directory: (A.R.)**
 preparation and distribution, 774, 159
- Army medical school (A.R.).** See Army War College (A.R.)
- Army organization (F.S.R.), 1-8, 1573-1574**
- Army ration, conversion table (R.C.), 615**
- Army reserve: (A.R.)**
 deposits of pay at time of furlough to,
 1361, 277, 1362, 277, 1364, 278
 enlistment contract, 855, 176
 organizing, etc., in time of war, 193, 48
 payments to soldiers furloughed to, 1373-1379, 280
 regulations governing, 1573, 318
- Army school of the line (A.R.).** See Army War College (A.R.)
- Army signal school (A.R.).** See Army War College (A.R.)
- Army staff college (A.R.).** See Army War College (A.R.)
- Army transport service: (A.R.)**
 beer, wine, or intoxicating liquors, 346, 84
 See Transports (A.R.)
- Army war college: (A.R.)**
 detachment of officers, 192, 48
 inspection, 896, 185
 leaves of absence, officers, 1277, 260
 letter and note headings, 512, 115
 location, Washington, D. C., 449, 102
 mounted officers, 1272, 259

Black face numbers refer to paragraph and the light face numbers to the page

- Army war college: (A.R.)**—Continued
supervision and regulations, 191, 47, 449, 102
- Arraignment: (C.M.)**
when made, procedure, 143, 144, 1321
- Arrest: (C.M.)**
discussed, 420, 1425
how executed, 48, 1297
of deserters by civil authorities, 58, 1298
of medical officer, 51, 1297
status while in, 49, 53, 1297
when ordered, 46, 1296
who may order, 47, 1296
- Arrest and confinement: (A.R.), 922-943, 189-193**
enlisted men, 929-933, 190
noncommissioned officers, 927, 929, 190
officers, 922-927, 189-190
See also Confinement, etc. (A.R.)
- Arrest of officers: (A.R.)**
by whom and how imposed, 922, 189
civil authorities, 1371, 279
close confinement, 923, 189
extension of limits, 923, 189
light offenses, 924, 189
medical, 925, 190
place on the march, 927, 190
release without charges, 924, 189
requirements while under arrest, 923, 189, 926, 190
- Arson (C.M.), 443, 1452**
- Articles of war: (C.M.)**
certain ones to be read and explained, 110, 1313
punitive, discussed, 405-446, 1409-1473
transitory provisions, 487, 1486
when effective, 486, 1485
- Artificers: (A.R.)**
appointment, 275, 278, 72
- Artificial limbs (A.R.), 1490-1492, 301**
- Artillery fire, effect of (F.S.R.), Appendix 7, 1704**
- Artillery supports (I.D.), 579-583, 439-410**
- Assaulting: (C.M.)**
noncommissioned officer, 416, 1420
persons suppressing quarrels, etc., 419, 1424
superior officer, 415, 1418
- Assaults (C.M.), 443, 1452**
- Assaults (L.W.), 212-229, 1753-1757**
- Assignments: (A.R.)**
chaplains, 43, 17
commanding officers, 13, 13
company commander, 268, 71
field officers of the mobile army, 247, 67
general staff corps officers, 752, 156, 765, 158, 767, 159, 773, 159
public animals to riders or drivers, 1072, 211
recruiting service, enlisted men, 843-845, 174
recruits to organizations, 872-876, 178-179
regimental and battalion staff officers, 255, 68
staff departments, officers and men, 197, 54, 743, 155
- Assistant judge advocate: (C.M.). See Judge Advocate (C.M.)**
appointment and duties, 106, 107, 1312
- Attaches: (A.R.)**
See Military Attaches (A.R.)
- Attachment (C.M.). See Warrant of Attachment (C.M.)**
- Attack: (I.D.), 442-488, 396-400**
advancing to, 453-457, 397
- Attack: (I.D.)—Continued**
by battalion, 305-319, 377-379
charge in, 444-475, 398-399
deployment for, 449-452, 396-397
fire in, 458-463, 397-398
fortifications, attack of, 481-484, 399-400
holding, 485-488, 400
pursuit, 476-480, 399
- Attorney and client: (C.M.)**
See Evidence, Testimonial (C.M.)
- Auction sales: (A.R.)**
auctioneer's account, etc., 680, 142
- Authorities, civil: (A.R.)**
See Civil Authorities (A.R.)
- Authority, military: (A.R.)**
exercise, 2, 11
- Automatic pistol, description of: (A.P.)**
to dismount and assemble, 629
- Automatic machine rifle (M.G.). See Machine Gun Drill Regulations (M.G.)**
- Aviation: (A.R.)**
officers, additional pay, 1269, 258
Signal Corps School, 449, 102
- B**
- Badges: (A.R.)**
military service, illegal possession, 180, 46
mourning, military, 431, 100
- Baggage (A.R.), 1135-1139, 224-226**
- Baggage of officers in the field (G.O.), 318, 932**
- Bakeries: (A.R.), 1201, 239**
bake ovens, 1201, 239, 1252, 256
bakers and assistants, 329, 82, 1201, 239
brooms, brushes and mops, 1181, 235
soap, towels, etc., 1215, 244
- Bakers and cooks, schools for: (A.R.)**
inspection, 896, 185
pay of graduates, 329, 82
supervision and regulations, 191, 47, 449, 102
- Band musicians: (A.R.)**
See Musicians (A.R.)
- Bands: (A.R.), 260-264, 70**
designation in army regulations, 15, 14
duties, 264, 70, 440, 100
funds, 324, 80, 326, 327, 81
inspection, 283, 73
musical instruments, 262, 70, 1179, 235
saluting, 375, 376, 378, 88
"The Star Spangled Banner," 264, 70, 375, 88, 378, 88, 437, 100
- Bands, competition of (G.O.), 75, 907**
- Band, the (I.D.), 779-781, 441-442**
- Barracks and quarters: (A.R.)**
allowance and assignments, 1024-1035, 222-224, 1044, 206, 1390, 1397, 284
arms, accouterments, etc., 285, 292, 74
daily inspection, 283, 73
hire of quarters, 1028, 1029, 204
illuminating supplies, 1050-1061, 207-210
names of men attached to bunks, 285, 74
police, 286, 74, 287, 74, 374, 87
squads to be quartered together, 284, 74
- Barter or exchange: (A.R.)**
supplies from quartermaster, 1247, 255
- Battalion commanders: (A.R.)**
company fund, 328, 82
general duties and responsibilities, 203, 55, 245, 66
noncommissioned officers, 256, 68, 271, 71
reports, incapacitated officers, 890, 183
transfer or exchange, enlisted men, 114, 29

Black face numbers refer to paragraph and the light face numbers to the page

- Battalion drill: (I.D.), 258-326, 369-380**
 attack in, 305-319, 377-379
 defense in, 320-326, 379-380
 fire in, 303, 304, 377
- Battalions: (A.R.)**
 command of a major, 14, 13
 designation in army regulations, 15, 14
 noncommissioned staff, 254, 68, 256, 68, 271, 71
 records, 245, 66
 regulations, 245, 66
 staff officers, 248, 67, 249, 67, 254, 68, 255, 68, 807, 166
 standards, names of battles, 244, 65
 transfer, etc., enlisted men, 114, 29
- Battalion, School of (I.D.), 258-326, 369-380**
- Battles: (A.R.)**
 classification by War Department, 244, 65
 colors carried in, 232, 62
 identification of soldiers killed in, 491, 492, 112
 participation, colors and standards, 244, 65
 reports, 816, 167, 817, 168
 returns of captured property, 819, 168
 returns of casualties, 818, 168
 returns of effective strength, 815, 167
- Bayonet combat: (B.D.), 1-118, 2001-2016**
 assaults, 73, 74, 2011
 attack, 27-36, 2004-2005
 attack, examples in, 75-84, 2011-2012
 attack on rifle, 80-84, 2012
 practical rules for, 49-60, 2009-2010
- Bayonet drill (B.D.), 1-118, 2001-2016**
- Bayonet model of 1905: (U.S.R.)**
 component parts, 674
 description, 690
 repair, spare parts for, 707
- Bayonet scabbard, model of: (U.S.R.)**
 1905, 692
 1910, 694
- Beard and hair: (A.R.)**
 enlisted men, 286, 74
- Bedding: (A.R.)**
 straw allowance, 1084, 213, 1085, 214
- Bedding rolls, size of (G.O.), 318, 932**
- Belligerents, armed forces (L.W.), 29-42, 1720-1723**
- Belligerents, intercourse between (L.W.), 230-249, 1757-1761**
- Beneficiaries: (A.R.)**
 allottees of pay, 1347, 275
 designated by officers and enlisted men, 1385, 281
- Benet Mercie machine gun (U.A.), 1834**
- Billeting (F.S.R.), 241, 1637**
- Bills of creditors: (A.R.)**
 attached to vouchers for payment, 634, 135
- Blacksmiths: (A.R.)**
 See Farriers and Horseshoers (A.R.)
- Blacksmiths' and saddlers' tools (U.A.), 1841-1843**
- Blankets: (A.R.)**
 prisoners, 939, 192
 transportation, etc.; 1023, 203
- Blank forms: (A.R.)**
 allotments of pay, 1348, 275
 alterations or new forms, 1571, 318
 discharge certificates, 150, 38
 final statements, 150, 38
 muster and pay rolls, 807, 166
 notes and directions, 1571, 318
 notification of discharge, 153, 38
 official telegrams, 1190, 238
 supplied by Adjutant General's Department, as follows:
 abstract of funds received from sales (No. 322 W.D.)
- Blank forms: (A.R.)—Continued**
 supplied by Adjutant General's Department—continued
 age, nativity, etc., of enlisted men, report of (No. 222)
 ammunition expended (No. 601)
 casualties in action, return of (No. 149), 818, 168
 clothing issued to recruit, account of (No. 140)
 consolidated morning report (No. 336), 211, 57
 correspondence book, 211, 57, 258, 69, 280, 73
 death and disposal of remains, report of (No. 415)
 descriptive and assignment card (No. 25), 847, 174
 descriptive list (No. 29), 280, 73
 deserters, descriptive list of (No. 95), 118, 31
 designation of beneficiary, officer or enlisted man (No. 380)
 discharge, certificate of disability for (No. 17), 159, 39
 discharge, notification of (No. 3), 153, 38
 discharge certificate, dishonorable (No. 20), 150, 38
 discharge certificate, honorable (No. 203), 150, 38
 discharge certificate, without honor (No. 19), 150, 38
 discharge of enlisted men, report of action taken on application for (No. 121)
 due certificate (No. 603)
 duty roster, with model (No. 342), 282, 73
 efficiency report (No. 329), 829, 170
 efficiency report, Officers Ordnance Department (No. 429-a)
 efficiency report of professor of military science and tactics (No. 176)
 enlisted men, request for retirement (No. 468)
 enlistment, application for (No. 141), 857, 176
 enlistment, trimonthly report of applicants for (No. 262), 857, 176
 enlistment paper (No. 22), 857, 176
 enlistments, trimonthly report of (No. 18), 857, 176
 expendable articles (No. 601)
 field practice, record of (No. 366)
 field practice, report of (No. 364)
 field return (No. 26), 812, 167
 final statement (No. 370)
 furlough (No. 66), 106, 27
 furlough and transfer to Army Reserve (No. 437)
 general prisoners, record of (No. 387)
 general prisoners, return of (No. 23), 937, 191
 guard reports (No. 338), 211, 57, 258, 69
 guard reports, extra sheets (No. 338-1)
 identification record card (No. 260), 774, 159
 interrogatories and deposition (No. 60)
 inventory of effects of a deceased soldier (No. 34), 162, 40
 invoice and receipt (No. 600)
 medical certificate, insane persons (No. 1-107, Interior Department), 466, 103
 medical certificate for leave of absence (No. 143), 57, 20

Black face numbers refer to paragraph and the light face numbers to the page

Blank forms: (A.R.)—Continued

supplied by Adjutant General's Department—continued
 medical examination of applicants for enlistment, monthly report of (No. 265), 871, 178
 memorandum receipt record of property issued on (No. 448, 448-a, 448-b)
 morning report, field, staff, and band (No. 333), 258, 69
 morning report, troop, battery, company, or detachment (No. 332), 280, 73
 muster roll, detachment (No. 21), 807, 166
 muster roll, troop, battery, and company (No. 61), 807, 166
 muster roll, troop, battery, and company, extra sheet (No. 61-1)
 muster rolls, model remarks for (No. 489)
 physical examination and test (captains and lieutenants only), report of (No. 378)
 physical examination and test (field officers), report of (No. 377)
 post return, extra sheet (No. 27-a)
 post return, with model (No. 27), 811, 167
 preference card (No. 423)
 property, return of, contingent fund (No. 180)
 public animals, descriptive card of (No. 277), 280, 73
 record of service (No. 29)
 recruit, record of (No. 421)
 recruit, report of physical examination of (No. 135), 857, 176
 recruiting handbill (No. 162)
 recruiting officer, letter of inquiry (No. 78)
 recruiting poster, letter to postmaster to accompany (No. 83)
 recruiting poster, single sheet, 2½ by 3½ feet (Nos. 401, 402, 403, 404)
 recruits, depot trimonthly report of (No. 151), 857, 176
 regimental return, extra sheet (No. 41-a)
 regimental return, with model (No. 41), 811, 167
 report of board on disability of enlisted men (No. 484)
 requisition for books and blank forms (No. 383)
 requisition for expendable articles (No. 604)
 reservist's descriptive card (No. 443)
 reservist's enlistment paper (No. 442)
 reservist's quarterly report card (No. 444)
 reservist's report card upon return to United States (No. 445)
 return of districts, brigades, divisions, departments, extra sheets (No. 24-a, b, and c)
 return of districts, brigades, divisions, departments, with model (No. 24), 811, 167
 return of officers, bureau (No. 101), 811, 167
 return, semi-annual (front cover No. 599, inside sheet No. 599A, back cover No. 599B)
 return of troop, battery, company, or detachment, with model (No. 30), 811, 167

Blank forms: (A.R.)—Continued

supplied by Adjutant General's Department—continued
 sergeant major, report of adjutant on (No. 329)
 service record (No. 29)
 sick reports, daily (No. 339), 280, 73
 small-arms firing, departmental, report of (No. 303)
 small-arms target firing (Special Course A), record of (No. 410)
 small-arms target firing (Special Course A), report of (No. 409)
 statement of charges (No. 602)
 subpoena duces tecum, 991, 195
 subpoena for civilian witness (No. 76), 991, 195
 subpoena for civilian witness (for deposition) (No. 27), 991, 195
 summary court, charge sheet (No. 594), 957, 194
 summary court, report of cases tried by (No. 59), 982, 195
 survey, report of (No. 196), 710, 147
 supplied by Inspector General's Department:
 report, inventory and inspection (No. 1), 904, 906, 186
 report, inventory and inspection, inside sheets (No. 1A), 904, 906, 186
 report, inventory and inspection, public animals (No. 2), 904, 906, 186
 report, inventory and inspection, public animals, inside sheets (No. 2A), 904, 906, 186
 statement of money accountability (No. 3)
Block and tackle (F.E.), 50, 1079
Boarding vessels of war: (A.R.)
 visits and courtesies, 407, 95, 411, 96
Boards of examination: (A.R.)
 appointees, grade of second lieutenant, 30, 31, 15
 rejected applicants for enlistment, 867, 177
Boards of officers: (A.R.)
 appointment, etc., staff, 744, 155
 character, discharge certificates, 148, 37
 damages by fire, storm, etc., 709, 146
 deceased officers, 86, 24
 insane officers, 86, 24
 private property lost in service, 726, 151
 purchase of horses from mounted officers, 1095, 215
 retirement of officers, 26, 14, 77, 23, 78, 23
Boats: (A.R.)
 flags and pennants for official visits, 240, 64
 rules for passing, 414, 98
Bombardments (L.W.), 212-229, 1753-1757
Bond-aided railroads: (A.R.)
 transportation requests, 732, 152
Bonds (A.R.), 567-581, 123-127
Boxes ordnance and ordnance stores (A.R.), 1544-1546, 313
Boxes, size of (G.O.), 318, 932
Branding: (A.R.)
 condemned animals, 907, 187
 officers' mounts at remount depot, 1099, 218
 public animals, 1067, 232
 public property, 676, 160
Bridges: (A.R.)
 construction and repair, 1000, 196
 passage of troops, teams, etc., 1126, 222
Bridges: (F.E.), 1079
 barges, 103, 1133
 block and tackle, 50, 1092
 cantilever, 105-107, 1140-1142
 design of, notes on, 51, 52, 1092

Black face numbers refer to paragraph and the light face numbers to the page

- Bridges: (F.E.)—Continued**
floating, 80-102, 1119-1132
hold fast, 49, 1089
ice, crossing of, 102, 1132
knots, 45, 1082
lashings, 46-48, 1089
loads on, 2, 1079
piers, landing, 76-79, 1117
pile driving, 67, 1103, 68, 1109
railway, 151, 1162
safe loads, formula for, 12, 1081
spar, 59, 1099
site of, 6, 7, 1079
suspension, 133-150, 1155-1162
trestle, 60, 1099
truss, 108-132, 1142-1155
wooden beams, strength of, 8, 1080
- Bridges, length of pontoon (F.S.R.), Appendix 7, 1704**
- Brigade: (I.D.)**
rules for, 347-349, 384
- Brigade commanders: (A.R.)**
appeals referred to, for decision, 195, 54
controversies arising within command, 195, 54
efficiency reports, 829, 170
furloughs to enlisted men, 106, 27, 111, 28
general duties and responsibilities, 194, 52
inspections, 194, 52, 887, 181
officers under arrest, 924, 189
orders, personal journeys for inspection, 194, 52
surveying officers, 711, 147
unimportant communications, 789, 162
visits to posts, 194, 52
- Brigade commanders: (C.M.)**
power over summary courts-martial, 29, 1290
- Brooms, brushes, and mops: (A.R.)**
allowance, 301, 76, 1181, 235
- Bugle, manual of (I.D.), 804-807, 447-448**
- Bugle signals (I.D.), 41, 337**
- Bugler (A.R.), 275, 72, 278, 72**
- Buildings (A.R.), 704-709, 145-146**
- Bunks and bedding: (A.R.)**
names of men to be attached to bunks, 285, 74
overhauling and airing, in barracks, 287, 74
post guardhouses, 1084, 213
straw for bedding, 1084, 213
- Burden of proof: (C.M.)**
in collateral issues, 288, 1369
in proving guilt, 288, 1369
- Burglary (C.M.), 443, 1452**
- Burials: (A.R.)**
battle-ground cemeteries, 491, 492, 112
deceased officers and soldiers, 87, 24, 167, 42, 1173, 234
post cemeteries, 493, 113, 497, 113, 498, 113
- C
- Cablegrams: (A.R.)**
See Telegraphing and Telephoning (A.R.)
- Cadets: (C.M.)**
courts-martial for trial of, 16, 1287
not triable by special court-martial, 41, 1294
not triable by summary court-martial, 43, 1295
subject to military law, 4, 1282
- Cadets, military: (A.R.)**
admission to general hospitals, 1441, 292
appointment, grade of second lieutenant, 27, 15
- Cadets, military: (A.R.)—Continued**
discharged, 1313, 1314, 266
education at military academy, 449, 102
eligibility of ex-cadets for commissions, 37, 16
graduation leave, 53, 20
longevity pay, 1271, 259
payments, 1312-1314, 266
rank and precedence, 9, 12
travel allowances, 1313, 266
- Camp followers: (C.M.)**
subject to military law, 4, 1282
- Camps: (A.R.)**
colors, 241, 65
guards, 441-443, 101
laying out, 1493, 301
temporary posts styled, 202, 55
uniform and clothing, enlisted men, 289, 74
- Camps: (F.S.R.)**
data and dimensions, Appendix 1, 1676
on the march, 106, 239-240, Appendix 1, 1676
semipermanent, Appendix 1, 1676
- Camps: (I.D.)**
excreta, disposal of, 674-677, 420-421
kitchens, 669-673, 419-420
sanitation of, 661-662, 418
selection of sites, 663-665, 418-419
water supply, 666-668, 419
- Camps, names of (G.O.), 72, 907**
- Camps, protection of: (I.D.)**
Cossack post, 690, 422
establishing outpost, 698-707, 423-424
general consideration, 678-682, 421
outguards, 687, 422
outpost, 683-697, 422-423
picket, 688, 422
reserve, 684, 422
sentinels, 692, 423
sentry squad, 689, 422
support, 685, 422
- Candidates for appointment and promotion: (A.R.)**
graduates of civil institutions, 35, 16
members of organized militia, 35, 16
moral character, etc., 36, 16
physical examination, 36, 16
selection, etc., of enlisted men, 30, 15
status pending appointment, 31-33, 15
- Canteens: (A.R.)**
repairs, 1534, 311
- Capital crimes: (C.M.)**
enumeration, 41, 1294
- Capital punishment: (A.R.)**
See Death Penalty (A.R.)
- Capitulations: (L.W.), 250-256, 1761-1764**
forms for, 1765-1770
- Capricious conduct: (A.R.)**
superiors toward inferiors, 3, 11
- Captains: (A.R.)**
appropriate command, 14, 13
baggage, 1136, 224
detached service, 265, 70
exemptions from detail, 358, 86
forage, 1080, 213
promotion to grade, 25, 14
rank and precedence, 9, 12
roster duty, 358, 86
- Captured property: (C.M.)**
offenses concerning, 429, 430, 1435, 1436
- Captured property: (A.R.)**
returns, 819, 168
- Care of arms: (C.E.)**
care of mechanism, 57-61, 649
gallery practice rifle, 53-54, 648

Black face numbers refer to paragraph and the light face numbers to the page

- Care of arms: (C.E.)—Continued**
 service rifle, 32-36, 644-645
 care of the bore, 37-45, 645-647
 preparation of solutions, 46-52, 647-648
 test for enlargement of the muzzle, 34, 644
- Care of equipment: (C.E.)**
 care of leather in the field, 29-30, 644
 instructions for dubbing leather in sides, 26-28, 643
 general instructions for care of cloth equipment, 2-5, 639-640
 general instructions for care of leather equipment, 6-20, 640-642
 special instructions for regimental and post ordnance officers, 21-25, 642-643
- Care of metal equipment (C.E.), 62-65, 649-650**
- Care of rifle (C.E.). See Care of Arms (C.E.)**
- Cargoes of vehicles, pack mules, etc. (F.S.R.), Appendix 7, 1704**
- Carriers: (A.R.)**
 responsibility of, supplies in transit, 721, 149, 1141, 227
- Cartels (L.W.), 284, 1781**
- Cartridges: (A.R.)**
 sales to enlisted men, 354, 85
 cartridges, description of (U.S.R.), 714
- Cash sales: (A.R.)**
 subsistence supplies, 1239, 253, 1241, 253, 1244, 254, 1245, 254
- Casualties in action: (A.R.)**
 preparation, etc., of returns, 818, 168
- Censorship (F.S.R.), 419-431, 1672-1675**
- Censure: (A.R.)**
 discussions, etc., conveying, forbidden, 5, 11
- Ceremonies: (A.R.)**
 chaplains, 46, 18
 colors carried on occasions of, 232, 62
 conformity to drill regulations, 435, 100
 Hospital Corps, 1413, 287
 Memorial Day, 440, 100
 precedence of regiments and corps, 6, 11
 reveille and retreat, 437, 100
 See also Honors, Courtesies, and Ceremonies (A.R.)
- Ceremonies (I.D.), 708-744, 425-433**
 battalion parade, 732-734, 429
 battalion review, 725-727, 427-428
 escort of honor, 738, 431
 escort to color, 736-737, 430, 431
 funeral escort, 739-744, 432-433
 general rules, 708-710, 425
 large commands, review of, 730, 731, 428
 parade, general rules, 732, 733, 429
 regimental parade, 735, 430
 regimental review, 728, 729, 428
 review, rules of, 711-724, 425-427
- Certificates: (A.R.)**
 disability. See Certificates of Disability (A.R.)
 discharge. See Discharge Certificates (A.R.)
 expenditures of ammunition, 1529, 310
 fuel for officers, 1039, 206
 money vouchers, 632, 134, 634, 135, 642-644, 136, 646, 137
 property expended, lost, or destroyed, 698, 144
 ration accounts, 1213, 243
 shipments of baggage, 1138, 225
 transportation of excess baggage, 1123, 221
- Certificates of accountability: (A.R.)**
 quartermaster supplies, 1091, 214, 1092, 215
- Certificates of disability: (A.R.)**
 admission to Soldiers' Home, D. C., 179, 45
 degree of disability to be noted, 161, 40
 discharge of enlisted men, 140, 36
 insane soldiers, 466, 103
 notation of soldiers' refusal to be treated, 161, 40
 permanent disability, 159, 39
 recruits, 870, 178
 report of discharge to medical officer, 160, 40
- Certificates of eligibility: (A.R.)**
 promotion, enlisted men, 31, 15
- Certificates of merit: (A.R.)**
 additional pay, 186, 46, 1341, 271
 conditions of award, 184, 46, 185, 46, 188, 46
 discharged and deceased soldiers, 187, 46
 enlisted men, 184-188, 46, 1341, 271
- Certificates of nonindebtedness: (A.R.)**
 final payments to officers, 1262, 257
- Certificates of pay: (A.R.)**
 purchase of pay due, 592, 128
- Certificates of rations: (A.R.)**
 civilian employees, 1213, 243
 detached troops, 1213, 243
- Certificates of service: (A.R.)**
 issued in lieu of lost discharges, 151, 38
- Challenges: (C.M.)**
 by Judge Advocate, 124, 1317
 grounds for, 121, 1316
 of new member, 122, 1316
 procedure upon, 123, 1317
- Changes of station: (A.R.)**
 articles to be transferred, 1023, 203
 baggage transportation, 1123, 221, 1135-1137, 224-225, 1139, 226
 barrack furniture, 1023, 203
 civilian employees, 739, 154
 commutation of quarters, 1301, 264, 1303, 265, 1304, 265
 enlisted men, 742, 154, 1023, 233
 furloughed soldiers, 112, 29
 officers on leave, 1292-1294, 263-264
 officers without troops, 68, 22
 personal staff, general officers, 71, 22
 quartermaster supplies, 1091, 214, 1092, 215
 transfer of enlisted men, 114, 29
 transportation of horses, 1098, 217
 troops in departments, 193, 48
 See also Movements of Troops (A.R.)
- Chaplains: (A.R.)**
 aid afforded by commanding officers, 44, 17
 assignments and transfers, 43, 17
 ceremonies and inspections, 46, 18
 duties, 44, 17
 flags, 224½, 60
 inspection reports concerning, 831, 172, 889, 181
 mounted pay, 1272, 259
 reports, 45, 17
- Chaplains: (C.M.)**
 not available for court-martial duty, 6, 1284
- Character: (A.R.)**
 discharged soldiers, 148, 37
 recruits, 869, 178
- Character: (C.M.)**
 of accused, evidence regarding, 205, 1343
- Character on discharge (G.O.), 49, 904**
- Charges: (C.M.)**
 accumulation of, 65, 1299
 forms for, 1512
 investigation of, 76, 1305
 joint, 69, 1300, 301, 1373

Black face numbers refer to paragraph and the light face numbers to the page

- Charges: (C.M.)—Continued**
 rules to be observed in pleading, 74, 1302
 submission of, 75, 1305
 who may initiate, 62, 1299
 who may prefer, 63, 1299
- Charges against enlisted men: (A.R.)**
 erroneous, 131, 33
 evidence of previous convictions, 954, 956, 194
 investigation by commanding officer, 955, 194
 offenses cognizable by summary courts, 957, 194
 preparation and transmission, 120, 31, 124, 32, 126, 32, 954, 194
- Charges against officers: (A.R.)**
 release from arrest, 924, 189
- Charge sheet: (C.M.)**
 form, 1508
- Check books, official: (A.R.)**
 issue, transfer, etc., 608-610, 130-131
- Check or currency payments to troops: (A.R.)**
 absence of soldier, 1333, 269
 checks drawn for portion of pay, 1317, 266
 checks drawn to order of individual, 1316, 266
 currency in separate envelopes, 1316, 266
 death or desertion of soldier, 1333, 269
 deficiencies or surplus in currency, 1327, 269
 deposits of enlisted men, 1335, 270
 distribution of, at posts, 1320, 267, 1325, 268, 1326, 268
 errors or informalities, 1328, 269, 1330, 269
 escort, 1324, 268
 express, 1321-1324, 267-268
 indorsement of check by payee, 1331, 269
 notification with roll, 1320, 267
 pay rolls, 1320, 267, 1321, 267, 1329, 269, 1330, 269, 1332-1334, 269-270, 1337, 270
 places beyond express delivery, 1324, 268
 posts at which made, 1316, 266
 receipts not required in check payments, 1319, 267
 troops absent from station, 1334, 270
 undelivered checks or currency, 1333, 269
 verification of sealed packages containing, 1325, 1326, 268
- Checks: (A.R.)**
 alterations or erasures, 609, 131
 bidders' certified, 524, 117, 535, 118
 blank, care and custody, 609, 131
 death or resignation of drawer, 603, 130
 designation of rank and department, 601, 129
 drawing, 599-601, 129, 635, 135, 638, 135, 643, 136
 duplicate, 602, 129
 lost, stolen, or destroyed, 602, 129, 607, 130
 miscellaneous receipts, etc., 615, 132
 mutilated or spoiled, 610, 131
 notation on vouchers, etc., 640, 136
 object of expenditures, 600, 129
 outstanding, 588, 127, 603-607, 130, 901, 186, 902, 186
 payment on presentation, 603, 604, 130
 payments by, how made, 587, 127, 599, 129
 payments to enlisted men, 1316-1335, 266-270
 signing in blank prohibited, 637, 135
 transferring funds, 597, 129
 use of rubber stamps in preparing, 600, 129
 use of typewriter in preparing, 600, 129
- Civil authorities: (A.R.)**
 application for troops, 487, 111
- Civil authorities: (A.R.)—Continued**
 arrest by, of officers and men, 1371, 279, 1381, 281
- Civil courts: (A.R.)**
 discharge of enlisted men, 146, 36
 witnesses, 75, 22, 951, 194, 994, 195, 1298, 264
- Civil functionaries: (A.R.)**
 courtesies and honors, 403, 93
 funeral honors, 421, 99
- Civilian employees (A.R.), 727-739, 151-154**
- Civilian physicians: (A.R.)**
 compensation, 1479, 299
 employment and payment, 1476-1478, 299, 1484, 300, 1485, 300
 examination of recruits, etc., 865, 177, 870, 178, 1484, 300, 1485, 300
 rates of charges, 1479, 299, 1484, 300, 1485, 300
 vaccination, 865, 177
- Civilians: (A.R.)**
 admission to hospital, 1459, 295
 appointment as second lieutenants, 27, 15, 34-37, 16, 1297, 264
 attendance upon civil courts, 994, 195
 burial in post cemeteries, 493, 113
 exploring or surveying expeditions, 1526, 310
 hospital charges, 1459-1461, 295-296
 medical and hospital supplies, 1457, 295
 residence on reservations, 212, 57
 witnesses before military courts, 738, 154, 952, 194, 990-993, 195
- Civil officers: (A.R.)**
 administration of oaths, 23, 14, 604, 143
 apprehension of deserters, 118, 121, 31
 fees for administering oath, 649, 137
- Civil suits against officers and soldiers: (C.M.)**
 when transferable to Federal Court, 484, 1485
- Civilian witnesses: (A.R.)**
 pay and allowances, 738, 154
- Claims: (A.R.)**
 information from records, 824, 169
 interest in, disbursing officers or clerks, 592, 128
 private property lost in service, 726, 151
 purchase of, against the United States, 592, 128
- Claims against U. S. (G.O.), 76, 907**
- Cleaning and preserving materials furnished by the ordnance, 71-97, 650-653**
 convenient measures, 97, 653
- Cleaning the rifle (C.E.). See Care of Arms (C.E.)**
- Clemency: (C.M.)**
 recommendation to, 332, 1378, 357, 1396
- Closed sessions: (C.M.)**
 judge advocate to withdraw, 91, 1309, 101, 1311
- Clothing and equipage: (A.R.)**
 accounts, 1157-1166, 229-232, 1169, 233, 1415, 287
 articles used for police, etc., 442, 101, 443, 101
 burial of deceased soldiers, 1173, 234
 care of, by enlisted men, 286-288, 74
 clothing allowance, 1161, 1162, 231
 company, 266, 70
 contract for, or purchase, 515, 116
 damaged, 911, 188
 deserters, 117, 30, 129, 33, 1164-1166, 232, 1373, 279
 estimates, 1147-1156, 227-229, 1177, 234
 furnished by Quartermaster Corps, 1000, 196
 Indian prisoners of war, 477, 105
 infected, 717, 148, 1454, 295
 inmate Soldiers'-Home, D. C., 181, 45

Black face numbers refer to paragraph and the light face numbers to the page

Clothing and equipage: (A.R.)—Continued

inspection, annual, 889, 181
 inspection by medical officers, 1387, 282
 issues, 1157, 229, 1158, 230, 1167-1173, 232-234, 1455, 295
 issues in case of necessity, 1156, 229, 1159, 230, 1168, 232
 laundry charges, recruits, 1169, 233
 measurements for clothing, condition, etc., 1155, 228
 military prisoners, 939, 192
 officers' servants, 1175, 234
 price list, 1146, 227
 purchase of, by officers, 1174, 234
 recruiting service, 1152, 228
 requisitions for, 203, 55
 retired enlisted men, 137, 35
 sizes of clothing, 1153-1155, 228
 tentage, 1183, 236
 winter garments, special, 1168, 232, 1171, 233
 worn and in possession of men, 288, 74, 289, 74

See also Uniforms (A.R.)

Clothing in field kit (G.O.), 320, 933

Clothing, sizes of (G.O.), 17, 937

Coast artillery corps (A.R.), 303-315, 76-79

Coast artillery, duties of (F.S.R.), 6, 1574

Coast defense (F.S.R.), 6, 1574

Coffee: (A.R.)

purchase and issue of liquid, 1208, 242

Colleges and schools: (A.R.)

See Educational Institutions, Civil (A.R.)

Colors and standards: (A.R.)

battalion, 233, 62

battles, participation, 244, 65

camp, 241, 65

care of, 232, 62

carried into battle, etc., 232, 62

infantry regiments, 229, 61

mourning, 434, 100

national, 226-234, 60-62, 377, 88

regimental, 227, 60, 229-233, 61-62, 377, 88, 434, 100

replaced, disposition of, 239, 64

salutes, 375-377, 88

service, 233, 62

silken, 232, 62

unserviceable, 239, 64

use of unprescribed, 243, 65

Color sentinels, duties of (G.M.), 148-153, 539-540

Color sergeants: (A.R.)

appointment, etc., 256, 68

Color, the (I.D.), 766-778, 440-441

guard, 769-774, 440-441

receiving, 775-777, 441

manual of, 778, 441

Combat (I.D.), 350-356, 385-404

communication in, 384-388, 389

deployment in, 425-441, 394-395

introduction to, 350-357, 385

leadership in, 358-388, 386-389

orders in, 378-383, 388-389

principles in battalion, 290-294, 376

principles in regiment, 342-346, 383

reconnaissance, 389-399, 389-390

summary of, 536, 404

team work in, 371-377, 387-388

Combat: (F.S.R.)

bivouacs, 227-230, 1633-1634

combined arms, 123-130, 1611-1613

defensive—

assembly positions, 205, 206, 1630

cavalry, 191, 1626

counter attack, 188-190, 1626

covering positions, 203, 204, 1629

defensive positions, 192-197, 1627-1628

Combat: (F.S.R.)—Continued

defensive—continued

delaying actions, 216-219, 1632

passive defense, 184, 185, 1625

positions in readiness, 198-200, 1628

retreat, 207-215, 1630-1631

seeking favorable decision, 186, 1625

withdrawal, 201, 1628

deployment, 150-159, 1618-1619

fire superiority, 131, 1613

frontage, 132, 1613

intrenchments, 133, 1614

leader, post of, 135, 1614

machine guns, 134, 1614

measures after battle, 231, 1634, 349, 1659

night—

advance, 226, 1633

defensive, 225, 1633

offensive, 221-224, 1632-1633

offensive—

assault, 173-178, 1623

attack, 163-168, 1620-1621

attack, enveloping, 169-170, 1622

attack, holding, 172, 1622

pursuit, 179-183, 1624

turning movements, 171, 1622

orders, 142, 1616

plan, 141, 1616

principles, 122, 1610

reconnaissance—

during, 20-22, 1578

preceding, 17, 1577

rencontre, 161, 1620

reserves, 136-140, 1615-1616

surprise, 160, 1619

Combat bayonet (B.D.). See Bayonet Combat (B.D.)

Combat practice: (S.A.F.)

effect of fire with rifle, 202-210, 813-818

ballistic qualities of the rifle, 202, 813

cone of dispersion and probabilities of

hitting, 203-205, 814-816

effectiveness of fire, 206, 817

exercises with examples, 237-239, 832-838

fire, adjustment of, 215-221, 822-827

auxiliary aiming points, 218, 825

combined sights, 217, 825

fire at moving targets, 219, 826

fire at stationary targets, 215, 822

indirect fire, 220, 827

night firing, 221, 827

rear sight corrections, 216, 823

general scheme for, 200, 812

influence of ground in firing, 211-214, 818-821

defilade, 211, 818

ground, description of, 214, 821

ricochet shots, 213, 821

rising and falling ground, 212, 818

instruction in, 222-227, 828-830

critique, 227, 830

exercises, preparation of, 224, 829

range regulations, 228, 830

records, 226, 830

reports, 228, 830

rules for, 223, 828

supervision of, 225, 829

proficiency test, 229-236, 831-832

officers responsible for deficiency to be

reported, 235, 832

procedure, 233, 831

range used, 230, 831

reporting results, 236, 832

results, 234, 831

rules for, 231, 831

who will fire, 232, 831

Black face numbers refer to paragraph and the light face numbers to the page

- Combat practice: (S.A.F.)—Continued**
 proficiency test—continued
 suggestions for arrangements of targets, .
 237-239, 832-838
- Combat reconnaissance (I.D.), 389-399, 389-390**
- Command: (A.R.)**
 appropriate to each grade, 14, 13
 commanding officers, 13, 13, 16-20, 14
 funeral escort, 427, 428, 99
 mixed corps, 10, 13
 reconnaissances and expeditions, 20, 14
 staff officer, eligibility, 18, 19, 14
- Commander of the guard, duties of (G.M.), 41-79, 531-533**
- Commanders of escorts: (A.R.)**
 reconnaissances and expeditions, 20, 14
- Commanding officer: (C.M.)**
 disciplinary power of, 333-336, 1379-1380
- Commanding officer, duties of (G.M.), 27-28, 529**
- Commands in infantry drill: (I.D.), 37-40, 337**
 rules for, 31-35, 336-337
- Commands: (A.R.)**
 alteration in strength, 814, 167
 annual inspection, 887-889, 181, 892, 183
 discontinued, records of, 821, 168
- Commissioned officers: (A.R.)**
 See Officers, Army (A.R.)
- Commissions, military: (A.R.)**
 See Military Commissions (A.R.)
- Communications, line of. See Zone of the Line of Communication (F.S.R.)**
- Communications, official: (A.R.)**
 see—
 correspondence (A.R.)
 letters, official (A.R.)
 orders (A.R.)
- Commutation of quarters: (A.R.)**
 officers, 1299-1307, 264-265
 retired enlisted men, 137, 35
- Commutation of rations: (A.R.)**
 allowance and conditions, 1212, 243, 1223, 249, 1224, 250, 1226, 251, 1228, 251, 1443, 293
 attendants, transportation of horses, 1098, 217
 furloughs, 1229, 251, 1233, 252, 1234, 252, 1236-1238, 253
 guards in charge of prisons, 938, 191
 insane soldiers, 468, 104
 meal tickets, 1227, 251
 orders, 1230-1232, 251
 payments, 1212, 243, 1231-1238, 251-253
 rates, 1212, 243, 1223, 249, 1224, 250, 1226, 251, 1228, 251, 1443, 293
 travel on duty, 1111, 219, 1232, 251
- Commutation of sentences: (C.M.)**
 can be exercised only by the President, 402, 1408
- Commutation of subsistence: (A.R.)**
 computation of time, 651, 137
- Companies: (A.R.)**
 accounts, 266, 70
 arms, etc., in quarters, 285, 74, 288, 74, 292, 74
 artificers, wagoners, etc., 173, 44, 275, 72, 278, 72
 baking bread, 1201, 239
 books and records, 280-282, 73, 1361, 277, 1471, 298, 1472, 298
 brooms, brushes and mops, 301, 76, 1181, 235
 captains, 265, 70, 266, 70, 269, 71
 care of arms, etc., 285, 74, 287, 74, 288, 74, 292, 74, 293, 74
 chiefs of squads, 287, 288, 74
 cleanliness of men, 286, 288, 74
 clothing, 266, 70
 commanders. See Company Commanders (A.R.)
- Companies: (A.R.)—Continued**
 command of a captain, 14, 13
 council, 280, 73, 316-318, 79-80, 320, 80, 321, 80, 327, 81
 designation on muster rolls and pay rolls, 809, 166
 desks, 1139, 226
 discipline and instruction, 266, 70
 division into squads, 284, 74
 equipments, 266, 70, 285, 74, 287, 74, 288, 74, 293, 74, 294, 75
 establishment of tailor, barber and shoe-repair shops, 327, 81
 field musicians, 261, 70, 263, 70
 first-aid treatment, 1419, 288
 fuel and stoves, 1044, 206
 fund, 316, 79, 320-322, 80, 324, 80, 327-329, 81-82, 343, 84, 344, 84, 1201, 239
 inspection, 283, 73
 kitchen, 297, 75
 leather dressing or polishing material, 293, 74
 libraries, 1144, 227
 litters, hand, 1430, 223
 lye and sapolio, 1182, 236
 marking property, 295, 75
 messing and cooking, 296-302, 75-76
 names of men on bunks, 285, 74
 noncommissioned officers. See Company Noncommissioned Officers (A.R.)
 numbering of men, 284, 7
 pay, 266, 70
 police of barracks, tents, etc., 286, 287, 74
 public property, 266, 70, 281, 73, 290, 74, 295, 75, 694, 144
 records, 280, 70, 281, 73, 1471, 298, 1472, 298
 records of discontinued, 821, 168
 repairs to ordnance stores, 1537, 312
 reports, 266, 70
 returns, 266, 70, 811, 167, 812, 167, 815, 167
 saving of rations, 1220, 247
 subsistence, 266, 70
 tableware, etc., 301, 76
 tailors, 279, 72
 textbooks, etc., 291, 74
 transfers, officers and men, 48, 18, 114, 29
 uniform and fatigue dress, 279, 72, 289, 74
 withdrawing from general mess, 330, 82
- Company commanders: (A.R.)**
 acting, in absence of company officers, 267, 70, 268, 71
 admission Soldiers' Home, D. C., 179, 45
 allotments of pay, enlisted men, 1348, 275, 1351, 276
 appointees second lieutenants, 29, 15
 artificers, 275, 278, 72
 authority as to discipline, 953, 194
 cartridges, hunting purposes, 354, 85
 chief mechanics, 275, 278, 72
 clothing accounts, 1157-1160, 229-230
 clothing and equipage, 1153, 228, 1156, 229, 1157, 229
 commutation of rations, 1233, 252, 1236, 253, 1237, 253
 company fund, 316, 79, 324, 80, 327, 81, 328, 82, 1208, 242
 confinement of enlisted men, 931, 190
 cooks, 275, 72, 278, 72
 councils of administration, 317, 79, 320, 80
 custody of discharge certificates, 150, 38
 daily and weekly inspections, 283, 73
 deceased soldiers' effects, 162-164, 40-41
 deposits by enlisted men, 1335, 270, 1361, 277, 1362, 277, 1369, 278
 deserters, 117, 30, 120, 31, 121, 31, 124, 32
 detached enlisted men, 104, 26

Company commanders: (A.R.)—Continued
 discharge of enlisted men, 140, 36, 142, 36,
 146, 36, 148, 37, 149, 38, 154, 38, 155, 38
 disposition of old records, reports, etc., 281,
 73
 efficiency reports, 829, 170
 emergency rations, 1205, 240
 enlisted men in hospital, 1472, 298
 enlistment of discharged soldiers, 860, 176
 escaped prisoners' money, 940, 192
 farriers and horseshoers, 275, 278, 72
 final statements, 1362-1364, 277-278, 1369, 278
 first sergeants, 273, 71, 275, 72
 furloughs, 109, 27, 110, 28, 1111, 219
 general duties and responsibilities, 266, 70,
 269, 71, 284, 74, 286, 74, 290, 74, 291, 74
 incorrect payments, 1336, 270
 inspection after taps, 370, 87
 instructions in signaling, 1562, 317
 lance corporals, 272, 71
 marking of graves, 492, 112
 mechanics, 275, 278, 72
 messing and cooking, 296, 298, 75
 musicians, 275, 278, 72
 muster rolls, 810, 166
 noncommissioned officers, 94, 26, 95, 26, 270-
 278, 71-72
 patients in hospital, 1451, 294
 payment of deserters, 1373, 279, 1374, 280
 payments to enlisted men, 1320, 267, 1321,
 267, 1330-1334, 269-270
 pay rolls, 110, 28, 810, 166, 1318, 267, 1320,
 267, 1321, 267, 1330, 269
 privates, first class, 275, 278, 72
 property responsibility, 266, 70, 290, 74, 291,
 74, 661-663, 139, 1089-1092, 214-215
 public animals, 1072, 211
 punishments awarded by, 280, 73
 quartermaster sergeants, 273, 71, 275, 72
 ration returns, 1209, 243
 reports, incapacitated officers, 890, 183
 returns of troops, 811, 812, 167
 serving with detached companies, 813, 167
 settlements with staff officers, 281, 73
 small-arms practice, 350, 85
 stable sergeants, 273, 71, 275, 72
 stamps for sealing ordnance packages, 1546,
 313
 stationery, 1063, 211
 transfer of enlisted men, 115, 30
 trumpeters, 275, 278, 72
 uniforms, enlisted men, 279, 72, 289, 74
 wagoners, 275, 72, 278, 72
Company drill (I.D.), 159-257, 356-369
Company fund (A.R.). See Accounts Company
 Fund (A.R.)
Company funds, debts by deserter (G.O.), 110,
916
Company funds, purchase of food (G.O.), 107,
916
Company funds, use of (G.O.), 106, 916
Company noncommissioned officers: (A.R.)
 appointments, etc., 270, 71, 271, 71, 273-278,
 71-72
 capacity of privates, test, 272, 71
 care of rations, 297, 75
 desertion vacates position, 277, 72
 first sergeants, 9, 12, 270, 71, 273-277, 71-72,
 370, 87, 480, 106, 1044, 206, 1136, 224
 management of kitchens, 297, 75
 quartermaster sergeants, 9, 12, 273-276, 71-72,
 1044, 206
 rank and precedence, 9, 12
 reduction to the ranks, 276, 277, 72
 reproving, 270, 71

Company noncommissioned officers: (A.R.)—
 Continued
 roster duties, 358, 86
 stable sergeants, 273-276, 71-72
 travel accommodations, 1128, 222
 warrants, 274, 71
 whistles, 1180, 235
Company quartermaster sergeants: (A.R.)
 See Quartermaster Sergeants, Company
 (A.R.)
Company, school of (I.D.), 159-257, 356-369
Competency: (C.M.)
 of witness, 209, 1344
Competitions in shooting: (S.A.F.), 282-289, 854-
856
 distinguished marksmen, 342-344, 863
 pistol competition, 290-297, 856-858
 post competition, 341, 862
 rules for, 298-340, 858-862
 ties in shooting, 340, 862
Compilation of general orders (G.O.), 901
Complaints: (C.M.)
 of wrongs committed by commanding offi-
 cer, 485, 1485
Compliments from guard (G.M.), 222-230, 546-
547
Computation of time: (A.R.)
 leaves of absence, 1276, 260
 one-half of court-martial sentence, 943, 193
 personal services, 651, 137
Condemnation of property: (A.R.)
 articles in charge of guards, 443, 101
 duties of inspectors, 903, 186, 906-908, 186-
 188
 inventories, 904-906, 186, 909, 188
 medical supplies, 1488, 300
 ordnance and ordnance stores, 913, 188,
 1543, 313
 property once condemned, 909, 188
 signal corps supplies, 1566, 318
 surveying officer's duty, 715, 178
 unserviceable, 678, 141, 679, 142
 worn or shabby in appearance, 908, 188
Condemned property: (A.R.)
 destruction, 906, 186, 907, 187, 910, 188, 912-
 914, 188, 1073, 212
 marking or branding, 907, 187
 ordnance and ordnance stores, 1543, 313
 sale, 680, 142, 681, 143, 906, 186, 907, 187,
 912-914, 188, 1073, 212
 small arms, 907, 187, 910, 188
Conduct: (C.M.)
 to the prejudice of good order and military
 discipline, 446, 1474
 unbecoming an officer and gentleman, 445,
 1473
Conduct in the military service (A.R.), 1-5, 11
Conduct of hostilities (L.W.), 172-188, 1746-
1749
Conference, Hague (F.S.R.), Appendix 6, 1688
Confessions (C.M.). See Evidence, Testimonial
 (C.M.)
 unsupported, not to be basis for charges,
 70, 1301
Confinement (C.M.). See Penitentiary, Dis-
 ciplinary Barracks (C.M.)
 disciplinary barracks, when directed, 397,
 1407
 in post, when directed, 398, 1407
 penitentiary, when directed, 396, 1407
 place of, to be designated by appointing
 authority, 394, 1406
Confinement of enlisted men: (A.R.)
 awaiting trial by summary courts, 933, 190
 inquiry into offense, 930, 190
 noncommissioned officers, 929, 190

Black face numbers refer to paragraph and the light face numbers to the page

- Confinement of enlisted men (A.R.)**—Continued
prisoners, 932, 190, 936-942, 191-192, 944, 194
report of, to commander, 931, 190
without charges, 934, 191
- Confinement of officers (A.R.)**
arrested, 923, 189
- Confinement of prisoners (A.R.)**
beginning and expiration of term, 969, 194
general prisoners, 969, 194, 971, 194, 972, 194
places, 971, 194
prior to confirmation of sentence, 972, 194
- Confirmation of sentences (C.M.)**
when required, 378, 1404
- Conspirators (C.M.)**
See Evidence, Testimonial (C.M.)
- Contagious diseases (A.R.)**
gratuitous issue of clothing, 1172, 234, 1455, 295
infected clothing, 717, 148
medical and hospital property, 1454, 295
patient and hospital attendants, 1455, 295
- Contempts (C.M.), 173, 1332**
- Continuances (C.M.)**
when granted, 139-141, 1320
- Continuous-service pay (A.R.)**
immediate re-enlistment, 143, 36
rates and payment, 1340, 271
- Contributing presents (G.O.), 3, 901**
- Conventional signs (F.E.). See Reconnaissance (F.E.)**
- Conventional signs (F.S.R.), 1687, 1688**
- Conventions, Red Cross (F.S.R.), Appendix 6, 1688**
- Conviction (A.R.)**
previous, 954, 194, 956, 194, 962, 194
- Convictions (C.M.). See Previous Convictions (C.M.)**
- Convicts (A.R.)**
enlistment or acceptance prohibited, 849, 175
See also Prisoners, General (A.R.)
- Convoys (F.S.R.), 115-121, 1606-1608**
attack of, 119, 1607
by water, 121, 1608
camping of, 119, 1607
of prisoners, 120, 1608
security of, 118, 1606
- Cooking (A.R.)**
See Messing and Cooking (A.R.)
- Cooks (A.R.)**
appointment, etc., 275, 72, 278, 72
excused from ordinary post duties, 329, 82
extra pay, 329, 82
hours of labor, 731, 152
inspection and muster, 329, 82
management and cooking in the field, 296, 75
manual for army, 296, 75, 299, 75
quartermaster corps, 1009, 197
reduction, 1009, 197
schools for, 449, 102
target practice, 329, 82
- Corn, forage ration (A.R.), 1077, 212**
- Coroner (C.M.)**
summary, court-martial as, 483, 1484
- Corporal of the guard, duties of (G.M.), 104-137, 536-538**
- Corporals (A.R.)**
appointments, 260, 70, 271, 71, 275, 72, 480, 106, 1405, 285
band, 260, 70
lance, 272, 71, 1405, 285, 1407, 286, 1408, 286, 1410, 287
- Corporals (A.R.)**—Continued
reduction, 276, 277, 72, 1009, 197, 1407, 286
reproving, 270, 71
roster duties, 358, 86
selection and instruction, 270, 71
signal corps, 103, 26
temporary appointments, 275, 72
travel accommodations, 1128, 222
warrants, 274, 71, 1405, 285, 1410, 287
whistles, 1180, 235
- Correspondence (A.R.)**
army and militia, 774, 159
channels of communication, 193, 48
confidential communications, 778, 161
courtesy required, 790, 162
foreign, 781, 161, 839, 173
judge advocates, 920, 189
post staff, official address, 206, 56
private, officers and enlisted men, 781, 161
recruiting service, 872, 178
resignation of officers, 79, 23, 80, 23
use of colored inks, 822, 168
See also—
letters, official (A.R.)
orders (A.R.)
- Correspondence books (A.R.)**
company, 280, 73
post, 211, 57
regimental, 258, 69
- Correspondence, military (G.O.), 174, 922**
- Correspondents, newspaper (F.S.R.), 422-431, 1673-1675**
- Councils of administration (A.R.)**
company, 280, 73, 316-318, 79-80, 320, 80, 321, 80, 327, 81
hospital, 317, 79
mess, 316-318, 79-80, 321, 80, 329, 82, 330, 82
post, 117, 30, 163, 41, 164, 41
post exchange, 211, 57, 279, 72, 316-321, 79-80, 327, 81
proceedings, record of, 318, 80
- Counsel (C.M.)**
appointment and duties, 108-111, 1312-1313
- Counsel (A.R.)**
employment of civil, 995, 195, 996, 195
- Countersign (C.M.). See Parole (C.M.)**
- Countersign and parole (G.M.), 209-217, 545-546**
- Courtesy (A.R.)**
enjoined on military men, 4, 11, 391, 90, 799, 162
See also Honors, Courtesies and Ceremonies (A.R.)
- Courts-martial (A.R.)**
acquittal of charge of desertion, 128, 33
available officers for duty, 192, 48
candidates for promotion, 32, 15
general. See Courts-Martial, General (A.R.)
judge advocates. See Judge Advocates of Courts-Martial (A.R.)
jurisdiction, 32, 15
records, 920, 189
reporters, 738, 154, 986, 967, 195
sentences. See Courts-Martial Sentences (A.R.)
special. See Courts-Martial, Special (A.R.)
summary. See Courts-Martial, Summary (A.R.)
witnesses, 127, 32
- Courts-martial (C.M.). See General Special, and Summary Court-Martial (C.M.)**
action on proceedings, 369-400, 1401-1407
by whom appointed, 14, 1287, 21, 1289, 25, 1289
classification, 5, 1284

Black face numbers refer to paragraph and the light face numbers to the page

Courts-martial: (C.M.)—Continued
 composition, 6, 1284
 control over accused, 87, 1308
 determination of, for trial, 78, 1306
 expenses of, how payable, 193, 1337
 number of members, 7, 1285
 not part of Federal judicial system, 33, 1291
 organization, 81-142, 1307-1320
 power to punish contempts, 173, 1332
 records of, 354-368, 1396-1401

Courts-martial, general: (A.R.)
 copy of proceedings to be furnished, 919, 189
 custodian of records, 915, 188
 orders, 791, 163, 917, 189
 proceedings, 917, 189, 921, 189
 records, 915, 188

Courts-martial, special: (A.R.)
 trial of candidates for promotion, 32, 15

Courts-martial, summary: (A.R.)
 trial of candidates for promotion, 32, 15

Courts-martial sentences: (A.R.)
 absence without leave, 127, 32, 128, 33
 candidates for promotion, 32, 15
 certificates of eligibility, enlisted men, 32, 15
 computation of one-half, 943, 193
 deposits of enlisted men, 1368, 278
 designation of persons convicted, 928, 190
 discharge of enlisted men, 139, 35
 noncommissioned officers, 256, 68, 276, 72, 277, 72, 310, 78
 payments to officers dismissed, 1262, 257, 1265, 258
 soldiers serving or awaiting, when term expires, 157, 39

Courts of inquiry: (A.R.)
 proceedings, 719, 149
 records, 915, 188

Courts of inquiry: (C.M.)
 constitution, jurisdiction, etc., 447-475, 1477-1480

Cover, use of (I.D.), 152-156, 355

Cowardice: (C.M.)
 accessory penalty, 347, 1386
 denounced, 425, 1431

Credibility: (C.M.)
 of witness, 256-262, 1361-1362

Credit sales: (A.R.)
 subsistence supplies, 1242, 254, 1243, 254, 1249, 255

Crimes or offenses: (A.R.)
 convictions, enlisted men, civil courts, 146, 36

Currency payment to troops: (A.R.)
 See Check or Currency Payments to Troops (A.R.)

Custody of public funds: (A.R.)
 separate accounts and deposits, 584, 127
 treasurer of the United States, 586, 127

D

Damages to property: (A.R.)
 civilian employees, 688, 143
 classification, 682, 143
 deserters, 687, 143
 enlisted men, 683, 143, 686, 143, 699, 144, 724, 150, 1178, 234
 examination, etc., surveying officer, 710, 147, 713, 147, 715, 148
 examination of original packages, 668, 140
 fire, storm, etc., 709, 146
 in transit, 721, 149, 1141, 227

Damages to property: (A.R.)—Continued
 mess property and utensils, 301, 76
 officers, 683, 143, 685, 143
 ordnance and ordnance stores, 1530, 310, 1541, 313
 prevention, 674, 141
 stoppages against pay of officers, 1309, 265
 surveys on, 710, 147, 713, 147, 715, 148

Damage to private property (G.O.), 153, 921

Dead (L.W.). See Sick, Wounded, and Dead (L.W.)

Death penalty: (C.M.)
 when and how imposed, 346, 1385
 when mandatory, 46, 1294

Deaths: (A.R.)
 report of chaplains, 45, 17
 report of commanding officers, 83, 23, 162, 40
 See also—
 Deceased Officers (A.R.)
 Deceased Soldiers (A.R.)

Deaths, reports of (G.O.), 78, 908

Debts of soldiers (G.O.), 40, 903

Deceased officers: (A.R.)
 accounts, medical attendance, etc., 1478, 299
 baggage, professional books, etc., 1137, 225
 burial in post cemeteries, 493, 113
 cause of death, 83, 23
 checks outstanding, 603, 130
 disposition of remains, 87, 24
 effects, 84, 24, 85, 24
 expenses of burial, 87, 24
 funeral honors and escort, 396, 92, 418-420, 98, 422, 99, 426, 99, 427, 99
 half year's pay to beneficiary, 1385, 281
 information from records, 824, 169
 notification of nearest relative, 87, 24
 outside continental limits U. S., 87, 24
 public property or funds, 86, 24
 reports of death and burial, 45, 17, 83, 23, 87, 24
 settlement of accounts, 85, 24
 transportation of horses, 1098, 217

Deceased soldiers: (A.R.)
 accounts, medical attendance, etc., 1478, 299
 allotment pay, 1350, 275
 arrears of pay, etc., 165, 41
 baggage, professional books, etc., 1137, 225
 burial in post cemeteries, 493, 113
 cause of death, 162, 40
 certificates of merit, 187, 46
 clothing for use in burial, 1173, 234
 deposits of pay, 1367, 278
 disposition of remains, 167, 42
 effects, 162-165, 40-41, 1451, 294
 expenses of burial, 167, 42
 funeral honors and escort, 423, 99, 428, 99
 half year's pay to beneficiary, 1385, 281
 information from records, 824, 169
 legal administration of estate, 166, 42
 notification of nearest relative, 162, 40, 167, 42
 patients dying in hospitals, 1451, 294
 payment of debts of, 163, 41
 payments, 1333, 269
 reports of death and burial, 45, 17, 167, 42
 settlement of accounts, 166, 42

Deductions: (A.R.)
 loss or damage to supplies in transit, 721, 149

Defense: (I.D.), 489-519, 400-402
 delaying actions in, 517-519, 402
 deployment for, 495-510, 401-402
 counter attack in, 511-516, 402
 position and entrenchment in, 489-494, 400

Defense act (G.O.), 995

Black face numbers refer to paragraph and the light face numbers to the page

- Deficiencies in public property: (A.R.)**
 stoppages against pay of officers, 1309, 265
- Definitions (I.D.), 331**
- Delays: (A.R.)**
 applications, 67, 22
 granted enlisted men, 107, 27
 officers changing stations, 68, 22
 regarded as leaves of absence, 70, 22
- Deliberations: (A.R.)**
 conveying praise or censure forbidden, 5, 11
- Demolitions (F.E.), 119-131, 1239-1246**
- Dental corps (A.R.), 1395-1403, 284-285**
- Dental injury (G.O.), 277, 930**
- Dental surgeons: (C.M.)**
 not available for court-martial duty, 6, 1284
- Department, territorial (A.R.), 190-200, 47-54**
- Deployment: (I.D.), 331**
 in combat, 425-441, 394-395
 of battalion, 295-326, 376-380
 of company, 199-220, 362-365
- Deposit books: (A.R.)**
 deceased soldiers, 1367, 278
 importance of preserving, 1364, 278
 loss, 1363, 277
 record of deposits, 1361, 277
 soldiers discharged by purchase, 1369, 278
 transfer, sale or pledge prohibited, 1361, 277
- Depositions: (C.M.)**
 as evidence, 263-268, 1362-1363
 before whom taken, 175, 1333
 form for, 1547
 procedure to obtain, 177, 1333, 182, 1335
 when admissible, 174, 1333
- Deposits by enlisted men: (A.R.)**
 check or currency payments, 1335, 270
 deceased soldiers, 1367, 278
 deposit books, 1361-1364, 277-278, 1367, 278, 1369, 278
 discharged for fraud, 1380, 280
 exempt from certain liabilities, 1368, 278
 final statements, 140, 36, 1362-1365, 277-278, 1369, 278
 forfeitures, 1362, 277, 1368, 278, 1370, 278
 furloughed to the reserve, 1361, 277, 1362, 277, 1366, 278
 interest, 1366, 278
 making and recording, 1335, 270, 1361, 277
 payments, 1362, 277, 1364, 278, 1365, 278
 purchase of discharge, 1369, 278
 renewal on re-enlistment, 1365, 278
 transfer or desertion, 1361, 277, 1362, 277, 1368, 278
 unpaid at discharge, 1364, 278
- Deposits of moneys and collections: (A.R.)**
 balances and collections, 611-619, 131-132
 certificates, 611, 131, 612, 131, 615, 132, 616, 132, 1521, 309
 company, post exchange, etc., funds, 324, 80
 deserters' effects, 117, 30
 funds of other staff departments, 613, 131
 funds refunded, etc., 1384, 281
 proceeds of sale, 617-619, 132
 quartermasters, 614, 131
 received for disbursement, 584, 127, 586, 127
- Descriptive and assignment cards: (A.R.)**
 applicants for enlistment, 874, 179
 detached enlisted men, 1535, 311
 enlistment period noted, 153, 38
 laundry charges, 1169, 233
 previous service notation upon re-enlistment, 153, 38
- Descriptive and assignment cards: (A.R.)—**
 Continued
 recruiting parties, re-enlisting, 847, 174
 recruits, 869, 178, 873-876, 179, 1217, 246, 1249, 254
- Descriptive cards: (A.R.)**
 officers' mounts at remount depot, 1099, 214
 public animals, 280, 73, 1070, 211, 1071, 211
- Descriptive list, character on (G.O.), 51, 905**
- Descriptive lists: (A.R.)**
 absent enlisted men discharged, 154, 38
 clothing balances, 1157, 229, 1163, 232
 deposits of pay, 1361, 277
 deserters, 118, 31, 124, 32
 detached enlisted men, 104, 26, 105, 26, 1535, 311
 insane soldiers, 466, 103
 navy or marine corps deserters, 133, 34
 patients in hospitals, 1451, 294
 post noncommissioned staff, 99, 26
 prisoners, 938, 191
 public animals, 1069, 211
 retired enlisted men, 138, 35, 1337, 270
 retirement of enlisted men, 135, 35
 transfer of enlisted men, 115, 30, 1356, 276
- Deserter: (C.M.)**
 arrest by civil authority, 58, 1298
 minority of, effect on jurisdiction, 60, 1299
- Deserters: (A.R.)**
 allotment pay, 1350, 275
 application for release, etc., 125, 32
 apprehended or surrendered, 123-126, 31-32, 1165, 232, 1166, 232
 arrest, delivery, etc., 118, 31
 awaiting trial, 129, 33
 clothing allowance and accounts, 1164-1166, 232, 1373, 279, 1374, 280
 clothing and personal effects, 117, 30, 129, 33
 definition, 132, 34
 delivery, 121, 31, 122, 31, 125, 32
 deposits of pay, 1361, 277, 1362, 277, 1368, 278
 descriptive lists, etc., 118, 31, 124, 32
 disposition without trial, 126, 32, 131, 33
 enlistment or acceptance prohibited, 849, 175
 evidence against, 124, 32
 forfeitures, 130-132, 33-34, 1373, 279
 identification, 119, 31
 inquiry, liability to trial, 125, 32
 military prisoners, escaped, 121, 31
 navy or marine corps, 133, 34, 1451, 294
 pay and allowances, 129, 33, 131, 33, 132, 34, 1372-1374, 279-280
 physically disqualified, 123, 31, 126, 32
 preparation of charges against, 120, 31, 124, 32, 126, 32
 property carried away or lost, 116, 30, 687, 143
 re-enlistment, restrictions, 849, 179, 861, 176
 reports, etc., 120, 31, 124, 32
 return to service, 130, 33
 rewards and expenses, 121, 31, 122, 31, 127, 32, 128, 33, 131, 33
 statute of limitations, 121, 31, 125, 32
 time lost to be made good, 130-132, 33-34
 trial, 125, 32, 126, 32, 128, 33, 129, 33
 witnesses against, 127, 32
- Deserters, apprehension of (G.O.), 61, 906**
- Deserters, removal of charges (G.O.), 43, 904**
- Desertion: (C.M.)**
 defined and discussed, 409-410, 1412-1414
 evidence of, 284, 1367
 War Department policy regarding, 340-343, 1382-1385

Black face numbers refer to paragraph and the light face numbers to the page

Desertion: (A.R.)

charge not sustained, 1165, 232
commencement, definition, etc., 132, 34
patients in hospitals, 1451, 294
payments to enlisted men, 1333, 269
reports of inspectors, 889, 181

Desertion, discharge for (G.O.), 52, 905**Desertion, report of (G.O.), 61, 906****Destitute persons: (A.R.)**

subsistence, 1219, 247

Destruction of public property: (A.R.)

accountability, destroyed in service, 698, 144
civilian employees, 688, 143
classification, 682, 143, 717, 148
deserters, 116, 30, 687, 143
deteriorated stores, infected clothing, etc., 717, 148
enlisted men, 685, 143, 686, 143, 699, 144
in transit, 721, 149, 1141, 227
military records, 823, 168
military telegraph lines, 1563, 317
officers, 683, 685, 143
ordnance and ordnance stores, 1527, 310, 1541, 313, 1542, 313
prevention, 674, 141
public animals, 1073, 212

Detached service: (A.R.)

commutation of rations, 1238, 253
descriptive lists, 104, 105, 26
details of officers, 39, 16, 40, 16, 265, 70
engineer officers and troops, 1494-1496, 302
enlisted men with organized militia, 105, 26
foreign, fuel and light, 1036, 205, 1057, 209
leaves of absence, 51, 19
muster and pay rolls, 808, 166
officers, service schools, etc., 192, 48
orders directing travel, 69, 22
personal reports, officers, 826-828, 169-170
transfer of ordnance stores, 1535, 311, 1536, 312

Detachment commanders: (A.R.)

allotments of pay, enlisted men, 1348-1351, 275-276
clothing accounts, 1157-1160, 229-230
clothing and equipage, 1153, 228, 1156, 229, 1157, 229
confinement of enlisted men, 931, 190
daily and weekly inspections, 283, 73
deposits by enlisted men, 1361, 1362, 277
deserters, 117, 30, 120, 31
discharge of enlisted men, 148, 37
duties, etc., 368, 369, 87
emergency rations, 1205, 240
final statements, 1363, 277, 1364, 278
muster rolls, 810, 166
payments to enlisted men, 1320, 267, 1321, 267, 1332-1334, 269-270
pay rolls, 810, 166, 1318, 1320, 1321, 267
property responsibility, 661-663, 139, 1089-1092, 214-215
ration certificates, 1213, 243
ration returns, 1209, 243
recruiting service, 840, 173
returns of troops, 811, 812, 167
settlement with staff officers, 281, 73

Detachment, defined (C.M.), 28, 1290**Detachments: (A.R.)**

commanders. See Detachment Commanders (A.R.)
formation, 365-367, 86-87
fund, 327, 81
muster and pay rolls, 808, 166
officers and enlisted men on other duty, 366, 87

Detachments: (A.R.)—Continued

protecting laborers, rosters, 357, 86
ration certificates, 1213, 243
return from duty, 369, 87
returns, 811, 167, 812, 167, 815, 167, 1009, 197
serving together, 368, 87

Details (A.R.), 38-42, 16-17**Details and rosters (G.M.), 7-26, 528-529****Details, enlisted men: (A.R.)**

clerical assistant, judge advocate, 985, 195
limitations, extra and special duty, 169, 43, 171-173, 44
noncommissioned officers, 270, 71, 311, 79
post noncommissioned staff, 97, 26
roster duty, 355-357, 86, 364, 86

Details, officers: (A.R.)

roster duties, 355-364, 86

Deteriorated stores, destruction of (A.R.), 717, 168**Diagnosis: (A.R.)**

enlisted men on sick report, 1472, 298

Diaries: (A.R.)

war, in campaigns, 446, 102

Diaries (F.S.R.), 35, 1581**Directions and orders: (A.R.)**

Secretary of War, defined, 761, 157

Disability: (A.R.)

certificates. See Certificates of Disability (A.R.)

discharge of enlisted men, 140, 36, 109-161, 39-40

entry on muster roll, 1472, 298

line of duty, 161, 40, 1472, 298

permanent, 159, 39

Disabled soldiers: (A.R.)

re-enlistment, etc., 863, 177

Disbursing officers: (A.R.)

accounts current, 626-629, 133-134
acting in different capacities, 586, 127
advances to, of public moneys, 583, 127
allotments of pay, enlisted men, 1352, 276, 1354, 276, 1359, 277
balance at close of fiscal year, 625, 133
balances unchanged for three years, 590, 128
bonds, 567, 123, 568, 123, 574-577, 124-125, 580, 126, 581, 127, 589, 128
ceasing to act, instructions, 588, 127, 630, 134, 902, 186
certificates of deposit, 611-613, 131, 615, 132, 616, 132
check books, 608, 130, 609, 131
checks, 599-607, 129-130, 610, 131, 635, 135, 638, 135, 643, 136
closing statement of accounts, 902, 186
correspondence, 745, 155
deposit by, of funds, 584, 586, 127
duplicate checks, 602, 129
errors or disallowances, 655, 656, 138
funds kept in personal possession, 586, 587, 127
gambling, 593, 128
identification of payees, 645, 137
inspection of accounts, 895, 184, 897, 185, 899-901, 185-186
insurance on public money or property, 596, 128
interest in purchases, etc., 591, 592, 128
opening account, 594, 128
organized militia, 452, 455, 456, 103
outstanding and unpaid checks, 588, 127
payments, accounts, contract service, 585, 127
pecuniary responsibility, 653, 654, 138
rates of exchange, 596, 128
receipts, 595, 128

Black face numbers refer to paragraph and the light face numbers to the page

Disbursing officers: (A.R.)—Continued
 recruiting officers, 587, 127
 refundments, stoppages, etc., 614, 131, 1384, 281
 separate depository accounts, 626, 133
 settlement with legal representatives, 652, 138
 signature to be furnished depositaries, 594, 128
 surety companies, lists, 573, 124
 transfer of funds, 589, 128, 597, 129, 598, 129, 639, 135, 640, 136, 1384, 281

Discharge: (C.M.) See Dishonorable Discharge (C.M.)
 effect of dishonorable, 38, 1293
 effect of honorable, 38, 1293
 jurisdiction after fraudulent, 38, 1293

Discharge certificates: (A.R.)
 blank forms, 150, 38
 by whom signed, 147, 37
 contents and preparation, 148, 37, 149, 38, 152, 38
 custody, 150, 38
 date, for soldier under sentence, 157, 39
 forwarding, in correspondence, 151, 38
 indorsements concerning date, 152, 38, 157, 39
 issue of duplicate, prohibited, 151, 38
 loss, 151, 38
 manuscript, prohibited, 1572, 318
 notations of final payments, 1376, 280
 post noncommissioned staff, 99, 26
 previous service notation, 153, 38
 retirement of enlisted men, 135, 35
 service certificates issued in lieu of lost, 151, 38
 soldiers confined by civil authorities, 1381, 281
 use of, 150, 38

Discharge, character on (G.O.), 49, 904

Discharged soldiers: (A.R.)
 certificates of merit, 187, 46
 enlistment of certain, prohibited, 849, 175
 hospital treatment, 1452, 1453, 295
 indebtedness to laundry, 341, 84
 indebtedness to post exchange, 345, 84
 outside continental limits U. S., 145, 36, 1235, 252
 payments, 1375-1383, 280-281
 re-entering service, 848, 175, 849, 175, 860-863, 176-177
 special authority for enlistment, 861, 176
 subsistence on transports, 1235, 252
 transportation, 145, 36, 1235, 252
 travel allowances, 145, 36, 158, 39, 1378, 280

Discharge from national guard: (G.O.), 72, 1001

Discharge of enlisted men (G.O.), 29, 997

Discharge of enlisted men: (A.R.)
 absent from organization, 154, 38
 admission to Soldiers' Home, D. C., 179, 45
 allotment pay, 1350, 275, 1358, 277
 authority, in whom vested, 139, 35
 awaiting trial or sentence, 157, 39
 before expiration of service, 139, 35, 142, 36, 159, 39
 by reason of dependent parent, 144, 36
 certificates. See Discharge Certificates (A.R.)
 conviction by civil courts, 146, 36
 date when discharge takes effect, 152, 38
 deposits of pay, 140, 36, 1362, 277
 disability, 140, 36, 159-161, 39-40
 dishonorable, 150, 38, 156, 39, 944, 194, 974, 194, 975, 194
 disqualified through own misconduct, 150, 38

Discharge of enlisted men: (A.R.)—Continued
 expiration term of service, 143, 36
 final statements, 140-142, 36, 155, 38, 1379, 280, 1381, 281, 1415, 287
 fraudulent enlistment, 150, 38
 general noncommissioned staff, 103, 26
 honorable, 150, 38
 imprisonment, 150, 38
 insane soldiers, 466, 103
 patients in hospital, 1451, 294
 personal notice to prisoners, 157, 39
 Philippine Department, 126, 32, 139, 35
 post noncommissioned staff, 99, 26, 102, 26, 958, 194
 purchase of, 139, 35, 144, 36, 1369, 278
 qualifications for commission in volunteers, 149, 38
 recruits, for disability, 841, 73
 re-enlisted, 148, 37
 serving sentence, 150, 38, 157, 39
 specially ordered, 150, 38
 transportation and allowance, 158, 39
 without honor, 126, 32, 150, 38

Disciplinary barracks: (C.M.)
 confinement in, 397, 1407

Discipline: (A.R.)
 authority of officers, 24, 14, 54, 20
 company, 266, 70
 courtesy enjoined, 4, 11
 deliberations or discussions, 5, 11
 exercise of authority, 2, 11
 methods, 953, 208
 obedience to, and execution of orders, 1, 11
 post commanders, 203, 55
 praise or censure, 5, 11
 publications, 5, 11
 punishments, 2, 11
 respect to superiors, 4, 11
 superiors and inferiors, 3, 11
 use of influence, 5, 11

Discussions: (A.R.)
 conveying praise or censure forbidden, 5, 11
 orders, etc., by adjutants, 252, 68

Diseases: (A.R.)
 chronic, 1476, 299
 contagious, 717, 148, 1172, 234, 1454, 1455, 295
 prevailing, reports concerning, 1387, 282
 venereal, 1387, 281
 See also Vaccinations (A.R.)

Dishonorable discharge: (A.R.)
 date fixed by court-martial sentence, 974, 975, 194
 effect and meaning, 156, 39
 pardon or mitigation of punishment, 944, 194
 preparation of certificate, 150, 38

Dishonorable discharge: (C.M.)
 may be suspended, 321, 1377, 393, 1406
 remission of suspended sentence of, 403, 1408
 when authorized, 349, 1386

Dishonorable discharge for desertion (G.O.), 52, 905

Dismissal of officer: (C.M.)
 when mandatory, 40, 1294

Dismissal of officers: (A.R.)
 pay regulations, 1262, 257, 1265, 258

Dismounted course, pistol practice: (S.A.F.), 167-175, 810-811
 classification, 175, 811
 expert test, 174, 811
 instruction practice, 168, 810
 procedure, 169, 810
 quick fire, 171, 810, 172, 810
 rapid fire, 171, 810, 172, 810

Black face numbers refer to paragraph and the light face numbers to the page

- Dismounted course, pistol practice: (S.A.F.)—**
Continued
record practice, 173, 811
See Pistol and Revolver Practice (S.A.F.)
See Range Practice with Pistol or Revolver (S.A.F.)
slow fire, 170, 810
- Disorders: (C.M.)**
interference when attempting to suppress, 419, 1424
- Disrespect: (C.M.)**
toward President, 413, 1416
toward superior officer, 414, 1417
- Distinguished classes of marksmen: (S.A.F.)**
See Marksmen, Distinguished Classes (S.A.F.)
- Distinguished service: (A.R.)**
certificates of merit, 184-188, 46
medals of honor, 182, 45, 183, 46
- Docking, banging, or clipping: (A.R.)**
public animals, 1068, 211
- Documents (C.M.).** See Evidence (C.M.)
- Draft (C.M.).** See Persons Drafted into the Service (C.M.)
- Drafted into federal service (G.O.), 76, 1002**
- Drills: (A.R.)**
enlisted men awaiting trial, etc., 932, 190
extra and special duty men, 175, 44
- Drunkenness: (C.M.)**
as excuse for crime, 285, 1368, 286, 1369
on duty, 435, 1442, 436, 1443
- Dual oath for men (G.O.), 70, 1001**
- Dwelling: (C.M.)**
offenses concerning, 441, 1448
- Dying declarations: (C.M.)**
See Evidence, Testimonial (C.M.)
- E**
- Effects of deceased officers: (A.R.)**
delivery to legal representatives, 84, 85, 24
inventories, 84, 24
sales, 85, 24
swords, watches, trinkets, etc., 85, 24
- Effects of deceased persons: (C.M.)**
disposition of, 482, 1484
- Effects of deceased soldiers: (A.R.)**
applications for proceeds of sale, 165, 41
delivery to legal representatives, 163, 165, 41
inventories, 162, 40
sale of unclaimed, 163, 164, 41
watches, trinkets, etc., 163, 41
- Effects of deserters: (A.R.)**
disposition, 117, 30
- Effects of escaped prisoners: (A.R.)**
inventories, 940, 192
- Efficiency reports: (A.R.)**
See Reports, Efficiency (A.R.)
elimination of officers, 77, 23
- Embezzlement (C.M.), 443, 1452**
- Embezzlement: (A.R.)**
ordnance and ordnance stores, 1527, 310
- Emergency ration: (A.R.)**
composition, issue, etc., 1205, 240
definition, use, etc., 1202, 239
- Employment of noncommissioned officers (G.O.), 39, 903**
- Employment of troops to enforce the law (A.R.), 484-489, 106-112**
- Encampments: (A.R.)**
private lands occupied, 1018, 202
- Enemy: (C.M.)**
relieving, harboring, holding correspond-
ence with, giving intelligence to, 431,
1437
- Enemy property, treatment of: (L.W.)**
contributions, 351-354, 1797-1798
movable public property, 360-361, 1800-1801
municipal property, 358-359, 1800
private property, 333-344, 1793-1795
real property of a State, 355-357, 1798-1799
requisitions, 345-350, 1795-1797
unknown ownership, 362, 1801
- Enforcement of the laws: (A.R.), 484-489, 106-112**
- Engineer equipment, price of (U.A.), 1823**
- Engineers, corps of (A.R.), 1493-1510, 301-305**
- Engineer train (F.S.R.), 278, 279, 1647, 1648**
- Enlisted men: (A.R.)**
absence without leave, 110, 28, 127, 32, 128,
33, 132, 34, 141, 36
additional pay, 186, 46, 859, 176, 1338-1346,
270-274
allotments of pay, 1347-1360, 275-277
altering or taking apart arms, 292, 74
ammunition, 1530, 310
arms, etc., in barracks, 285, 74
attested by civil authorities, 1371, 279, 1381,
281
articles for sale to, 885, 180, 1174½, 234
artificial limbs and appliances, 1490, 1491,
301
artillery instruction, 303, 76
attendance at funerals, 430, 99
awaiting trial or result of trial, 157, 39, 928,
190, 970, 194, 973, 194
barrack bag, 286, 74
beard and hair, 286, 74
buildings erected, places of amusement, 339,
83
care, etc., of clothing, 286, 74, 288, 74
care, etc., of rooms and furniture, 1011, 200
certificates of merit, 184-188, 46, 1341, 271
charges against. See Charges against En-
listed Men (A.R.)
classification and rating, 1343-1345, 272-273
cleanliness, dress, etc., 286, 74, 288, 74, 289,
74, 1387, 282
clothing accounts, 1157-1166, 229-232, 1169, 233
clothing and equipment. See Clothing and
Equipment (A.R.)
commutation of rations. See Commutation
of Rations (A.R.)
confinement, 929-933, 190
correspondence with War Department, 782,
161
damaged clothing, 911, 188
deceased. See Deceased Soldiers (A.R.)
dental work, 1398-1403, 285
deposits of pay, 140, 36, 1335, 270, 1361-1369,
277-278, 1380, 280
deserters. See Deserters (A.R.)
desertion. See Desertion (A.R.)
designation of beneficiary in event of
death, 1385, 281
detached service, 104, 26, 105, 26, 808, 166
details. See Details, Enlisted Men (A.R.)
discharges. See Discharge of Enlisted Men
(A.R.)
dispatches in the field, 799, 163
expert rifle men, 1345, 273
extra and special duty, 97, 26, 168-177, 43-44,
279, 72
families of. See Families, etc. (A.R.)
first class privates, 275, 72, 278, 72, 1009, 197,
1340, 271
fuel and stoves, 1044, 206
funeral honors and escort, 428, 99
furloughed to the Army Reserve, 1361, 277,
1362, 277, 1366, 278, 1375-1379, 280
furloughs. See Furloughs (A.R.)

Black face numbers refer to paragraph and the light face numbers to the page

Enlisted men: (A.R.)—Continued

hair and beard, 286, 74
 hospital corps, 1405-1412, 285-287, 1415-1418, 287-288, 1420, 288
 hospital stores, 1473, 298, 1476, 299
 individual cooking, 302, 76, 1205, 240
 insane, 464-466, 103
 instructions by chaplains, 44, 17
 instruction in signaling, 1562, 317
 labor, 494, 113
 leaving post on pass, 288, 74
 marksmen, 1345, 273
 meal tickets, 1227, 251
 medals of honor, 182, 45, 183, 46, 188, 46
 medical attendance, etc., 1473, 298, 1474, 299, 1476, 299, 1478, 299, 1480, 300
 mess furniture in the field, 302, 76
 messing and cooking, 296-302, 75-76, 371, 87
 messing separately from company, 1209, 243
 military history, 774, 159
 navy and marine corps, hospital charges, 1460, 296
 noncommissioned officers. See Noncommissioned Officers (A.R.)
 orders, regulations, etc., affecting, 766, 159, 774, 159
 payments. See Payments to Enlisted Men (A.R.)
 physical examination or vaccination, 1485, 300
 post schools, 449, 102
 presence at parades, 436, 100
 private property lost in service, 726, 151
 promotion from the ranks, 27-33, 15, 1138, 225, 1139, 226, 1296, 264
 property damaged, 685, 143, 686, 143, 699, 144
 purchase of articles of uniform clothing from post exchange, 1174½, 234
 purchase of discharge, 1369, 278
 pursuit of deserters, 122, 31
 quartermaster corps, 1009, 197
 rations. See Ration of the Army (A.R.)
 reading matter, 1144, 227
 records, 280, 73, 281, 73, 821, 168
 recruiting service, assignments, 843-845, 174
 respect to national airs when played, 378, 88
 retired. See Retired Enlisted Men (A.R.)
 retirement, 132, 34, 134, 34, 135, 35
 returning to United States from foreign parts, 111, 28
 right to trial by court-martial, 953, 194
 roster details and duty, 355-364, 86
 sales to, of subsistence supplies, 1241, 253, 1242, 254, 1244, 254, 1249, 255
 salutes to officers, 383-392, 89-90
 sanitary measures, 286, 74
 second class privates, 1340, 271
 service, computation of time, 134, 34
 sharpshooters, 1345, 273
 sick call, 1471, 298
 staff corps and departments, 742, 154, 743, 155, 1009, 197, 1557, 315
 stoppages, 724, 150
 straw for bedding, 1084, 213
 term of enlistment, 855, 176
 transfers. See Transfers of Enlisted Men (A.R.)
 transmission by, of dispatches, 799, 163
 travel on duty. See Travel on Duty, Enlisted Men (A.R.)
 uniform, etc., 289, 74, 1569, 318
 witnesses, military or civil courts, 75, 22, 951, 194
Enlisted men, absence not in line of duty (G.O.), 229, 976

Enlisted men, debts of (G.O.), 46, 903
Enlisted men, travel allowance (G.O.), 11, 1916, 936
Enlisted men, unsuited or undesirable (G.O.), 50, 904
Enlisted reserve corps: (C.M.)
 when subject to military law, 4, 1282
Enlistment: (C.M.) See Fraudulent Enlistment (C.M.)
 unlawful, defined and discussed, 406, 1410
Enlistment papers: (A.R.)
 forms, 857, 176
 name of recruit, 858, 176
 oath, 855, 176
 preparation, etc., 847, 174, 857, 176
Enlistment papers, change of (G.O.), 189, 928
Enlistments and re-enlistments: (A.R.)
 additional pay, 1338-1340, 270-271
 antedating, 859, 176
 applicants. See Applicants for Enlistment (A.R.)
 army reserve, 855, 176, 1573, 318
 articles of war to be read, 856, 176
 coast artillery corps noncommissioned staff, 310, 78, 312, 79
 continuous-service pay, 143, 36, 1340, 271
 date, 847, 174, 859, 176
 deserters, 849, 175, 861, 176
 enlistment papers, 483, 106, 853, 176, 855, 176, 857, 176, 858, 176
 enticing by false representations, 854, 176
 fraudulent, 1380, 281, 1382, 281
 married men, 852, 176, 1009, 197, 1412, 267
 minors, 849, 175, 850, 175, 853, 176
 original, 844, 175
 prohibited classes, 849, 175
 recruiting officers, 850, 175, 851, 175, 853, 176, 854, 176, 860, 176
 re-enlisted pay, 1338, 270, 1339, 271
 re-enlistments, 859-863, 176-177, 1340, 271, 1365, 278, 1412, 267
 re-entering service, 848, 175, 860, 176, 861, 176
 signal corps, 1557, 315
 special authority required, 861, 176, 862, 177, 877, 179
Enlistments in National Guard (G.O.), 60, 1001
Enlistments in regular army (G.O.), 27, 906
Envelopes: (A.R.)
 confidential communications, 778, 161
 penalty, 834-837, 172-173, 839, 173
Epidemics: (A.R.)
 transfers of hospital corps, 1414, 287
Equipage: (A.R.)
 See Clothing and Equipage (A.R.)
Equipment and arms to be in possession of officer (U.R.), 1901
Equipment, ordnance for infantry (U.A.), 1825
Equipment, by whom, when, and how worn (U.R.), 1868
Equipment, care of (C.E.). See Care of Equipment (C.E.)
Equipment, engineer, for infantry (U.A.), 1823
Equipment, infantry, instruction and assembling of (I.E.), 741
Equipment model 1906, Appendix B (I.D.), 46
Equipment, quartermaster, for infantry (G.O.), 39, 880
Equipment, signals, for infantry (U.A.), 1824
Equipment: (A.R.)
 bands, 257, 69, 262, 70
 care and preservation, 287, 288, 74
 company, 266, 70
 field cooking device, 302, 76
 fitting and changing, 294, 75

Black face numbers refer to paragraph and the light face numbers to the page

- Equipments: (A.R.)**—Continued
horse, 1520, 308, 1521, 309, 1537, 312, 1538, 312
leather dressing material, 293, 74
markings, 257, 69, 295, 75
- Equivalents: (C.M.)**
table of, for substituted punishments, 349, 1386
- Erasures: (A.R.)**
checks, 609, 131
proposals, supplies and services, 534, 118
- Escaped prisoners: (A.R.)**
See Prisoners (A.R.)
- Escorts: (A.R.)**
commanders, 20, 14
honor, composition, etc., 416, 98
insane soldiers, 467, 468, 104
- Escorts of honor (I.D.), 738, 431**
- Espionage and treason (L.W.), 199-211, 1751-1753**
- Estimating distance rule (G.O.), 1005**
- Estimating distance test (S.A.F.), 77-85, 781-785**
- Evidence: (A.R.)**
against deserters, 124, 32
previous convictions, 954, 956, 962, 194
proceedings, surveying officers, 712, 713, 147
relief of officers from responsibility, 712, 713, 147
- Evidence: (C.M.)**
circumstantial, 203, 1342, 206, 1343
depositions, 263-275, 1362-1364
documents, 238-245, 1357-1359
general subject, 194-289, 1337-1370
judicial notice, 289, 1370
presumptions, 276-288, 1364-1369
rules of, followed by courts-martial, 196-199, 1340
testimonial, 207-237, 1343-1356
- Examination, boards of: (A.R.)**
See Boards of Examination (A.R.)
- Examination for appointment and promotion: (A.R.)**
candidates, second lieutenants, 28-31, 15
character or efficiency records, officers, 26, 13
line of army, 25, 13
- Examinations, physical: (A.R.)**
See Physical Examination (A.R.)
- Examining posts (F.S.R.), 83, 1592**
- Exchange, post: (A.R.)**
beer, wine, or intoxicating liquors, 346, 84
civilian employees, 1457, 295
council, 316-318, 79-80
council book, 211, 57
custodian of funds, 316, 79, 324, 80
erection of building by labor of troops, 339, 83
establishment and maintenance, 345, 84
fuel, 1044, 206
fund, 316, 79, 320, 321, 324, 80, 335, 83
indebtedness of soldiers, 345, 84, 1370, 278
inspection, 889, 181
profits paid to regimental fund, 325, 81
sale of certain articles of uniform clothing, 1174½, 234
sales to, of subsistence supplies, 1241, 253
- Exchange or barter: (A.R.)**
supplies from quartermaster, 1247, 255
- Exchange or surrender: (A.R.)**
public animals, 1072, 211
- Exchange or transfer: (A.R.)**
See Transfers, etc. (A.R.)
- Executive order: (C.M.)**
prescribing maximum limits of punishments, 349, 1386
- Exercise with bayonet (B.C.). See Bayonet Combat (B.C.)**
- Expeditions: (A.R.)**
escort commanders' duties, 20, 14
- Expendable articles, quartermaster department (G.O.), Bulletin 3, 1914, 983**
- Expenditures: (A.R.)**
ammunition, 350, 85, 1528-1531, 310
commanding officers, 751, 156
exceeding appropriations, 582, 127
obedience to orders, 653, 138
veterinary medicines and supplies, 1075, 212
- Expenses: (A.R.)**
arrest, etc., of deserters, 121, 122, 31, 127, 32, 131, 33
attendants, horses, mounted officers, 1098, 217
burial of officers and soldiers, 87, 24, 167, 42
contingent, 200, 54, 623, 133
escaped military prisoners, 121, 31
recovery of public property, 692, 144
sea travel, 1280, 261
- Experimental trials (A.R.), 1553-1555, 314**
- Expert riflemen: (A.R.)**
additional pay, 1345, 273
- Experts: (C.M.)**
employment and pay of, 192, 1337, 218, 1345
- Expiration of leave: (A.R.)**
defined, 58, 20, 60, 21
- Expiration of term of service: (A.R.)**
discharge of enlisted men, 143, 36
payments to officers, 1255, 256
- Explorations: (A.R.)**
ordnance and ordnance stores, 1526, 310
outfits, 672, 141
travel allowance, officers, 1295, 264
- Extensions: (A.R.)**
furloughs, 107, 27
leaves of absence, 51, 19, 52, 20, 67, 22
limits, officers under arrest, 923, 189
- Extra and special duty: (A.R.)**
artificers, wagoners, etc., 173, 44
attendance, drills, and inspections, 175, 44
classes excepted from detail, 171-173, 44
defined, 169, 43
employment of troops in labors, 168, 43
hours of labor, 176, 44
labor in camp or garrison, 169, 43
mode of detail, 169, 43
restrictions in employment, 169, 43, 177, 44
tailors, 279, 72

F

- False alarms: (C.M.)**
occasioning, 425, 1431-
- Families of officers, soldiers, etc.: (A.R.)**
burial in post cemeteries, 493, 113
enlisted men absent abroad, 1248, 225
fuel, 1038, 205
hospitals, medicines, etc., 1459, 295
medical attendance, etc., 1473, 296, 1476, 299
sales to, of subsistence supplies, 1239, 253, 1248, 255
- Farriers and horseshoers: (A.R.)**
appointment, etc., 275, 278, 72
instruction by veterinarians, 91, 25
- Fatigue dress: (A.R.)**
worn by enlisted men, when, 289, 74
- Fatigue duty: (A.R.)**
performed by roster, 357, 86
- Fees: (A.R.)**
administering oath, 649, 137
passports, 63, 21
tipping, 1280, 261
- Feet, care of (F.A.), 573**

Black face numbers refer to paragraph and the light face numbers to the page

- Feet, care of (G.O.),** 91, 912
- Ferries: (A.R.)**
 passage of troops, teams, etc., 1126, 222
 purchase, use, etc., of tickets, 1127, 222
- Field artillery practice (A.R.),** 349-354, 85
- Field clerks: (C.M.)**
 army, subject to military law, 4, 1282
- Field engineering: (F.E.)**
 See Bridges (F.E.)
 See Field Fortification (F.E.)
 See Field Transportation (F.E.)
 See Reconnaissance (F.E.)
 See Roads (F.E.)
- Field equipment, instructions (G.O.),** 319, 932
- Field firing, rules for (F.F.),** 1941
- Field fortifications: (F.E.)**
 block house, 46, 1199
 classes of, 3, 1171
 command in, 7, 1172
 cover, 13, 1178, 14, 1178, 60-64, 1206-1208
 cover in, 5, 1171
 demolitions, 119-131, 1239-1246
 division of, 4, 1171
 flanking defenses, 47, 1201
 general considerations, 23, 1185
 inundations, 59, 1205
 lunette, 18, 1182
 mining, 78-118, 1214-1238
 obstacles, 49-58, 1201-1205
 profile of, 6, 11, 1173-1174
 redan, 17, 1182
 redoubts, 19-21, 1182-1184
 revetments, 24-43, 1187-1195
 sieges, 65-77, 1208-1214
 stockades, 45, 1197
 trace of, 15, 1180, 16, 1182
 traverses, 44, 1196
 trenches, classification of, 12, 1176
 trenches, kinds of, 9, 1174
- Field kit, clothing in (G.O.),** 320, 933
- Field maneuvers, regulations for: (F.M.)**
 ammunition, 31-33, 612
 artillery, 19, 609
 cavalry attack, 20, 609
 conduct, 12, 605
 contact, 34-43, 612-613
 discussions, 15, 606
 effect of fire, 16, 607
 general principles, 1-8, 603-604
 instruction, program of, 9, 10, 604
 machine guns, 18, 608
 miscellaneous provision, 50-53, 614
 private property, 46-49, 613
 recall, 44-45, 613
 signals, 13, 14, 606
 tactical exercises, conduct of, 21-29, 610-611
 umpires, 11, 605
 umpire's decisions, 16, 607
 umpires, rules for, 17, 607
 umpiring, 30, 611
- Field music: (A.R.)**
 instruments, 1180, 235
 Memorial Day, 440, 100
 saluting, 375-377, 88, 437, 100
- Field notes and sketches: (A.R.)**
 maps and reconnaissances, 444-446, 101-102
- Field service and duties: (A.R.)**
 cooking, 296, 75, 302, 76, 1205, 240
 details by roster, 356, 86
 emergency ration, 1202, 239
 field training, divisions and brigades, 193, 48, 194, 52
 quartermaster supplies, 1087, 214
 route maps and journals of march, 444-446, 101-102
- Field service regulations (F.S.R.),** 1573
- Field works, etc.: (A.R.)**
 engineer officer's duties, 1493, 301, 1499, 302
 journals of daily events, 1502, 303
 plans, etc., 1502, 303
 working parties, 1499, 302
- Field works: (F.E.)**
 See Field Fortifications (F.E.)
- Final payment, enlisted men: (A.R.)**
 notification to quartermaster, 155, 38
- Final statements: (A.R.)**
 absence without leave, 141, 36
 blank forms, 150, 38
 clothing balance, 1163, 232
 date of discharge, 152, 38
 deposits of pay, 140, 36, 1362-1367, 277-278, 1369, 278
 discharge of enlisted men, 140, 36, 142, 36, 155, 38, 1235, 252, 1379, 280, 1415, 287
 erroneous, 155, 38
 forfeitures and deductions, 141, 36, 341, 345, 84
 fraudulent enlistments, 1380, 280
 lost or mislaid, 1377, 280
 money accounts, method of stating, 648, 137
 patients discharged from hospital, 1451, 294
 payments to discharged soldiers, 341, 84, 345, 84, 1375-1377, 280, 1381, 281
 post noncommissioned staff, 807, 166
 retirement of enlisted men, 135, 35
 transportation, 1235, 252, 1378, 1379, 280
- Findings: (C.M.)**
 discussed, 294-305, 1372-1374
 exceptions and substitutions, 299, 1373
 general principles, 297, 1372
 lesser included offense, 298, 1372
 on joint charges, 301, 1373
 record of, by reporter, 305, 1374
- Fire: (I.D.),** 232-257, 367-369
 clip fire, 243, 368
 control, 250-253, 368-369
 direction, 248, 249, 368
 discipline, 254-257, 369
 fire at will, 242, 368
 fire of position, 241, 368
 ranges, 238-240, 367
 ranging and determining, 240, 367
 rules for, 232-237, 367
 target, 244-249, 368
 volley firing, 241, 368
- Fire attack: (I.D.),** 221-231, 365-367
 company acting alone, rules for, 230, 231, 366-367
 company in support, rules for, 225-229, 366
 crawling, 224, 366
 platoons, 222, 365
- Fire superiority: (I.D.),** 400-424, 391-394
 ammunition in, 418, 419, 393
 artillery in support, 420-423, 393
 choice of target, 408-410, 392
 deployment, 425-441, 394-395
 direction and control, 402-424, 391-394
 discipline, 416-417, 393
 distribution in, 413, 392
 fire of position, 424, 394
 observation, 414-415, 392-393
 opening fire, 402-405, 391
 purpose and nature, 400, 401, 391
 range in, 411-412, 392
 use of ground in, 406, 407, 392
- Firing field, rules for (F.F.),** 1941
- Firing regulations: (S.A.F.)**
 See Small Arms Firing Manual (S.A.F.)
- First aid: (F.A.),** 571
 drowning, apparent, 578
 Schaefer method, 579
 exhaustion, 577
 fainting, 577

Black face numbers refer to paragraph and the light face numbers to the page

First aid: (F.A.)—Continued

freezing, 578
frostbite, 578
general rules for, 574
heat, 577
shock, 577
sunstroke, 577

First aid packet (G.O.), 321, 935

First aid treatment: (A.R.)

instruction, 1419, 1420, 288

First sergeants: (A.R.)

instruction, 270, 71
reduction to the ranks, 276, 277, 72
reproving, 270, 71
return to grade of sergeant, 273, 71
roll calls and inspections, 370, 87
selection and appointment, 270, 273, 71, 275, 72
warrants, 274, 71

Flags: (A.R.)

ceremonies on lowering at retreat, 437, 100
chaplains, 224½, 60
dipping of, at military posts, 405, 94
garrison, post, and storm, 223, 59
Geneva convention, 225, 60
halfstaff, 418, 98, 420-426, 98-99
Memorial Day, 440, 100
names of battles, 244, 65
national festivities, foreign vessels, 413, 98
post, 223, 59
provisional organization, 242, 65
regimental, names of battles, 244, 65
storm, 223, 59
target practice, 351, 85
United States or national, 215, 57, 216, 58, 397, 92, 398, 92, 437, 440, 100
use of unprescribed, 243, 65

Flags and lanterns, distinguishing (F.S.R.), 1689

Flags, regulations for (G.M.), 337-345, 559

Flank guards (F.S.R.), 15, 1576, 39, 1583, 53, 1587, 54, 1587

Food and cooking: (A.R.)

daily inspections, 283, 73
examination by medical officers, 1387, 282
prisoners' food, 300, 76

Forage: (A.R.)

allowance to mounted officers, 1080, 1081, 213
contracts for, or purchase, 515, 116, 557, 121
furnished by quartermaster corps, 1000, 196
issue, 1079, 213
mounted officers, 1082, 1083, 213, 1096, 217
ration, 1077, 212, 1078, 213
straw for bedding, 1084, 213, 1085, 214
transportation at posts, 1106, 219
unconsumed, 1083, 213

Fords, practicable depths (F.S.R.), Appendix 7, 1704

Foreign countries: (A.R.)

correspondence, 781, 161, 839, 173
national airs respected, 378, 88
officers and enlisted men visiting, 61-63, 21, 109, 27

Foreign vessels of war: (A.R.)

celebration of national festivities, 413, 98
flying sovereign's standard, 415, 98
salutes and honors, 399, 92
visits and courtesies, 407, 95, 410-413, 96-98

Forfeitures: (A.R.)

absence without leave, 132, 34, 141, 36
beginning of sentence, 970, 194
deposits of pay, 1368, 1370, 278
deserters, 129-132, 33-34, 1373, 279
good-conduct time of prisoners, 942, 192
sentences of courts-martial, 976-978, 194

Forms (A.R.). See Blank Forms (A.R.)

Fort Bayard, New Mexico: (A.R.)

general hospital, 1212, 243, 1439, 292, 1445, 1446, 293, 1460, 296

Frauds against the government: (C.M.)

accessory penalty, 347, 1386
defined and denounced, 444, 1446

Fraudulent enlistment (C.M.), 70, 1301, 405, 1409

Fraudulent enlistment (G.O.), 52, 905

Fraudulent enlistment: (A.R.)

deposits of pay, 1380, 280, 1382, 281

Fuel: (A.R.)

allowance, monthly, 1044, 206
families of regular or volunteer soldiers, 1038, 205
increased allowance, 1044, 206
issued to officers or troops, 1042, 1043, 206
messes, 301, 76
officers and families, 1036, 205, 1039-1040, 206
outside continental limits U. S., 1036, 1037, 205
sales, 1037, 205
standard and equivalents, 1040, 206
unconsumed, 1042, 206

Funds, special: (A.R.)

band, 324, 80, 326, 327, 81
company, 316, 79, 320, 322, 324, 80, 327, 81, 329, 82, 343, 344, 84, 1208, 242
custodians, 316, 79, 324, 80
detachment, 327, 81
inspection, 889, 181
mess, 316, 79, 320-322, 80, 324, 80, 329, 330, 82
post exchange, 324, 80
projects requiring specific authority from War Department, 323, 80
regimental, 262, 70, 321, 322, 324, 80, 325, 81
transfer, 324, 80

Funeral expenses: (A.R.)

settlement from decedent's estate, 166, 42

Funeral honors (A.R.), 396, 92, 417-434, 98-100

Furloughs: (A.R.)

arms and accouterments, 113, 29
commutation of rations, 1229, 251, 1233, 252, 1234, 252, 1236-1238, 253
delays, 107, 27
exceeding limits, 109, 27, 1229, 251
granted by whom, 106, 107, 27
gunners, 1343, 272, 1344, 273
lost, 1237, 253
number limited to 5 per cent. of any command, 106, 27
orders, 1233, 252
outside continental limits U. S., 111, 28, 134, 34
payments while absent, 113, 29
period and extensions, 106, 107, 27
previous, 109, 27
re-enlistments, conditions, 107, 27
subsistence, returning, 110, 28
suspension, 108, 27
to army reserve, 1361, 1362, 277, 1366, 278, 1375-1379, 280
transportation, 110, 112, 28, 1111, 219
visiting foreign countries, 109, 27
when not granted, 106, 27

G

Gambling: (A.R.)

dispersing officers, 593, 128

Gardens, post (A.R.), 342-344, 84

Garrison equipment: (U.A.), 1854-1856

held on memorandum receipt—not a part of unit accountability equipment

Black face numbers refer to paragraph and the light face numbers to the page

- Garrison flag: (A.R.)**
description and when used, 223, 59
salutes and honors, 398, 92
saluting, 397, 92
- Garrison prisoners: (A.R.)**
See Prisoners, Garrison (A.R.)
- Garrison ration: (A.R.)**
composition, issue, etc., 1205, 240
computation of cost, 1221, 248
definition, use, etc., 1202, 239
savings, 1220, 247
value, 1207, 242
- General courts-martial: (C.M.)**
by whom appointed, 14, 1287
form for order publishing proceedings, 1545
form for record, 1532
jurisdiction, 39, 1294
limit of punishment, 40, 1294
number of members, 7, 1285
record of trial, 354-357, 1296
- General courts-martial: (A.R.)**
See Courts-martial, General (A.R.)
- General hospitals: (A.R.)**
annual inspections, 191, 47
commutation of rations, 1212, 243
Fort Bayard, New Mexico, 1439, 292, 1445, 1446, 293, 1460, 296
Hot Springs, Ark., 1441-1444, 292-293, 1446, 293, 1460, 296
regulations and control, 1439, 292
sanitary inspections, 1387, 282
Walter Reed, D. C., 1436, 291
- General mess (A.R.)**
accounts, audit and inspection, 316, 79, 330, 82
companies withdrawing, etc., 330, 82
cooks and attendants, 329, 82
council, 316-318, 79-80, 329, 330, 82
extra compensation to attendants, 329, 82
fuel and lights, 301, 76
fund, 316, 79, 320-322, 80, 324, 80, 329, 330, 82
furniture, brooms, brushes, etc., 296, 75, 301, 76
instruction and supervision, 296, 75
management, 330, 82
recruit depots, 329, 82
time, in garrison, 371, 87
visits to hall, 204, 56
- General Order 39, 1914, extract from (G.O.), 878**
- General Order No. 9, 1916 (G.O.), 935**
- General Order No. 11, 1916 (G.O.), 936**
- General Order No. 17, 1916, extract from (G.O.), 937**
- General Order No. 21, 1916 (G.O.), 943**
- General Order No. 36, 1916 (G.O.), 943**
- General Order No. 40, 1916 (G.O.), 956**
- General Order No. 45, 1916 (G.O.), 966**
- General Order No. 54, 1916 (G.O.), 972**
- General Order No. 60, 1916 (G.O.), 974**
- General Order No. 21, 1917 (G.O.), 975**
- General Orders (A.R.). See Orders (A.R.)**
- General Orders, Circulars, and Bulletins (G.O.), 877**
- General Orders, compilation of (G.O.), 901**
- General Orders, for sentinels (G.M.), 155, 156, 540**
- General prisoner: (C.M.)**
defined, 74, 1302
sentences concerning, 330, 1378
- General prisoners: (A.R.)**
See Prisoners, General (A.R.)
- General prisoners, escape and apprehension of (G.O.), 61, 906**
- General prisoners, rules for (G.M.), 257-298, 550-554**
- General recruiting service: (A.R.)**
See Recruiting Service (A.R.)
- General staff corps (A.R.), 752-773, 156-159**
- General staff in the field (F.S.R.), 261, 1644**
- General staff serving with troops: (A.R.)**
assignment to duties, 767, 159
chief of staff of a command, 197, 199, 54, 771, 772, 159
composition, etc., 757, 157, 770, 159
senior officer, chief of staff, 771, 159
- Geneva convention: (A.R.)**
flag, 225, 60
recognition of rights, 1438, 292
- Gifts, acceptance of, or contributions to (G.O.), 3, 901**
- Good conduct time: (A.R.)**
prisoners, 942, 192, 943, 193
- Government hospital for the insane: (A.R.)**
admission, etc., of insane patients, 464-468, 103-104, 1451, 294
classes of persons admitted, 464, 103
release of patients, 470, 104
- Government of the United States: (A.R.)**
enforcement of laws by the army, 480-489, 106-112
- Governors of States and Territories: (A.R.)**
funeral honors, 421, 99
salutes and honors, 376, 88, 400, 92, 403, 93
- Graduates of the military academy: (A.R.)**
baggage transportation, 1134, 225, 1139, 226
graduating leave, 53, 20
mileage to first station, 1296, 264
pay, 1314, 266
- Gratuitous issues: (A.R.)**
accounts, 1159, 230
articles of band uniform, etc., 1167, 232
clothing, special cases, 1167, 1168, 232, 1172, 1173, 1455, 234
toilet articles, etc., 1216-1218, 245-246
- Guard, compliments from (G.M.), 222-230, 546-547**
- Guard duty: (G.M.)**
general rules for, 231-237, 547-548
method of detail, Appendix A, 565
watchman, 221, 546
- Guard duty: (A.R.)**
exemption, 363, 86
manual, 441, 101
old, exemptions, 363, 86
rosters, interior and stable, 357, 86
sentences, courts-martial, 964, 194
- Guard duty, interior (G.M.), 527**
- Guardhouses: (A.R.)**
confinement of noncommissioned officers, 929, 190
iron bunks, 1084, 213
men awaiting trial, summary courts, 933, 190
police daily, 374, 87
visits, post commander and surgeon, 204, 56
- Guard mounting: (G.M.), 347-348, 560**
formal for infantry, 349-356, 560-563
informal for infantry, 357-359, 563
- Guard patrols (G.M.), 218-220, 546**
- Guard, relieving of (G.M.), 360-367, 563-564**
- Guard roster, rules for (G.M.), Appendix B, 566**
- Guarding prisoners (G.M.), 299-307, 554-556**
- Guards: (A.R.)**
candles, 1215, 244
deserters, 127, 32
duties, etc., 441, 101
excused from Saturday inspections, 283, 73
guard report, 211, 57
interior, 357, 86

Black face numbers refer to paragraph and the light face numbers to the page

Guards: (A.R.)—Continued
 list of articles in charge, 443, 101
 military prisoners, 938, 191
 military prisons, 170, 43
 prisoners en route, 938, 191, 939, 192
 property used for police, etc., 442, 443, 101
Guns: (A.R.)
 funeral honors, 417-421, 98-99
 morning and evening, 210, 56
 saluting, 393-400, 91-92, 440, 100
Gun sling, assembling of (G.O.), 298, 932

H

Habeas corpus: (A.R.)
 discharge of enlisted men, 139, 35
 returns, 997-999, 195
 state courts or judges, 997, 998, 195
 United States courts or judges, 999, 195
Habeas corpus: (C.M.)
 briefs for use in certain cases, 1554
 forms for returns, 1553
 in connection with warrant of attachment,
 169, 1330, 478, 1481
 purpose of writ, 476, 1481
 when issued by State court, 477, 478, 1481
 when issued by United States court, 479,
 1482
 writ issued in the Philippine Islands, 480,
 1482
Hague convention (F.S.R.), Appendix '6, 1688
Hair and beard: (A.R.)
 enlisted men, 286, 74
Handwriting: (C.M.)
 See Evidence (C.M.)
Harness: (A.R.)
 ambulance, 1428, 289
 dressing, 293, 74
 purchase and repair, 1105, 219
Haversack ration: (A.R.)
 composition, issue, etc., 1205, 240
 definition, use, etc., 1202, 239
 supplemented, 1202, 239
Hay: (A.R.)
 bedding, 1085, 214
 forage ration, 1077, 212
Hazing: (A.R.)
 commissions for cadets expelled for, 37, 16
Hearsay: (C.M.)
 See Evidence, Testimonial (C.M.)
Honorable discharge: (A.R.)
 preparation of certificate, 150, 38
Honors and salutes (I.D.), 758-765, 437-439
Honors, courtesies, and ceremonies: (A.R.)
 boarding visits, 407, 95, 411, 96
 ceremonies, 433-440, 100
 escorts of honor, 416, 98
 funeral honors, 417-434, 98-100
 salutes, 375-405, 88-94, 411-413, 96-98
 visits and courtesies, 406-414, 94-98
 See also Ceremonies (A.R.)
Horse equipments: (A.R.)
 repairs, 1520, 308, 1537, 1538, 312
 sales, 1520, 308, 1521, 309
Horses: (A.R.)
 mounted officers. See Horses of Mounted
 Officers (A.R.)
 Philippine Islands, 1095, 215, 1098, 217
 public. See Public Animals (A.R.)
 transportation of the army, 1101, 218
Horseshoeing: (A.R.)
 animals pertaining to militia, 456, 103
 instructions by veterinarians, 91, 25
 shoes and nails, 1097, 217
Horseshoers: (A.R.)
 See Farriers and Horseshoers (A.R.)

Horses of mounted officers: (A.R.)
 field officers of the mobile army, 1272, 259
 forage, 1080-1083, 213
 inspection, 889, 181
 officers on service in foreign country, 1098,
 217
 purchase and sale, 1073, 212, 1095, 215
 shoeing, etc., 1096, 1097, 217
 transportation, 1098, 217
 veterinary attention, 90, 25, 1096, 217
Hospitals: (C.M.)
 inmates, Fort Bayard and Hot Springs,
 subject to military law, 4, 1282
Hospitals: (A.R.)
 army and navy, Hot Springs, Ark., 1441-
 1444, 292-293, 1446, 293, 1460, 296
 attendants, 1455, 295
 candles, 1215, 244
 charges, 1460, 1461, 296
 civilians, 734, 153, 1457-1461, 295-296
 deaths, 87, 24, 167, 42
 field, instruction, supplies, etc., 1436, 291
 flags, 225, 60
 for insane, 464-470, 103-104
 Fort Bayard, New Mexico, 1445, 1446, 293,
 1460, 296
 indebtedness to, 1461, 296
 mess rooms, 1044, 206
 muster and pay rolls, 808, 166
 property and stores, 1454, 1456, 295, 1473, 298,
 1476, 299
 sick, 283, 73, 327, 81, 1450-1453, 294-295, 1455,
 295, 1471, 1472, 298
 supervision or control, 191, 47, 1439, 292
 surgeon, post and assistants, 204, 56, 1447,
 1448, 294
Hospitals, capacity of (F.S.R.), Appendix 7,
 1704
Hostile state: (L.W.)
 authority over, 285-330, 1763-1792
Hostilities: (L.W.)
 commencement of, 19-23, 1717-1718
 treatment of enemy subjects, 24-28, 1718-1719
Hostilities, conduct of (L.W.), 172-188, 1746-
 1749
Hot Springs, Ark.: (A.R.)
 general hospital, 1441-1444, 292-293, 1446, 293,
 1460, 296
Housewife: (A.R.)
 issue to squad, 1215, 244
Husband and wife (C.M.). See Evidence,
 Testimonial (C.M.)
Hygiene: (A.R.)
 duties of surgeons, 1387, 282
Hygiene, personal: (F.A.)
 See Personal Hygiene (F.A.)
Hypothecation: (A.R.)
 pay accounts of officers, 1258, 256

I

Ice: (A.R.)
 allowance and issue, 1215, 244
Ice, strength of (F.S.R.), Appendix 7, 1704
Identification: (A.R.)
 cards, 774, 159
 deserters, 119, 31
 discharged soldiers' merit certificates, 187,
 46
 payments to discharged soldiers, 1375, 280
 soldiers killed in battle, 491, 492, 112
 unknown payees, 645, 137
Ignorance: (C.M.)
 of law and fact, 282, 1366, 283, 1367
Illuminating supplies: (A.R.)
 candles, 1052, 208, 1215, 244

Black face numbers refer to paragraph and the light face numbers to the page

- Illuminating supplies: (A.R.)—Continued**
 lanterns, 1052, 208
 matches, 1215, 244
 mineral oil, 1052-1054, 208, 1056, 209, 1061, 210, 1199, 238
 noncommissioned officers, 1054, 208, 1057-1059, 209-210
 regulations governing use of, 1051, 208
 wicks, 1052, 1054, 208
- Imprisonment: (A.R.)**
 sentences of courts-martial, 965-969, 194
- Inaccurate rifles (C.E.), 234-241, 668-670**
- Incinerator, description of (G.O.), General Order 45, 4, 967**
- Incrimination: (C.M.)**
 See Self-crimination (C.M.)
- Independence Day: (A.R.)**
 salute to the Union, 398, 92
- Indians (A.R.), 471-483, 104-106**
- Indorsements: (A.R.)**
 official correspondence, 776, 160
- Indorsements on letters, model of (G.O.), 924**
- Infantry: (A.R.)**
 administrative unit, 245, 66
 colors, 229, 61
 precedence, 6, 11
- Infantry against artillery (I.D.), 575-578, 409**
- Infantry against cavalry (I.D.), 569-574, 408-409**
- Infantry drill: (I.D.)**
 general rules for formation, 8-30, 334-336
 introduction, 1-7, 333-334
- Infantry drill regulations (I.D.), 333**
- Infantry equipment: (I.E.), 741**
 instruction for assembling
- Infantry unit accountability (U.A.), 1823**
- Infantry units: (G.O.)**
 composition of, 17, 995
- Inferior courts: (C.M.)**
 See Special Court-martial and Summary Court-martial (C.M.)
- Influence, use of (G.O.), 11, 901**
- Information: (F.S.R.)**
 general principles, 9, 10, 1575
 transmission of, 9, 1575, 36, 1581
- Information: (A.R.)**
 concerning sick and wounded, 824, 169
 forbidden, in regard to permanent works of defense, 348, 85
 furnishing, from military records, 824, 169
 military, foreign countries, 62, 21
 tests of arms or munitions of war, 1553, 314
- Information, general (F.S.R.), Appendix 7, 1704**
- Inks: (A.R.)**
 colored, in records and correspondence, 822, 168
- Inquests: (C.M.)**
 report of, 1570
 summary court-martial to hold, 483, 1484
- Insane officers: (A.R.)**
 public property or funds, 86, 24
- Insane persons: (A.R.)**
 enlistment or acceptance prohibited, 849, 175
- Insane soldiers: (A.R.)**
 Government Hospital for the Insane, 464, 103, 466-468, 103-104, 470, 104, 1451, 294
- Insanity: (C.M.)**
 accused, 219, 1346
- Inspector General's Department (A.R.), 878-914, 179-188**
- Inspection reports: (A.R.)**
 copies, 883, 180, 892, 183
 damaged clothing, 911, 188
- Inspection reports: (A.R.)—Continued**
 efficiency or inefficiency of officers, 831, 172, 883, 172, 889, 181, 890, 183
 final disposition, 900, 185, 912-914, 188
 ordnance and ordnance stores, 1537, 312, 1543, 313
 preparation and scope, 887, 181, 890, 183, 891, 183
 private buildings and lands, 1018, 202
 proceedings, surveying officers, 725, 150
 troops, stations and accounts, 900, 185
- Inspections: (I.D.), 745-753, 433-437**
 battalion, 749-753, 436-437
 company, 745-748, 433-436, Appendix B, 467
 Model 1906 equipment, Appendix B, 467
 regimental, 754, 437
- Inspections: (A.R.)**
 articles in charge of guards, 443, 101
 bakers, cooks, etc., 329, 82
 barracks and quarters, 1010, 200, 1012, 200, 1467, 297
 company fund accounts, 328, 82
 daily and Saturday, 283, 73
 damaged clothing, 911, 188
 detachments of recruits, 868, 178
 extra and special duty men, attendance, 175, 44
 garrisons, 888, 889, 181
 horse equipments, 1520, 308
 methods of conducting, 887-892, 181-183, 901, 186
 military commands, 879, 179
 musters, 439, 100
 post commanders, 203, 55
 private buildings and lands, 1018, 202
 public property for condemnation, 678, 141, 679, 142, 903-914, 186-188, 1073, 212
 recruits sent to organizations, 868, 178
 reports. See Inspection Reports (A.R.)
 special, 893, 184, 895, 184
 subjects embraced, 887, 181
 tactical, regulations, 887, 181
 tours of inspectors, 880, 881, 180
 transports, 896, 185
 troops, stations, etc., 889, 181
 weekly, 283, 73, 287, 74, 1447, 294
- Instruction: (A.R.)**
 cooking, 296, 75
 enlisted men, signaling, 1562, 317
 field practice, messing and cooking, 296, 75, 1205, 240
 first aid to sick and wounded, 1419, 1420, 288
 use and preservation of reconnaissance instruments, 447, 448, 102
- Instruction for care and repair of small arms and ordnance equipments (C.E.), 639**
- Intercourse between belligerents (L.W.), 230-249, 1757-1761**
- Interior guard: (G.M.)**
 classification of, 6, 527
- Interior guard duty (G.M.), 527**
- Interments: (A.R.)**
 battle-ground cemeteries, 491, 492, 112
 deceased officers and soldiers, 87, 24, 167, 42, 1173, 234
 post cemeteries, 493, 113, 497, 113, 498, 113
- Interpreter: (C.M.)**
 employment and pay, 119, 1315
- Interrogatories: (C.M.)**
 See Deposition (C.M.)
- Intoxicated persons: (A.R.)**
 enlistment or acceptance prohibited, 849, 175
- Intoxicating liquor: (A.R.)**
 sale of, in exchanges forbidden, 346, 84

Black face numbers refer to paragraph and the light face numbers to the page

- Intoxicating liquor: (A.R.)**—Continued
unlawful introduction into Indian country, 471, 104
- Intranching: (F.E.)**
See Field Fortifications (F.E.)
- Intrenchments: (F.S.R.)**
in combat, 133, 1614
- Invalid soldiers: (A.R.)**
parlor and sleeping cars, 1128, 222
- Inventories: (A.R.)**
condemnation of property, 904-906, 186, 909, 188
deceased officers' and soldiers' effects, 84, 24, 162, 40, 1367, 278, 1451, 294
defects or shortage, 668, 140
escaped military prisoners' effects, 940, 192
ordnance and ordnance stores, 1543, 313
public property, deceased officers, 86, 24
public property, insane officers, 86, 24
quartermaster stores, 1094, 215
unserviceable property, 678, 141, 679, 142, 725, 150
- Investigations: (A.R.)**
alleged attempts to defraud the government, 884, 180
irregularity or misconduct of officers or agents, 883, 884, 180
loss of special funds, 321, 80
- Irons: (C.M.)**
accused not to be tried in, 88, 1308
- Irons: (A.R.)**
placing in, of prisoners, 935, 191
- Isolated stations: (A.R.)**
issues of clothing, 1158, 230
- Issues: (A.R.)**
clothing and equipage, 1157, 229, 1158, 230, 1167-1173, 232-234, 1455, 295
disinfectants, 1487, 300
extra, quartermaster supplies, 1215-1218, 244-246
forage, 1079, 213
fuel, 1042, 1043, 206
gratuitous. See Gratuitous Issues (A.R.)
hay for bedding, 1085, 214
hospital stores, 1473, 298
litters, hand and mule, 1430, 1431, 290
ordnance and ordnance stores, 1513-1519, 308, 1522, 309, 1524-1526, 310
public animals, 1071, 211
public property, 673, 141
shoeing material, 1097, 217
subsistence supplies, 1219-1222, 247-249
transportation requests, 1116, 220, 1119, 221, 1121, 221, 1125, 222, 1126, 222, 1279, 261
veterinary medicines and supplies, 1075, 212
- J**
- Jeopardy (C.M.).** See Trial (C.M.)
- Joint charges (C.M.).** See Charges (C.M.)
- Journals: (A.R.)**
field operations, 816, 167
marches, 446, 102
war diaries, 446, 102
- Judge advocate: (C.M.)**
assistant, 106, 107, 1312
duty toward accused, 96, 1310
power to appoint, 15, 1287
legal adviser of court, 99, 1311
selection and duties, 94-105, 1310-1312
suggestions for trial, 1528
- Judge advocate general's department (A.R.),** 915-921, 188-189
- Judge advocates of courts-martial: (A.R.)**
administration of oaths, 23, 14, 684, 143
- Judge advocates of courts-martial: (A.R.)**—Continued
civilian witnesses, military courts, 993, 195
clerical assistant, 985, 195
death or disability after decision of court on sentence, 979, 195
interpreters, 988, 195
preparation and authentication of record, 979, 980, 195
reporters, 986, 195
transmission of record, 981, 195
witnesses, 950, 194, 952, 194, 993, 195
- July 4: (A.R.)**
salute to the Union, 398, 92
- Jurisdiction: (A.R.)**
lands used for military purposes, 704, 145
State courts, habeas corpus, 997, 998, 195
See also—
Courts-martial (A.R.)
Military Commissions (A.R.)
- Jurisdiction of courts-martial: (C.M.)**
can not be divested by act of accused, 36, 1293
conditions necessary to show, 34, 1292
defined, 32, 1291
general courts-martial, 39, 40, 1294
not territorial, 37, 1293
other military tribunals, 45, 1296
special courts-martial, 41, 1294, 42, 1295
summary courts-martial, 43, 44, 1295
when concurrent with civil, 35, 1292
when terminated, 38, 1293
- K**
- Keepsakes: (A.R.)**
escaped prisoners, 940, 192
- Kitchens: (A.R.)**
daily inspections, 283, 73
fuel and stoves, 1044, 206
management and regulations, 297, 75
tableware, utensils, etc., 297, 75, 301, 76, 1177, 1178, 234
- Knots, tying of (F.E.),** 45, 1082
- L**
- Labor of troops: (A.R.)**
aid to contractors, 516, 116
buildings for amusement, etc., 339, 83
extra-duty pay, 169, 43
in arrest or confinement, 932, 190
maintenance of post cemeteries, 494, 113
military works, 357, 86
unnecessary, on Sunday, 205, 56
- Labor, results by one man (F.S.R.),** Appendix 7, 1704
- Land warfare, rules for (L.W.),** 1713
- Lanterns: (A.R.)**
candles, 1215, 244
stable use, 1052, 208
- Larceny (C.M.),** 443, 1452
- Lashings, making of (F.E.),** 46, 1089
- Laundries: (A.R.)**
charges, 319, 80, 341, 84, 1169, 233
company, 327, 81
indebtedness of soldiers, 341, 84
post, 341, 84
- Laundrymen: (A.R.)**
purchase of subsistence stores, 1245, 254
- Laws: (A.R.)**
obstructing or hindering, 485, 106
- Laws of war on land: (L.W.)**
general principles, 10-18, 1715-1717
unwritten rules, 8, 9, 1715
written rules, 2-7, 1713-1714

Black face numbers refer to paragraph and the light face numbers to the page

Laws of war, penalties for violation: (L.W.)
 complaints, 365, 1802
 hostages, 387, 1805
 punishment of war crimes by individuals, 366-378, 1803-1805
 reprisals, 379-386, 1805-1806
Leading questions (C.M.). See Evidence (C.M.)
Leases: (A.R.)
 military lands, 705, 146
 rooms for offices, 1046, 207
Leaves of absence: (A.R.), 49-67, 19-22
 applications, etc., 51, 19, 55-57, 20, 67, 22, 1187, 237
 beyond limits of command, 51, 19, 57, 20, 60, 21
 change of station, 1292-1294, 263-264
 commencement and expiration, 58-60, 20-21
 commutation of quarters, 1301, 264
 computation, 1276, 260
 contract surgeons, 1393, 284
 cumulative, 1033, 204, 1275, 260
 custodians of special funds, 324, 80
 delays, 70, 22
 detached service, 51, 19
 duration, 58, 20, 60, 21
 during active operations, 54, 20
 full pay, 1275, 260
 graduates of military academy, 53, 20
 granted, by whom, 49, 19, 51, 19, 52, 20
 granted in months and days, 58, 20
 instructors, service schools, 1277, 260
 in the field, 59, 21
 leave year, how reckoned, 1276, 260
 notations on rolls and returns, 64, 21
 nurses, 1425, 829
 officers in charge of public property, 659, 139
 officers returning to United States, 60, 21
 on special duty, 59, 21
 orders to rejoin station, 1289, 263, 1290, 263
 payments to officers, 1275-1277, 260
 payments to officers resigning, 1263, 257
 periods and extensions, 49-53, 19-20, 55, 20, 57, 20, 67, 22
 periods defined, 58, 20, 60, 21
 permission to hunt, 65, 21, 66, 22
 personal, restrictions, 50, 51, 19
 professors, etc., military academy, 1277, 260
 quarters, 1033, 204, 1035, 205
 reports, etc., by officers, 59, 21, 64, 21
 sick, 57, 1035, 205, 1301, 264
 take effect, 59, 21
 telegraphic application, 1187, 237
 temporary duty, 1278, 260, 1289-1291, 263
 tender of resignation, 81, 23
 travel allowances, 1289-1294, 263-264
 verbal permits, 64, 21
 visiting foreign countries, 61-63, 21
 when not granted, 54, 55, 20
Leave year: (A.R.)
 reckoned, 1276, 260
Legal representatives: (A.R.)
 deceased officers and soldiers, 84, 24, 85, 24, 87, 24, 163, 41, 165, 41, 187, 46
 settlements with, by disbursing officers, 652, 138
Legislation: (A.R.)
 efforts to influence, 5, 11
Length of service: (A.R.)
 rules for computing longevity pay, 1271, 259
Letter heads: (A.R.)
 wording and matter, 512, 115
Letters, official: (A.R.)
 applications for official opinions, 788, 162

Letters, official: (A.R.)—Continued
 briefing, 776, 160
 channels, 782-785, 161-162, 787, 162, 788, 162
 chiefs of bureaus, 787, 162
 colored inks, 822, 168
 commanding officers, 787, 162
 confidential communications, 778, 161
 courtesy required, 790, 162
 courts-martial proceedings, 919-921, 189
 employment of civil counsel, 996, 195
 inclosures, 776, 160
 indorsements, 776, 160, 786, 162
 letter heads, form, 512, 115
 messages by telegraph, 1561, 316
 penalty envelopes, 834-837, 172-173, 839, 173
 post-office address, 777, 161
 preparation, folding, etc., 775, 160
 signatures, 779, 161
 title, officer addressed, 780, 161
 transmission by freight or express, 838, 173
 unimportant and trivial, 789, 162
 See also Correspondence (A.R.)
Libraries (A.R.), 331-341, 83-84
License: (A.R.)
 civilians on reservations, 212, 57
 military lands, 705, 146
Licenses to trade (L.W.), 281, 1780
Lights: (A.R.)
 extinguished at taps, 370, 87
Limitation: (A.R.)
 age, recruits, 849, 175
 appointees to second lieutenantcies, 28, 15, 31, 15, 34, 16
 court-martial sentences, 968, 194
 detached service, 59, 16, 40, 16, 265, 70
 emergency purchases, 1007, 196
 expenditures, posts, etc., 207, 56, 707, 146
 express transportation, 1142, 206
 mess furniture in the field, 302, 76
 personal staff duty, 41, 17
 punishments, 963, 964, 968, 194
 re-entering army, 861, 176
 special funds, 322, 80
 statute of, concerning deserters, 121, 31, 125, 32
 transportation of officers' horses, 1098, 217
Limitation on actions: (C.M.)
 as to number, 149, 1322
 as to time, 149, 1322
Limits: (A.R.)
 arrested officers, 923, 189
 furloughed enlisted men, 109, 27
Litters: (A.R.)
 hand and mule, 1430-1432, 290
Longevity pay: (A.R.)
 computing service, 1271, 259
Loss of Funds: (A.R.)
 fraud or neglect, 1309, 265
 special funds, 321, 80
 stoppages, 1309, 265
 transported by express, 1142, 227
Loss of property: (A.R.)
 accountability for, if lost in service, 698, 144
 classification, 682, 143
 deserters, 687, 143
 enlisted men, 685, 143, 686, 143, 699, 144
 in transit, 721, 149, 1141, 227
 mess property and utensils, 301, 76
 officers, 683, 685, 143
 ordnance and ordnance stores, 1527, 310, 1530, 310, 1541, 313
 prevention, 674, 141
 stoppages, 1309, 265
Lye and sapollo: (A.R.)
 allowance, 1182, 236

Black face numbers refer to paragraph and the light face numbers to the page

M

- Machine gun drill regulations: (M.G.)**
ceremonies, 219-224, 1927-1929
company, 167-218, 1922-1927
definitions, 33-45, 1907-1909
firings, 32, 1907
gun squad, 56-68, 1910-1911
instruction, 46-55, 1909-1910
packer, 69-96, 1912-1916
signals, 5-10, 1905
squad, 15-31, 1905-1907, 146-166, 1916-1921
tactical employment, 225-319, 1929-1937
- Machine gun equipment, Benet-Mercie, prices of (U.A.), 1833**
- Machine gun equipment, Maxim, prices of (U.A.), 1837**
- Machine guns (I.D.), 537-546, 404-405**
- Machine guns: (A.R.)**
target practice, 351-353, 85
- Machine guns in combat (F.S.R.), 134, 1614**
- Maneuvers, rules for: (F.M.)**
See Field Maneuvers (F.M.)
- Manslaughter (C.M.), 443, 1452**
- Manual:**
Automatic pistol (A.P.), 619
Bayonet, of the (B.D.), 2001
Courts-martial (C.M.), 1280
Engineers' field (F.E.), 1009
Instruction for assembling the infantry equipment (I.E.), 739
Instruction for care and repair or small arms and equipment (C.E.), 637
Interior guard duty (G.M.), 525
Of arms (I.D.), 74-100, 343-347
Personal hygiene and first aid (F.A.), 569
Physical training (P.T.), 471
Small arms firing (S.A.F.), 751
Unit accountability (U.A.), 1821
United States rifle (U.S.R.), 671
- Manuals of staff departments (A.R.), 1570-1572, 318**
- Maps and reconnaissances: (A.R.)**
duties, engineer corps, 1493, 301, 1500, 302, 1502, 303
journals of march, 445, 446, 102
purchase of maps, 521, 117
route maps, 444, 101, 445, 102
surveying instruments, 447, 448, 102
system of scales, 444, 101
- Maps and sketches (F.S.R.), Appendix 4, 1687**
- Map making: (F.E.)**
See Reconnaissance (F.E.)
- Map reading (F.E.). See Reconnaissance (F.E.)**
- Marches (I.D.), 623-660, 414-418**
advance guards, 639-652, 416-417
flank guards, 656-660, 418
protection on the march, 636-638, 415
rear guards, 653-655, 417-418
training and discipline, 623-635, 414-415
- Marches: (A.R.)**
journals, 446, 102
war diaries, 446, 102
- Marches and convoys: (F.S.R.)**
conducting prisoners, 120, 1608
conduct of, 97-107, 1598-1603
convoys, 115-121, 1606-1608
convoys by water, 121, 1608
night marches, 114, 1605
regulations for—
in campaign, 110-114, 1604-1605
in peace, 108, 109, 1603
- Marine corps: (A.R.)**
deserters from, enlisted in the army, 133, 34
- Marine corps: (A.R.)—Continued**
precedence of, on occasions of ceremony, 6, 11
rations, 1204, 240
relative rank with other corps, 10, 13
- Marine corps officers: (A.R.)**
See Officers, Marines (A.R.)
- Marines: (C.M.)**
subject to military law, 4, 1282
when available for court-martial duty, 10, 1286
when triable by military court, 4, 1282
when triable by naval court, 4, 1282
- Marking: (A.R.)**
boxes for transportation, 1547, 313
company property, 295, 75
condemned property, 907, 187
donations, 1144, 1145, 227
graves, 491, 112, 492, 112, 495, 113
packages for shipment, 1140, 226
public property, 676, 141
regimental property and equipments, 257, 69
- Marksmen: (A.R.)**
additional pay, 1845, 273
- Marksmen, distinguished classes (S.A.F.), 342-344, 863**
- Married men: (A.R.)**
enlistment or re-enlistment, 852, 176, 1009, 197, 1412, 287
transfer to Hospital Corps, 1412, 287
- Marshals: (A.R.)**
apprehension of deserters, 118, 121, 31
- Martial law (C.M.), 2, 1281**
- Maxim machine gun (U.A.), 1837**
- Maximum limits of punishments: (C.M.)**
See Punishments (C.M.)
- Mayhem (C.M.), 443, 1452**
- Meals and lodgings: (A.R.)**
civilian employees, 733, 152
enlisted men, 371, 87, 1227, 251
- Mechanics: (A.R.)**
appointment, etc., 275, 278, 72
extra-duty details, 173, 44
- Medals of honor: (A.R.)**
announcement of award, 183, 46
applications, 182, 45
conditions of award, 182, 45, 188, 46
officers and enlisted men, 182, 45, 188, 46
unauthorized possession, report, 189, 46
- Medical attendance: (A.R.)**
accounts, 1476-1485, 299-300
civilian physicians, 1476-1479, 299, 1484, 300, 1485, 300
medical officers, 1473, 298, 1474, 299
military prisoners, 1473, 298, 1476, 299
prisoners of war, 1473, 298
recruiting service, 1475, 299
- Medical certificates: (A.R.)**
disability, 159-161, 39-40
insane soldiers, 466, 103
sick leave, officers, 57, 20
- Medical department (A.R.), 1385-1492, 281-301**
- Medical officers: (A.R.)**
arrests, etc., 925, 190
boards of examination, 30, 15
certificates of disability, 160, 161, 40
deserters, 126, 32
detail, duties, etc., 204, 56, 206, 56, 1387, 282, 1447, 294, 1448, 294
diagnosis furnished, etc., 1472, 298
efficiency reports, 829, 170
eligibility to command, 19, 14
field service, 1433, 1434, 291
first-aid treatment, 1420, 288
hygiene and sanitation, 204, 56, 1387, 282

lack face numbers refer to paragraph and the light face numbers to the page

- Medical officers: (A.R.)—Continued**
 insane soldiers, 465, 466, 103
 invalid soldiers, 1128, 222
 official address at posts, 206, 56
 patients in hospital, 1451, 294, 1472, 298
 ration returns, 1210, 243
 recruits, 867, 177, 868, 178, 870, 178, 871, 178
 reports, incapacitated or deceased officers,
 83, 23, 890, 183
 reports to, of discharges for disability, 160,
 40
 responsibility for remains of officers and
 soldiers, 87, 24, 167, 42
 sick call, 1471, 1472, 298
 sick leave, officers, 57, 20
 surgeons, 24, 14, 491, 112, 492, 112, 1489, 300
- Medical reserve corps: (A.R.)**
 appointments in medical corps, 1389, 283
 assignment of officers, 1389, 283
 baggage transportation for officers, 1138,
 225
 mileage, 1296, 264
- Medical supplies: (A.R.)**
 disinfectants, 1487, 300
- Medicines: (A.R.)**
 accounts, 1477, 299, 1480, 300, 1483, 300
 charges, organized militia, 1460, 296
 dispensed, to whom, 1473, 298
 families and servants, 1476, 299
 officers and men not on duty, 1476, 299
 purchased from druggists, 1478, 299, 1480,
 300, 1483, 300
 retired officers and enlisted men, 1474, 299
 veterinary, 1074-1076, 212, 1096, 217
- Meeting engagement (I.D.), 520-530, 403**
- Member of court-martial: (C.M.)**
 absence, how accounted for, 85, 1307
 as accuser, 129, 1317
 as witness, 131, 1318
 change in, 93, 1309
 decorum, 86, 1307
 duties, 81, 1307
 quorum, 7, 1285
 voting, 90, 1308
- Members of courts-martial: (A.R.)**
 appointment, 945, 194
 disorderly conduct, 948, 194
 duty with command, 946, 194
 sit according to rank, 945, 194
- Members of the cabinet: (A.R.)**
 funeral honors, 421, 99
 salutes and honors, 376, 88, 400, 92, 403, 93
- Memorandum receipts: (A.R.)**
 company records, 281, 73
 cooking apparatus, 1252, 256
 ordnance stores, 1524, 310
 quartermaster supplies, 1020, 202, 1076, 212,
 1089-1092, 214-215
 relief from responsibility, 657, 138
- Memorial Day: (A.R.)**
 observance, 440, 100
- Messages, reports, maps, and diaries (F.S.R.),
 32-35, 1580-1581**
- Mess, general: (A.R.)**
 See General Mess (A.R.)
- Messing and cooking: (A.R.)**
 broken, lost or damaged articles, 301, 76
 brooms, brushes, fuel, and lights, 301, 76
 cooking apparatus, 1252, 256
 enlisted men, 296-302, 75-76
 field ranges, etc., 296, 75
 general mess, 204, 56, 296, 75, 301, 76, 317, 79,
 318, 80, 320, 80, 321, 80, 329, 82, 330, 82, 371,
 87
 inspections, 889, 181
 kitchen tableware and furniture, 301, 76
- Messing and cooking: (A.R.)—Continued**
 management of kitchens, 297, 75, 301, 76
 manual for army cooks, 296, 75, 299, 75
 meals for enlisted men, 371, 87
 mess furniture in the field, 302, 76
 mess sergeants, 1346, 274
 mess stewards, 329, 82
 prisoners' food, 300, 76
 rations, care, savings, etc., 298, 75
 removal of outfits from barracks, 1023, 203
 rooms for officers, 1034, 204
 supervision, company and general mess,
 296, 75
 yearly field practice, 296, 75, 1205, 240
- Metal equipment, care of (C.E.), 62-65, 649-650**
- Mileage: (A.R.)**
 approval of journey, 1285, 263
 authority, 1284, 1285, 263
 baggage transportation, 1122, 221
 delays en route, 1283, 263
 discharged soldiers, 1378, 280
 joining first station, 1296, 1297, 264
 leaves of absence, 1289-1294, 263-264
 lines of travel, 1287, 263
 orders, 71, 22, 1284-1288, 263
 payments, 1279, 261, 1283, 263, 1507, 304
 rates and computation, 1279, 261, 1282, 262
 return journeys, 1285, 263
 route of travel, 1282, 262, 1287, 263
 sea travel, 1280, 261
 surveys, military, 1295, 264
 traveling with troops, 1281, 262
 travel without troops, 1279, 261
 unauthorized, 1297, 264
 urgent duty, 1285, 263
 witnesses, 75, 22, 990-993, 195, 1298, 264
- Military academy: (C.M.)**
 See Superintendent, Cadet (C.M.)
- Military authority: (A.R.)**
 exercise, 2, 11
- Military authority over the territory of a
 hostile state (L.W.), 285-330, 1783-1792**
- Military commands: (A.R.)**
 See Commands (A.R.)
- Military commissions: (A.R.)**
 discharge of enlisted men, 139, 35
 proceedings, 917, 189
 records, 915, 188
 reports, 1934, 52
- Military control: (A.R.)**
 emergencies, 191, 47, 192, 48
- Military correspondence (A.R.), 775-790, 160-
 162**
- Military correspondence (G.O.), 176, 923**
- Military defenses: (A.R.)**
 sites, plans, and estimates, 1493, 301
- Military discipline: (A.R.)**
 See Discipline (A.R.)
- Military education (A.R.), 449, 102**
- Military government (C.M.), 2, 1281**
- Military information: (A.R.)**
 See Information (A.R.)
- Military jurisdiction: (C.M.)**
 exercise of, 3, 1281
 kinds, 2, 1281
 source, 1, 1281
- Military law (C.M.), 2, 1281**
- Military police: (F.S.R.)**
 commander of trains, 411-418, 1671-1672
 commanders, defense districts, line of
 communications, 413, 1672
 provost marshal, functions of, 414, 1672
- Military prison: (A.R.)**
 See United States Military Prison (A.R.)
- Military record: (A.R.)**
 deserters, 124, 32

Black face numbers refer to paragraph and the light face numbers to the page

Military record: (A.R.)—Continued
 indorsed on discharge certificate, 148, 37, 149, 38
 officers for retirement or promotion, 26, 14
Military roads, railroads, and bridges: (A.R.)
 construction and repair, 1493, 301, 1508, 304
Military signaling and signal duties: (A.R.)
 code cards and instructions, 1564, 317
 communication between the army and navy, 409, 96, 1561, 316
 general service code, 1561, 316
 instruction, enlisted men, 1562, 317
 in the field, 1558, 1561, 316
 precedence of messages, 1561, 316
 See Signal Book (Sig.), 585
 supervision, control, etc., 1556, 315, 1558, 315
 visual signaling, use between army and navy, 409, 96, 1561, 316
Military telegraph and telephone lines: (A.R.)
 commanding officers, 1559, 316
 confidential communications, 1560, 316
 construction, maintenance, etc., 1556, 315, 1559, 316
 destruction or obstruction, 1563, 317
 in the field, 1561, 316
 personal and press messages, 1561, 316
 signal officers, 1559, 316
 use of cipher, 1561, 316
Military works: (A.R.)
 laborers and armed working parties, 357, 86
Militia: (C.M.)
 See National Guard (C.M.)
Militia, composition of (G.O.), 57, 1000
Militia duty, exemption from (G.O.), 59, 1001
Militia, organized: (A.R.)
 adjutant general of the army, the, 105, 26, 774, 159
 admission to hospitals, 1459, 295, 1460, 296
 annual returns of, for Congress, 774, 159
 arming and equipping, 1143, 227
 chief of staff, supervisory powers, 764, 158
 correspondence, 105, 26, 774, 159
 custody of records after muster out, 774, 159
 encampments, reports of, 774, 159
 engineer supplies, 1510, 305
 enlisted men, army, detailed with, 105, 26
 equipment, etc., 741, 154
 equipping, forwarding, etc., in time of war, 193, 48, 194, 52
 examination of members, for appointment in army, 35, 16
 inspections, 193, 48
 officers. See Officers, Militia (A.R.)
 officers, army, serving with, 1261, 257
 ordnance and ordnance stores, 1511, 305, 1514, 308
 relative rank with regulars, marine corps, and volunteers, 6, 11, 10, 13
 reports and returns, 105, 26, 193, 48, 774, 159
 signal supplies, 1565, 317
 subsistence charges, field hospitals, 1460, 296
Mineral oil: (A.R.)
 allowance, 1053, 208, 1061, 210
 extra issues, 1006, 196
 purchased by soldiers' families, 1038, 205
 requisitions for, and issue, 1052, 208
 sales, 1054, 208
 storage in or near storehouses, 1199, 238
 unconsumed, 1056, 208
Mines, submarine (L.W.), 432-443, 1817-1818
Mining (F.E.), 78-118, 1214-1239
Minors: (A.R.)
 consent of parent or guardian to enlistment, 850, 175, 853, 176

Minors: (A.R.)—Continued
 discharged for fraud, 1380, 280
Minor warfare (L.D.), 596-603, 410-411
Misbehavior: (C.M.)
 various kinds in time of war prohibited, 425, 1431
Misconduct: (A.R.)
 cause of death, 83, 23, 162, 40
 officers or agents, 884, 181, 900, 185
Mixed corps: (A.R.)
 commanders, 10, 13, 817, 168
Mobile army (F.S.R.), 3, 1573
Mobile army, training of (G.O.), 85, 908
Mobs: (A.R.)
 employment of troops against, 489, 112
Model remarks for muster rolls (M.R.), 1996
Money accountability: (A.R.)
 appropriations, 620-625, 132-133
 certificates of deposit, 611-616, 131-132
 checks, 587, 127, 599-607, 129-130
 disbursing officers, 583-596, 127-128
 division staff officers, 197, 54
 funds by express, 1142, 227
 liquid coffee purchases, 1208, 242
 money accounts. See Money Accounts (A.R.)
 money vouchers. See Money Vouchers (A.R.)
 official check books, 606, 130, 610, 131
 pecuniary responsibility of officers, 141, 36, 155, 38, 653, 138, 654, 138
 post noncommissioned staff, 254, 68
 proceeds of sale, 611, 131, 617-619, 132
 transfer on succession, 17, 14, 630, 134
 transfers, 589, 128, 597, 129, 598, 129
 See also Public Monies (A.R.)
Money accounts: (A.R.)
 abstracts, 626, 133, 1250, 255
 accounts current, 615, 132, 623, 133, 626-629, 133-134, 635, 135, 1492, 301
 administrative examination, 655, 656, 138
 amounts to be in dollars and cents, 635, 135
 certificates of deposit, 615, 132
 closing statements, disposition, 902, 186
 contingent expenses, 623, 133
 deceased officers, 86, 24
 disbursing officers, 589, 128
 disposition, 626, 133
 foreign currency, 635, 135
 fractions of cents, 635, 135
 insane officers, 86, 24
 inspection, 895, 184, 897, 185, 899-901, 185-186
 military attaches, 1100, 218
 orders and papers supporting, 627-629, 134
 ordnance department, 1511, 305
 original vouchers required, 628, 134
 preparation and rendition, 626, 133, 627, 134
 rates of exchange, 1100, 218
 subsistence sales, 1250, 255
 vouchers to accompany, 627, 628, 134
 See also—
 Public Monies (A.R.)
 Receipts for Money and Property (A.R.)
Money vouchers: (A.R.)
 artificial limbs, 1492, 301
 certificate of correctness, 632-634, 134-135, 642-644, 136
 coin or currency, 635, 135
 commanding officers, 751, 156
 completion before certified by creditor, 638, 135
 corporations, 641-644, 136
 currency payments to be noted, 640, 136

Black face numbers refer to paragraph and the light face numbers to the page

- Money vouchers: (A.R.)**—Continued
 fees of civil officers, 649, 137
 firms and individuals, 641-644, 136
 fractions of cents, 635, 135
 identification, when required, 645, 137
 invoices and receipts for funds, 630, 135, 640, 136
 mode of purchase, 636, 135
 money amounts, 635, 135, 638, 135, 644, 137
 number, date, and amount of check, 640, 136
 number of copies to be made, 631, 134
 original, to accompany account, 628, 134
 original bills, 634, 135
 payment with check, 643, 136
 payment with currency, 642, 136
 quartermaster and subsistence supplies, 633, 134
 receipts in blank prohibited, 637, 135
 services, not personal, 633, 134, 636, 135
 services, personal, 633, 134, 651, 137
 signature and heading, 646, 137
 signing of checks in blank prohibited, 637, 135
 small sums for occasional services, 644, 136
 supplies, 633, 134, 636, 135
 telegraphic service, 644, 136, 1186, 237
 unpaid accounts, 650, 137
 witnesses to signature by mark, 647, 137
- Monthly payments: (A.R.)**
 enlisted men, 1315, 266
 officers, 1256, 256
- Monthly reports: (A.R.)**
 chaplains, 45, 17
- Monthly returns: (A.R.)**
 effective strength in campaigns, 815, 167
 enlisted strength of the army, 811, 167, 813, 167, 815, 167
 general prisoners, 937, 191
 medical officers, 1489, 300
- Mops: (A.R.)**
 allowance, 1181, 235
- Morning reports: (A.R.)**
 company, 280, 73
 post, 211, 57
 regimental, 258, 69
- Motions: (C.M.)**
 nolle prosequi, 158, 1327
 to elect, 157, 1327
 to sever, 156, 1327
- Mounted officers: (A.R.)**
 accouterments, horse equipments, etc., 1520, 308
 forage, 1080-1082, 213
 horses, 90, 25, 889, 181, 1095-1098, 215-217
 mounted pay, 1272-1274, 259-260
 public animals, 1081, 213
 rank or conditions requiring, 1272, 259
- Mounted officers, equipment for (G.O.), 9, 1916, 935**
- Mounted scouts (I.D.), *554-557, 406**
- Mounted service: (A.R.)**
 additional pay, 1272-1274, 259-260
 authority for mounting, 1272, 259
 policing stables, etc., 1106, 219
 sale of public horses to officers, 1095, 215
- Mounted service school (A.R.)**
 See Army War College (A.R.)
- Mourning: (A.R.)**
 badge, 431, 100
 colors, 434, 100
 drums, 433, 100
 family, 432, 100
 wearing, restrictions, 431, 100
- Movement of troops: (A.R.)**
 accommodations, 1114, 220
 notice sent by quartermaster, 1113, 220
 orders and returns of command, 1110, 1111, 219
 routes, 1112, 220
 staff officers, 750, 155
 timely notice to be given, 750, 155, 1107, 219
- Mules: (A.R.)**
 mule shoes and nails, 1097, 217
 transportation of the army, 1101, 218
- Mules (F.E.). See Transportation, Animal (F.E.)**
- Murder (C.M.), 442, 1449**
- Musical instruments: (A.R.)**
 bands and field music, 262, 70, 1179, 1180, 235
 post chapels, 1144, 227
 requisitions, 1151, 228
- Musicians: (A.R.)**
 appointment, etc., 260, 70, 263, 70, 275, 72, 278, 72
 competition with civilian, 261, 70
 fuel, 1044, 206
 music pouches, 1167, 232
 roster duties, 358, 86
 separation from companies, 261, 70
 signals for roll calls, etc., 373, 87
 transfer to hospital corps prohibited, 1411, 287
 whistles, 1180, 235
 See also—
 Chief Musicians (A.R.)
 Principal Musicians (A.R.)
- Musicians of the guard, duties of (G.M.), 138-139, 539**
- Muster (I.D.), 755-757, 437**
- Muster, false (C.M.), 407, 1410**
- Mustering officers: (A.R.)**
 correction and changes, muster rolls, 810, 166
- Muster rolls: (A.R.)**
 absentees, 808, 166
 absent without leave notations, 132, 34
 calculations, 810, 166
 character notations, 148, 37
 corrections or changes, 810, 166
 dates of service, 134, 34
 designation on, of companies, 809, 166
 detached enlisted men, 808, 166
 disability originating in line of duty, 1472, 298
 discharge notations, 152, 38
 duties, post surgeons, 1448, 294
 hospital corps, 1448, 294
 manuscript, prohibited, 1572, 318
 notations, discharged soldiers, 152, 38
 preparation, disposition, etc., 807, 166
 retained, 810, 166
 sick in hospital, 808, 166
 See also Pay Rolls (A.R.)
- Muster rolls, change of (G.O.), 180, 928**
- Muster rolls, model remarks (M.R.), 1996**
- Muster rolls, preparation on typewriter (G.O.), 194, 929**
- Musters: (A.R.)**
 bakers, cooks, etc., 329, 82
 designation of officers to assist, 438, 100
 inspection and review, 439, 100
 monthly, for pay, 438, 439, 100
 muster and pay rolls, 807-810, 166
 Sunday, 439, 100
- Mutiny (C.M.), 417, 1421, 418, 1422**

Black face numbers refer to paragraph and the light face numbers to the page

N

- nal airs: (A.R.)
 reign, 378, 88
 nited States, 264, 70, 378, 88, 437, 100
 nal cemeteries: (A.R.)
 trial of deceased officers and soldiers,
 167, 42
 nal colors: (A.R.)
 alute, 377, 88
 nal defense act (G.O.), 995
 nal festivities: (A.R.)
 reign war vessels in port or harbor, 413,
 98
 nal flag: (A.R.)
 escription, 215, 57, 216, 58
 isplayed at time of firing salute, 397, 92
 isplayed in action, 437, 100
 emorial Day, 440, 100
 alute to, 398, 92
 ars in union, 216, 58
 nal Guard: (G.O.)
 omposition of, 58, 1000
 ontinuous-service pay, 54, 972
 ischarge from, 72, 1001
 nlisted in, 69, 1001
 n service of U. S., 101, 1003
 aws governing, 101, 1003
 ngeivity pay, 54, 972
 ath in, 70, 1001
 hysical examination, 115, 1005
 eserve, 78, 1002
 eserve battalions, 79, 1003
 ight to pensions, 112, 1004
 raining of, 36, 943
 hen drafted, 111, 1003
 nal Guard: (C.M.)
 ay be tried by regulars, 11, 1286
 ystem of court-martial for, 1507
 hen available for court-martial duty, 9,
 1286
 hen subject to military law, 4, 1282
 nal Guard officers: (G.O.)
 limination of, 77, 1002
 ederal oath, 73, 1002
 ualifications of, 74, 1002
 vacancies when drafted, 76, 1002
 nal Home for Disabled Soldiers: (A.R.)
 nsane inmates, 464, 103
 nal salutes: (A.R.)
 Fourth of July, 398, 92
 Memorial Day, 440, 100
 umber of guns, 398, 92
 hips of war, 399, 92
 y: (A.R.)
 deserters from, enlisted in the army, 133,
 34
 signal communication with the army, 409,
 96, 1561, 316
 y: (C.M.)
 medical department serving with marines,
 4, 1282
 not subject to military law, 4, 1282
 y officers: (A.R.)
 See Officers, Navy (A.R.)
 trality: (L.W.)
 belligerents, interned in neutral territory,
 411-430, 1811-1815
 neutral rights and duties, 390-395, 1807-1808
 railway material, 431, 1815
 recruiting, 396-402, 1808-1809
 supplies, 403-410, 1810-1811
 trality laws: (A.R.)
 enforcement by the army, 485, 106
 post commanders, 899, 181
 wspaper correspondents (F.S.R.), 422-431,
 73-1675
- Newspapers: (A.R.)**
 advertisements, 499, 113, 500, 114, 502-509,
 114-115
 readvertisements, 501, 114
Night firing (S.A.F.), 221, 827
Night marches (F.S.R.), 114, 1605
Night operations (I.D.), 558-568, 406-408
Noile prosequi (C.M.), 158, 1327
Noncommissioned officer: (C.M.)
 may object to trial by summary court, 43,
 1295
 reduction of, 42, 44, 1295, 327, 1378, 349, 1386
Noncommissioned officers: (A.R.)
 arrest, etc., 927, 929, 190
 bands, 260, 70
 battalion staff, 254, 68, 256, 68
 company, 9, 270-278, 71-72, 297, 75, 358, 86,
 370, 87, 480, 106, 1044, 206, 1180, 235
 extra-duty details, 171, 172, 44
 funeral honors and escort, 428, 99
 general noncommissioned staff, 103, 26, 1009,
 197, 1557, 315
 hospital corps, 1405-1408, 285-286, 1410, 287,
 1416, 288, 1418, 288
 illuminating supplies, 1054, 208, 1057-1059,
 209-210
 insane soldiers, 467, 104
 ordnance department, 103, 26
 parlor and sleeping cars, 1128, 222
 quarters, fuel and stoves, 1036, 205, 1044, 206
 rank and precedence, 9, 12
 reduction to the ranks, 276, 72, 277, 72, 1009,
 197
 regimental, 9, 12, 253, 68, 256, 68, 257, 69,
 1044, 206, 1181, 235
 salutes, commanding detachments, 385, 90,
 transfers, 276, 72
 travel under orders, 1124, 1125, 222
 ungarrisoned posts, 1065, 211
 warrants, 103, 26, 256, 68, 274, 71, 310, 78,
 1405, 285, 1410, 287
Noncommissioned officers, restriction on em-
ployment (G.O.), 39, 903
Notary public: (A.R.)
 administration of oaths, 684, 143
Noteheads: (A.R.)
 wording and matter, 512, 115
Nurses, special: (A.R.)
 employment and pay, 1476, 299, 1482, 300
- O
- Oath for National Guard officers (G.O.),** 73,
 1002
Oaths: (C.M.)
 For administration purposes, 138, 1319
 of interpreter, 136, 1319
 of judge advocate, 133, 1319
 of members, 132, 1318
 of reporter, 135, 1319
 of witness, 134, 1319
 to test competency, 137, 1319
Oaths: (A.R.)
 administration by civil officers, 684, 143
 administration by judge advocates, 684,
 143
 administration by recorders of boards, 684,
 143, 714, 148
 administration by surveying officers, 714,
 148
 enlistment, 855, 176
 fee for administering, 649, 137
 of office, army officers, 23, 14
 power of inspectors to administer, 884, 180
Oaths of office: (A.R.)
 administration by civil officers, 23, 14
 officers of the army, 23, 14

ack face numbers refer to paragraph and the light face numbers to the page

Obstacles: (F.E.)

See Field Fortifications (F.E.)

Offenses: (A.R.)

See Crimes or Offenses (A.R.)

Officer of the day: (A.R.)

exemptions from duty, 363, 86

old, exemptions from duty, 363, 86

property used for police, etc., 442, 443, 101

Officer of the day, duties of (G.M.), 29-40, 530**Officer of the guard: (G.M.)**

See Commander of the Guard (G.M.)

Officers, army: (A.R.)

acceptance, etc., of civil office, 82, 23

accompanying troops changing station, 193, 47

accountability, 1549, 314

additional pay, 1267-1274, 258-260

administration of oaths, 23, 14, 684, 143, 714, 148

appointment and promotion, 21-26, 14

arrest, etc., 922-924, 189-190, 131, 279

articles for sale to, 885, 180

artificial limbs and appliances, 1490, 301, 1491, 301

attendance at funerals, 430, 99

baggage transportation, 1135-1139, 224-226

boards. See Boards of Officers (A.R.)

change of station, 1098, 217

command of mixed corps, 10, 13

commissions, 774, 159

commutation of quarters, 1299-1307, 264-265

correspondence with War Department, 782, 161, 786, 162

courteous correspondence, 790, 162

deceased. See Deceased Officers (A.R.)

dental work, 1398-1401, 285

designation of beneficiary in event of death, 1385, 281

detached service, temporary duty, 192, 48

detailed with militia, 454, 103

details. See Details, Officers (A.R.)

dismissal. See Dismissal of Officers (A.R.)

dispatches in the field, 798, 163

efficiency reports, 829-833, 170-172

equipment allowance, 1146, 227

equipments of enlisted men, 294, 75

families. See Families, etc. (A.R.)

forage, 1080, 1081, 213

grades of rank, 9, 12

horses. See Horses of Mounted Officers (A.R.)

hospital charges, 1460, 1461, 296

incapacitated, 193, 48, 194, 52, 890, 183

insane, 86, 24, 464-466, 103, 1297, 264

inspection reports concerning, 831, 172, 883, 180, 889, 181, 890, 183

investigation of accusations against, 883, 180, 884, 180

issue of clothing, 1157, 229, 1158, 230

leaves of absence. See Leaves of Absence (A.R.)

longevity pay, 1271, 259

medals of honor, 182, 45, 183, 46, 188, 46

medical attendance, etc., 1473, 298, 1474, 299, 1476, 299, 1478, 299, 1480, 300, 1483, 300

messing and cooking, 296-302, 75-76

military history, 774, 159

militia encampments, 774, 159

misconduct or irregularity, 83, 23, 884, 180, 900, 185

mounted, 1272-1274, 259-260

mounted, addressing superior, 381, 89

mourning, 431, 100, 432, 100

oath of office, 23, 14

on duty without troops defined, 1300, 264

orders, regulations, etc., affecting, 766, 159, 774, 159

Officers, army: (A.R.)—Continued

orders eulogizing living, 797, 163

ordnance and ordnance stores, 1520-1522, 308-309, 1542, 313

outside continental limits U. S., 60, 21, 71, 22, 1098, 217

parlor and sleeping cars, 1128-1134, 222-224

payments. See Payments to Officers (A.R.)

pecuniary responsibility, 653, 138, 654, 138

personal reports, 59, 21, 62, 21, 64, 21, 826-828, 169-170

presence at parades, 436, 100

private property lost in service, 726, 151

promotion, 21-26, 14

property damaged, lost, or destroyed, 683-685, 143

public animals, 1081, 213

purchase of clothing, etc., 1174, 234

quartermaster supplies, 1174, 234

quarters, 1024-1035, 203-205, 1044, 206

rank and precedence, 9, 12, 14, 13

registry on arrival at Washington, D. C., or at headquarters of a territorial department, 406, 94, 825, 169

relative rank with marine corps, militia, and volunteers, 10, 13

relative rank with naval officers, 12, 13

reproving noncommissioned officers, 270, 71

resignation. See Resignation of Officers (A.R.)

respect to national airs when played, 378, 88

retirement, causes for, 76-78, 23

roll calls, 370, 87

roster details and duty, 355-364, 86

salutes by enlisted men, 383-392, 89-90

salutes with cannon, 393-397, 91-92

saluting, 380-382, 89, 392, 90

sea travel expenses, 1280, 361

special duty under secretary of war, 191, 47, 192, 48

special or distinguished services, 765, 158

staff corps and departments, 197-199, 54, 742, 154, 743, 155, 746, 155, 750, 155, 806, 166

staff duty details, 38, 16

status, returning to United States on leave, 60, 21

stoppages against pay, 1308-1311, 265-266

subsistence supplies, 1239, 253, 1240, 253, 1242-1244, 254, 1246, 254

suspended from duty or command, 1033, 204

telegraphic service, 1186, 237

transfer or exchange, 47, 18, 48, 18, 303, 76, 1297, 264

travel on duty, 68-75, 22, 800, 163, 1122, 221, 1123, 221, 1125-1134, 222-224

uniform and equipments, 1569, 1318

use of transportation facilities, 1108, 219

visiting foreign countries, 62, 21, 63, 21

visits and courtesies, 240, 64, 403, 93, 406-414, 94-98

volunteer or militia service, 1261, 257

witnesses, military or civil courts, 75, 22, 951, 194

Officers, foreign service: (A.R.)

official salutes and honors, 376, 88, 402, 93, 403, 93

visits and courtesies, 407, 95

Officers, general staff corps: (A.R.)

aids, 41, 17

assignments to duty, 752, 156, 761, 157, 765, 158, 767, 159, 773, 159

chief of staff of the army, 752, 156, 756, 157, 759-769, 157-159

current business, 758, 157

detail, eligibility, etc., 752, 156, 761, 157, 765, 158, 767, 159, 773, 159

ers, general staff corps: (A.R.)—Continued
imitation of service, 752, 156
election and detail of general officers, 773, 159
erving with troops, 197, 54, 199, 54, 757, 157, 770-772, 159
pecial powers and duties, 753-756, 156-157, 758, 157
Var Department General Staff, 757, 157, 759, 157, 760, 157
ers, marines: (A.R.)
ommand of mixed corps, 10, 13, 817, 168
ospital charges, 1460, 296
ations, 1204, 240
elative rank with regulars, militia, and volunteers, 10, 13
eports, 817, 168
alutes and honors, 376, 88, 390, 90, 402, 93, 403, 93
ers, militia: (A.R.)
ommand of mixed corps, 10, 13, 817, 168
eports, 817, 168
alutes and honors, 376, 88, 390, 90, 402, 93, 403, 93
ervices as, of regular officers, 1261, 257
ers' mess: (A.R.)
quarters, 1034, 204
ers' mounts (G.O.), 9, 935
ers, navy: (A.R.)
uneral honors, 420, 98
ospital charges, 1460, 296
ations, 1204, 240
elative rank with army officers, 12, 13
alutes and honors, 376, 88, 390, 90, 402, 93, 403, 93
isits and courtesies, 407-414, 95-98
ers' reserve corps: (C.M.)
when available for court-martial duty, 9, 1286
when subject to military law, 4, 1282
ers' reserve corps: (G.O.), 37, 38, 998, 999
nstruction of, 39, 1000
uniform of, 21, 975
ers, volunteers: (A.R.)
ommand of mixed corps, 10, 13
ualifications of enlisted men as, 149, 38
alutes and honors, 376, 88, 390, 90, 402, 93, 403, 93
ervices as, of regular officers, 1261, 257
ial communications, reply to (G.O.), 181, 1
n-market purchases: (A.R.)
mergencies, etc., 551-554, 121
ions: (A.R.)
pplications for official, 788, 162
rises, duties of (G.M.), 140-147, 539
ers: (I.D.), 36, 337
ules for, 31-35, 336-337
ers: (F.S.R.)
omposition of, 38, 1583, 89, 1594
ield, 85, 1593, 89, 1594
or combat, 85, 1593
orms of, Appendix 3, 1681, 90-94, 1595-1597
general, 87, 1593
general principles of, 84, 1593
etters of instruction, 84, 1593
orders, 87, 1593
special, 87, 1593
verbal, 88, 1594
ers: (C.M.)
orms for, 1545
promulgating proceedings, 400, 1407
ers: (A.R.)
acting commanding officers, 16, 14
addressed to commander, 796, 163
appointing courts-martial, 945, 194
approval before issue, 794, 163

Orders: (A.R.)—Continued
authorizing payment of mileage, 71, 22
change of station of officers, 68, 22
channels of communication, 801, 163
circulars, 791, 163
classification, issue, etc., 791, 163
commutation of quarters, 1305, 1307, 265
commutation of rations, 1230, 1231, 251
condemned property, 912, 914, 188
copies furnished, 796, 163, 801, 163, 805, 164
councils of administration, 318, 80
court-martial duty, emergencies, 192, 48
courts-martial proceedings, 917, 189, 970, 194, 981, 195, 984, 195
delays in obeying, 70, 22
detaching officers, service schools, etc., 192, 48, 449, 102
distribution and file, 802, 163, 803, 164
emanating from War Department, 766, 774, 159
eulogizing living officers, 797, 163
executed by whom, 796, 163
expenditures and issues, 653, 138, 696, 697, 144
field orders defined, 791, 163
furlough, 1233, 252
general, defined, 792, 163
general court-martial, 791, 163, 984, 195
inspections, 893, 184, 899, 185, 1284, 263
inspectors, 880-882, 180
liquid coffee, 1208, 242
mounted service, 1272, 259
obedience to, and prompt execution, 1, 11
personal journeys, brigade commanders, 194, 52
preparation, etc., 795, 163
publication in field, camp, or garrison, 804, 165
pursuit of deserters, 122, 31
qualifications of enlisted men, 1343-1345, 272-273
rations to destitute persons, 1219, 247
regimental files, 259, 69
retirement of enlisted men, 134, 34, 135, 35
return journeys, 71, 22, 1285, 263
salutes and saluting stations, 399, 92, 404, 94
secretary of war, defined, 761, 157
sentences of general prisoners, 774, 159
settlement of accounts, 74, 22
signaling and telegraphy instruction, 1556, 315
signal parties in the field, 1558, 315
source and authority, 795, 163
special, defined, 793, 163
staff officers, travel, 72, 22
summary court trials, 957, 194
target practice, 349, 352, 353, 85
title, officer designated, 780, 161
transfer of enlisted men, 115, 30
transmission in the field, 798, 799, 163
transportation of the army, 1110, 1111, 219
travel allowances, 1284-1288, 263
travel on duty, 68-74, 22, 800, 803, 163-164
witnesses, military or civil courts, 951, 104
Orders, general: (G.O.)
See General Orders (G.O.)
Ordnance and ordnance stores: (A.R.)
accountability, etc., 1511, 305
arm chests for storage, 1542, 313
care and preservation, 1552, 314
cartridges for hunting purposes, 354, 85
condemned, 913, 188, 1543, 313
definition, 1512, 305
expenditure of ammunition, 1528-1531, 310
horse equipments, 1520, 308
inspections, 1537, 312, 1543, 313

ick face numbers refer to paragraph and the light face numbers to the page

- Ordnance and ordnance stores: (A.R.)**—Continued
 issues, 1513-1519, 308, 1522, 309, 1524-1526, 310
 loans, 1523, 309
 loss, etc., by civilian employees, 1527, 310
 materials, ordnance establishments, 1548, 314
 militia, 1143, 227
 packing, 1544-1546, 313
 price lists, 1541, 313
 proceeds of sale, 617, 132
 requisitions, 1517-1519, 308
 sales, 1520, 308, 1521, 309, 1526, 310, 1543, 313
 serviceable surplus, 1532, 1533, 310
 stamps for sealing packages, 1546, 1547, 313
 sufficiency of supplies at depots, 1517, 308
 supply table, 1519, 308
 surplus or damaged, 1532-1542, 310-313
 transfer, 671, 140, 701, 145, 1524, 310, 1535, 311, 1536, 312
 transportation, 1547, 313, 1548, 314
 unserviceable, 1517, 308, 1534, 311, 1537-1540, 312-313
 See also Arms and Accouterments (A.R.)
- Ordnance, charges for (G.O.),** 193, 928
- Ordnance equipment, new model, prices of (U.A.),** 1829
- Ordnance officers: (A.R.)**
 post, 206, 56, 701, 145, 1537, 312, 1538, 312
- Ordnance property, old model, prices of (U.A.),** 1825
- Ordnance property, unit equipment, prices of (U.A.),** 1825
- Organization: (F.S.R.)**
 army 3, 1573
 brigade, 3, 1573
 brigade, separate, 3, 1573
 coast artillery, 5, 1574
 coast defense, 6, 1574
 division, 3, 1573
 field army, 3, 1573
 field army troops, 3, 1573
 militia, organized land, 1, 1573
 mobile army, 3, 1573
 oversea departments, 7, 1574
 regular army, 1, 1573
 tables of, 8, 1574
 volunteers, 1, 1573
- Organization tables of army (O.T.).** See Tables of Organizations (O.T.)
- Original packages: (A.R.)**
 examination, verification, etc., 668, 140, 669, 140
- Outpost duty: (A.R.)**
 roster, 357, 86
- Outposts: (I.D.)**
 See Camps, Protection of (I.D.)
- Outposts and outguards (F.S.R.),** 14, 15, 1576, 37, 1582, 60-83, 1588-1592
- Overpayments: (A.R.)**
 failure to refund, 1309, 265
 on erroneous final statements, 155, 38
 stoppages, 1309, 265
- Oversea departments (F.S.R.),** 7, 1574, 258, 1644
- P**
- Packages: (A.R.)**
 original, examination, verification, etc., 668, 140, 669, 140
 public property, transmission by mail, 837, 173
- Packing and crating: (A.R.)**
 ordnance and ordnance stores, 1544-1546, 313
- Packing and crating: (A.R.)**—Continued
 oversea shipments, 1136, 224, 1137, 225, 1545, 313
 regimental and company desks, etc., 1139, 226
- Painting, ordnance (C.E.),** 66-70, 650
- Pallbearers: (A.R.)**
 funerals, military, 429, 100
- Parade: (A.R.)**
 daily, 436, 100
- Pardon: (C.M.)**
 as plea in bar, 150, 1324
 evidence of, 273, 1363
- Pardon: (A.R.)**
 punishment imposed by a court-martial, 944, 194
- Parlor and sleeping cars: (A.R.)**
 accommodation in, to whom allowed, 1128, 222
 fare excluded from travel allowances, 1279, 261
 reimbursements to officers, 1134, 224
 requests, 1129-1131, 223, 1133, 223
 unused requests, 1133, 223
 witnesses before military courts, 989, 195
- Parole: (A.R.)**
 general prisoners, 943, 193
- Parole: (C.M.)**
 offenses concerning, 427, 1434
- Paroles (G.M.),** 209-217, 545-546
- Partnerships: (A.R.)**
 acceptance of partners as sureties, 573, 124
 contracts, 559, 122
- Pass: (L.W.)**
 civilian employee, Appendix B, 1732
 correspondents, Appendix A, 1731
 Red Cross, Appendix A, 1745
- Passports: (L.W.),** 276, 1779
 forms for, 1781
- Passports: (A.R.)**
 officers visiting foreign countries, 63, 21
- Patients in hospitals: (A.R.)**
 admission, etc., 1441-1446, 292-293, 1471, 298
 arms and accouterments, 1450, 294
 captured, 1451, 294
 contagious diseases, 1455, 295
 deceased, 1451, 294
 descriptive lists, 1451, 294
 desertion, 1451, 294
 discharged for disability, 1451, 294
 discharged soldiers, 1452, 295, 1453, 295
 excused from Saturday inspection, 283, 73
 information to company commander, 1472, 298
 muster and pay rolls, 808, 166
 return to duty, 1451, 294
 savings of rations, 327, 81
 transferred, 1451, 294
- Patrolling: (F.S.R.)**
 signals in, 29, 1579
 signs of enemy in, 27, 1579
- Patrols (I.D.),** 604-622, 411-413
- Patrols: (F.S.R.)**
 conduct of, 26, 1579
 leaders in, 25, 1579
 reconnoitering, 23, 24, 1578
- Pay accounts, officers: (A.R.)**
 hypothecation or transfer, 1258, 256
 leaving service, 1262, 257
- Pay and clothing accounts: (A.R.)**
 clothing 1157-1166, 229-232, 1169, 233
 deserters, 124, 32, 1164-1166, 232, 1373, 279, 1374, 280
 detached enlisted men, 104, 26
 enlisted men of quartermaster corps, 1009, 197
 hospital corps, 1415, 287

Pay, longevity and continuous service, National Guard (G.O.), 54, 972

Payments: (A.R.)

accounts and under contract, 585, 127
checks on presentation, 603, 130, 604, 130
commutation of rations, 1212, 243, 1231, 251
computation of time of service, 651, 137
ferry and bridge transportation, 1126, 222
general provisions, 1254, 256, 1255, 256
horses sold to mounted officers, 1095, 215
interpreters, courts-martial, 988, 195
medical attendance and medicines, 1476, 299, 1477, 299
mileage, 1263, 263
outstanding checks, 607, 130
prisoners on release, 978, 194
reporters, courts-martial, 738, 154, 986, 195
savings of rations, 1222, 249
signing receipts or checks in blank, 637, 135
soldiers furloughed to the reserve, 1375-1379, 280
telegraph and telephone service, 1186, 237, 1187, 237, 1189, 237, 1191-1194, 238
turnpike transportation, 1126, 222
unauthorized advertisements, 507, 115

Payments to discharged soldiers: (A.R.)

by whom made, 155, 38, 1337, 270
dates included, 1376, 280
deduction for absence without leave, 141, 36
fraud in enlistment, 1380, 280
identification before payment, 1375, 280
loss or nonreceipt of final statements, 1377, 280
made on final statements, 155, 38, 1375, 280, 1381, 281
notations on discharge, 1376, 280
recruits, 1382, 281
transferred claims, 1383, 281
travel allowances, 1378-1380, 280

Payments to enlisted men: (A.R.)

arrested by civil authorities, 1371, 279
awaiting result of trial, 970, 194
check or currency, 1316, 266, 1319-1335, 267-270, 1337, 270
commutation of rations, 1232-1238, 251-253
continuous-service pay, 132, 34, 1340, 271
dates included, 1255, 256
deposits of pay, 1364-1366, 278
deserters, 1372-1374, 279-280
expert riflement, 1345, 273
extra-duty pay, 174, 44, 329, 82
final. See Payments to Discharged Soldiers (A.R.)
forfeitures and deductions, 132, 34, 341, 84, 345, 84, 976-978, 194, 1249, 255, 1370, 278
furloughed soldiers, 113, 29
furloughed to the reserve, 1375-1379, 280
incorrect, 1336, 270
mode of forwarding, 1322, 267, 1323, 267
monthly, 1315, 266
outside continental limits U. S., 1317, 266, 1342, 271
pay rolls, 1318-1321, 267, 1326, 268, 1332-1334, 269-270, 1337, 270
personal, by quartermasters, 1316, 266
quartermaster designated, 1337, 270
re-enlistment, 1338, 270, 1339, 271
witnessed by officers, 810, 166, 1318, 267, 1319, 267, 1326, 268, 1332, 269, 1394, 284
witnesses before civil courts, 1298, 264

Payments to officers: (A.R.)

absent from station, 1257, 256
arrested by civil authorities, 1371, 279
collection for credit sales, 1243, 254
commutation of quarters, 1299-1307, 264-265

Payments to officers: (A.R.)—Continued

dates included, 1255, 256
dismissed by sentence, 1262, 257, 1265, 258
entering or leaving service, 1260, 257, 1262, 257, 1263, 257
leaves of absence, 1275-1277, 260
longevity pay, 1271, 259
mileage. See Mileage (A.R.)
monthly, 1256, 256
mounted service, 1272-1274, 259-260
outside continental limits U. S., 1317, 266
pay accounts, 1256, 256, 1258, 256, 1262, 257
promotions, 1260, 257
resigning, 1262, 257, 1263, 257
retired, 1257, 256
retiring from active service, 1264, 258
serving beyond sea, 1259, 257
serving with volunteers or militia, 1261, 257
stoppages against pay, 1308-1311, 265-266
travel allowances. See Travel Allowances (A.R.)

Pay of the army: (A.R.)

additional to enlisted men, 186, 46, 1338-1346, 269-274
additional to officers, 1267-1274, 258-260
allotments, enlisted men, 1347-1360, 275-277
certificates of merit, 186, 46, 1341, 271
chief of staff of the army, 740, 154
companies, 266, 70
continuous service, 1339, 271, 1340, 271
deposits by enlisted men, 1361-1369, 277-278
deserters, 129, 33, 131, 33, 1372-1374, 279-280
extra duty, 169, 43, 170, 43, 172, 44, 174, 44, 176, 44, 177, 44
forfeitures and deductions, 976, 194, 1370, 278
general provisions, 1254, 256, 1255, 256
longevity, 1271, 259
miscellaneous, 1384, 281
nurses, 1426, 289
rates, 1338-1345, 270-273
re-enlisted, 1338, 270, 1339, 271
retired enlisted men, 137, 35, 138, 35
stoppages against officers, 1308-1311, 265-266
volunteers or militia, 1261, 257

Pay of the National Guard (G.O.), 54, 972

Pay rolls: (A.R.)

additional pay notations, 1343-1346, 272-274
allotments of pay notations, 1357, 277
calculations, 810, 166, 1318, 267
charges, 110, 28, 116, 30, 127, 32, 341, 84, 345, 84, 686, 143, 687, 143, 699, 144, 724, 150, 1166, 232, 1178, 234, 1236, 253
check or currency payments, 1320, 267, 1321, 267, 1326, 268, 1329-1335, 269-270, 1337, 270
clothing balances, 1160, 230, 1164, 232
corrections or changes, 810, 166
credit sales to enlisted men, 1249, 255
damages to property, 686, 143, 699, 144, 724, 150, 1178, 234
deserters' pay, 127, 32, 687, 143, 1164, 232, 1166, 232, 1373, 279, 1374, 280
designation on, of companies, 809, 166
detached enlisted men, 808, 166
forfeitures and deductions, 1370, 278
forwarded to quartermaster, 1319, 267
incorrect payments, 1336, 270
laundry charges, 341, 84
manuscript, prohibited, 1572, 318
money accounts, 648, 137
payments to enlisted men, 1337, 270
post exchange dues, 345, 84
preparation, disposition, etc., 807, 166, 1329, 269
property lost or destroyed, 686, 143, 687, 143, 699, 144, 1178, 234
retained, 810, 166, 1318, 267, 1332, 269

Black face numbers refer to paragraph and the light face numbers to the page

- Pay rolls: (A.R.)**—Continued
 sick in hospital, 808, 166
 signatures of enlisted men, 1319, 267
 stoppages, 1370, 278
 witness to payment, 1318, 267, 1319, 267,
 1326, 268, 1332, 269, 1333, 269
 See also Muster Rolls (A.R.)
- Pay rolls, charges for ordnance (G.O.),** 193, 928
- Pay rolls, instruction for (G.O.),** 40, 956
- Pay rolls, preparation on typewriter (G.O.),** 194, 929
- Pay, stoppage for absence, etc. (G.O.),** 229, 976
- Penalties: (A.R.)**
 destroying or obstructing military telegraph lines, 1563, 317
- Penalties for violation of laws of war: (L.W.)**
 See Laws of War, Penalties for Violation (L.W.)
- Penalty envelopes: (A.R.)**
 use for official business, 834-839, 172-173
- Penetration of rifle bullet (F.S.R.),** Appendix 7, 1704
- Penitentiaries: (A.R.)**
 abatement term of confinement, 942, 192
 exercise of clemency, 944, 194
 imprisonment, 966, 194, 967, 194
 inspection, 895, 184
- Penitentiary: (C.M.)**
 confinement in, when authorized, 337-339, 1380-1382
- Pensions: (A.R.)**
 evidence, etc., from records, 824, 169
 notation of degree of disability, 161, 40
- Peonage laws: (A.R.)**
 enforcement of, by the army, 485, 106
- Periodicals: (A.R.)**
 post libraries, 331, 83
- Perjury (C.M.),** 443, 1452
- Personal hygiene: (F.A.)**
 feet, care of, 573
- Personal reports (A.R.).** See Reports, Personal (A.R.)
- Personal services: (A.R.)**
 bills to contain no charge for material, 519, 116
 definition, 519, 116
 rules for computation of time, 651, 137
 vouchers for payment, 633, 134
 wages, discharged employees, 650, 137
- Persons accompanying army in field: (C.M.)**
 subject to military law, 4, 1282
- Persons drafted into the service: (C.M.)**
 when available for court-martial duty, 9, 1286
 when subject to military law, 4, 1282
- Persons serving with army in field: (C.M.)**
 subject to military law, 4, 1282
- Persons subject to military law: (C.M.)**
 classes enumerated, 4, 1282
- Photographs: (A.R.)**
 permanent works of defense, 348, 85
- Physical examination: (A.R.)**
 applicants for enlistment, 841, 173, 847, 174, 848, 175, 862, 177, 864-867, 177, 871, 178, 1484, 300
 enlisted men, 1485, 300
 members recruiting parties re-enlisting, 847, 174
 recruits, 774, 159, 864, 177, 865, 177, 870, 178, 1484, 300
- Physical examination of National Guard (G.O.),** 115, 1005
- Physical training, manual for: (P.T.)**
 rifle exercises, 516
 setting up exercises, 479
- Physicians: (A.R.)**
 See—
 Civilian Physicians (A.R.)
 Medical Officers (A.R.)
- Pistol and revolver practice: (S.A.F.),** 135-146, 801-806
 aiming, 139, 803
 cocking the pistol, 140, 803
 cocking the revolver, 140, 803
 grip, the, 137, 802
 position and aiming drills, dismounted, 141, 804
 position dismounted, 136, 802
 rules for, 135, 801
 See Dismounted Course Pistol Practice (S.A.F.)
 See Range Practice with Pistol or Revolver (S.A.F.)
 snap shooting, 142, 805
 trigger squeeze, 138, 802
- Pistol, automatic, description of: (A.P.),** 621
 to dismount and assemble, 629
- Pistol practice for National Guard (S.A.F.),** 356, 869
- Pleas: (C.M.)**
 action upon special, 153, 1325
 general issue, 154, 1325
 inadmissible, 153, 1324
 in abatement, 147, 1321
 in bar, 148-151, 1322-1324
 jurisdiction, 146, 1321
 kinds, 145, 1321
 refusal to plead, 155, 1327
- Police: (A.R.)**
 barracks, 286, 74, 287, 74
 daily duties of parties, 374, 87
 guards and property, 441-443, 101
 kitchens of enlisted men, 297, 75
- Police officers: (A.R.)**
 apprehension of deserters, 118, 31, 121, 31
- Posse comitatus: (A.R.)**
 employment of national forces, 484-489, 106-112
- Postage on soldiers' letters (G.O.),** 199, 929
- Post exchange: (C.M.)**
 debts can not be collected by court-martial, 325, 1378
- Post exchange: (A.R.)**
 See Exchange, Post (A.R.), 345, 84, 346, 84
- Post exchanges, indebtedness to (G.O.),** 116, 916
- Post laundries, indebtedness to (G.O.),** 116, 916
- Post offices (F.S.R.),** 432, 1675
- Post ordnance officers: (A.R.)**
 See Ordnance Officers (A.R.)
- Postponement (C.M.).** See Continuance (C.M.)
- Post quartermasters: (A.R.)**
 See Quartermasters (A.R.)
- Posts and reservations: (A.R.)**
 address, official, of staff officers, 206, 56
 ambulances and harness, 1428, 289
 beer, wine, or intoxicating liquors, 346, 84, 471, 101
 boarding visits, 411, 96
 bowling alleys, 339, 83
 brooms and mops, 1181, 235
 buildings, construction or repair, 706, 146, 707, 146, 1015-1017, 231-202
 buildings for amusements, etc., 339, 83
 care and preservation, 213, 57
 cemeteries, 167, 42, 493-498, 113
 chapels, 331, 83, 1044, 206, 1144, 227
 civilians residing on reservation, 212, 57
 coast defense commands, 203, 55
 council, 117, 30, 163, 41, 164, 41

Black face numbers refer to paragraph and the light face numbers to the page

Posts and reservations: (A.R.)—Continued

deeds, title, and other papers, 705, 146, 915, 188
 designation, 202, 55
 discontinued, 821, 168
 duty and labor on Sunday, 205, 56
 engineer officer on duty, 1503, 303
 establishment, 201, 55
 exchanges. See Exchange, Post (A.R.)
 extra-duty pay, 177, 44
 flags, 223, 59, 397, 92, 398, 92
 foreign vessels, national festivities, 413, 98
 funeral honors, 420-434, 98-100
 gardens, 342-344, 84, 1206, 242
 garrison schools, 193, 48, 194, 52, 449, 102
 general officers commanding, 106, 27, 114, 29, 198, 54, 203, 55
 general prisoners, 932, 190, 936, 191, 937, 191, 943, 193
 guards, 441-443, 101
 gymnasiums, 339, 83, 340, 84, 1144, 227
 hauling forage, 1106, 219
 hospital buildings, 1464-1470, 297-298
 hospital corps, 1416, 288, 1418, 288
 illuminating supplies, 1051-1061, 208-210
 improvement of grounds, 213, 57, 707, 146
 inspection, 889, 181, 895, 184, 1387, 282
 jurisdiction of states, 704, 145
 laundries, 341, 84
 letter and noteheds, 512, 115
 libraries, 331, 83, 334-338, 83, 340, 84, 1044, 206, 1144, 227
 limitation of expenditures, 207, 56
 lye and Sapolio, 1182, 236
 means of transportation, 1105, 219, 1106, 219
 Memorial Day, 440, 100
 morning and evening guns, 210, 56
 navy or marine corps deserters, 133, 34
 new, purchase of sites, 704, 145
 nomenclature, 201, 55, 202, 55
 official correspondence, 783, 161, 785, 162
 orderly observance of the Sabbath, 205, 56
 payments to enlisted men, 1316-1319, 266-267
 plats of land, 708, 146
 policing stables, 1106, 219
 post schools, 331, 83, 340, 84, 449, 102, 1044, 206
 quartermaster supplies, 1086, 214
 reading rooms, 331, 83, 340, 84, 1044, 206
 records, 211, 57, 495, 113, 497, 113, 821, 168
 removal of trespassers, 212, 57
 repairs to ordnance stores, 1537, 312
 repairs to roads, walks, etc., 1016, 201
 returns, 477, 105, 811, 167, 815, 167, 1185, 236
 salutes and honors, 375-377, 88, 380-405, 89-94
 sanitary condition, 1387, 282
 spring wagons, 1103, 219
 staff of commanding officer, 198, 54, 206, 56
 supervision, 212, 57, 214, 57
 unauthorized use of volatile oils, 1053, 208
 ungarrisoned, 214, 57, 889, 181, 1065, 211, 1158, 230
 veterinary hospitals, 92, 26
 visits and courtesies, 403, 93, 406-414, 94-98
 water supply, 1387, 282
 wharves and piers, 707, 146
Post surgeons: (A.R.)
 See Medical Officers (A.R.)
Power: (A.R.)
 storage in or near storehouse, 1199, 238
ractice marches, field maneuvers, etc.: (A.R.)
 field practice, messing and cooking, 296, 75, 302, 76, 1205, 240
raise: (A.R.)
 discussions, etc., conveying, forbidden, 5, 11

Precedence: (A.R.)

arms of service, 6, 11
 commissioned officers, 9, 12, 11, 13
 different corps of the army, 10, 13
 noncommissioned officers, 9, 12
Presents, giving and accepting: (G.O.), 3, 901
President of court-martial: (C.M.)
 duties, 89, 1308, 154, 1325, 357, 1396
President of the United States: (C.M.)
 as appointing authority, 15, 1287
Presumptions: (C.M.)
 of law and fact, 276-278, 1364-1365
Previous convictions: (A.R.)
 consideration and evidence, 954, 956, 962, 194
Previous convictions: (C.M.)
 character of, 307, 1374
 defined, 349, 1386
 disposition of evidence of, 306, 1374
 procedure in introducing, 306, 1374
Price lists: (A.R.)
 clothing and equipage, 1146, 227
 ordnance and ordnance stores lost or damaged, 1541, 313
 subsistence supplies, 1251, 255
Prices: (A.R.)
 tailors, company and civilian, 279, 72
Printing: (A.R.)
 See Advertisements (A.R.)
Prisoner, military: (C.M.) See General Prisoner (C.M.)
 general, 74, 1302
 refusal to receive or keep, 55, 1298, 421, 1426
 refusing to turn over to civil authorities, 424, 1427
 releasing without authority, 57, 1298, 423, 1427
 subject to military law, 4, 1282
 suffering to escape, 423, 1427
 use of irons, 56, 1298
Prisoners: (A.R.)
 awaiting trial or result of trial, 928, 190, 932, 190
 bedding and bunks, 1084, 213
 beginning and expiration of term, 969, 194
 classes to be confined separately, 932, 190
 classification and designation, 928, 190
 clothing, 911, 188, 938, 191, 939, 192
 counsel, 961, 194
 discharge from the army, personal notice, 157, 39
 escaped, 121, 31, 940, 192
 food supplies, rations, etc., 300, 76, 1203, 240, 1212, 243
 garrison. See Prisoners, Garrison (A.R.)
 general. See Prisoners, General (A.R.)
 general courts-martial, proceedings, 919, 189
 good-conduct time, 942, 192
 irons, 935, 191
 keepsakes, 940, 192
 medical attendance, etc., 1473, 298, 1476, 299
 pardon, or mitigation of punishment, 944, 194, 972, 194
 payments on release from confinement, 1370, 278
 personal effects of escaped, 940, 192
 place of confinement, 971, 194
 rations, 1203, 240, 1212, 243
 reward for escaped, 121, 31
 transfer to place of confinement, 938, 191, 939, 192
 trials, 961, 962, 194
 undergoing more than one sentence, 973, 194
 with no record of charges, 934, 191
 writ of habeas corpus, 998, 999, 195

- Prisoners, garrison: (A.R.)**
 abatement of term of confinement, 942, 192, 943, 193
 defined, 928, 190
 kept apart from general prisoners, 932, 190
 probation, 943, 193
- Prisoners, general: (A.R.)**
 abatement of term of confinement, 942, 192, 943, 193
 application for clemency, 944, 194
 clothing, 939, 192, 1170, 233, 1171, 233
 confined at posts, 932, 190, 936, 191, 942, 192
 defined, 928, 190
 discharge papers, 938, 191
 insane, 464, 103
 jurisdiction in case of, 998, 999, 195
 kept apart from other prisoners, 932, 190
 parole, 943, 193
 place of confinement, 936, 191, 965-967, 194
 release from confinement, 941, 192, 1170, 233
 remitting of sentence, 774, 159, 944, 194
 reports and returns, 937, 191
 sewing machines, 1216, 245
 sick in hospital, 1212, 243
 special rules and regulations, 936, 191
 toilet articles, etc., 1216, 245
 transfer to place of confinement, 938, 191, 939, 192
- Prisoners of war: (A.R.)**
 medical attendance, etc., 1473, 299
 rations, 1203, 240
- Prisoners of war: (L.W.), 43-99, 1723-1731**
 attempt to escape, 67-82, 1726-1728
 bureau of information, 83-86, 1729
 exchanges, 91-98, 1730-1731
 pay of officers, 88, 1730
 relief societies, 87, 1729
 religious privileges, 89, 1730
 wills, 90, 1730
- Prisoners, rules for (G.M.), 238-256, 548-549**
- Private correspondents: (A.R.)**
 officers and men beyond the seas, 781, 161
- Private property: (A.R.)**
 claims under act of March 3, 1885, 726, 151
- Private property, damage to: (G.O.), 153, 921**
- Privates: (A.R.)**
 See Enlisted Men (A.R.)
- Privates of the guard: (G.M.)**
 duties of, 154-208, 540-545
 orders for sentinels, 155-198, 540-544
 special orders for sentinels at post of the guard, 199-208, 544-545
- Privileged communications: (C.M.)**
 See Evidence, Testimonial (C.M.)
- Probation: (A.R.)**
 garrison prisoners, 943, 193
- Procedure on the range (S.A.F.). See Rifle Practice on the Range (S.A.F.)**
- Proceedings: (A.R.)**
 See—
 Councils of Administration (A.R.)
 Courts-martial (A.R.)
 Courts of Inquiry (A.R.)
- Proceeds of sale: (A.R.)**
 deserters' effects, 117, 30
 disposition, etc., 611, 131, 617-619, 132
 escaped prisoners' effects, 940, 192
 horses sold to mounted officers, 1095, 215
 ordnance and ordnance stores, 1520, 308, 1521, 309, 1543, 313
 transfers of public property, 619, 132
- Professional books and papers: (A.R.)**
 transportation, 1136, 224, 1137, 225, 1139, 226
- Proficiency test, rules for (F.F.), 1941**
- Promotion: (A.R.)**
 enlisted men from the ranks, 1138, 225, 1139, 226, 1296, 264
 officers, 21-26, 14
 payments to officers, 1260, 257
 travel allowances joining station, 1296, 264
- Property accountability and responsibility: (A.R.)**
 articles in charge of guards, 442, 101, 443, 101
 articles issued to general prisoners or to recruits, 1216, 245, 1217, 246
 bake ovens, 1252, 256
 branding before issue, 676, 141
 captured property, 819, 168
 company commanders, 281, 73, 661-663, 139
 condemned, 680, 142, 681, 143
 cooking apparatus, 1252, 256
 damaged, lost, destroyed, or stolen, 682-692, 143-144, 1178, 234
 defined, 657, 138
 detachment commanders, 281, 73, 661-663, 139
 details separating from property, 664, 139
 division staff officers, 197, 54
 enlisted men, 280, 73, 663, 139, 695, 144
 expenditures under orders, 696-698, 144
 failure to sign receipt, 667, 139
 insurance of public money or property, 596, 128
 issues, 663, 139, 673, 141
 keys of storerooms, etc., 674, 141
 means of transportation at posts, 1106, 219
 military telegraph lines, 1539, 316
 miscarried or missing stores, 666, 139
 musical instruments, 1179, 235, 1180, 235
 officers separated from commands, 659, 139
 ordnance and ordnance stores, 701, 145, 1511, 305, 1520-1529, 308-310, 1535, 311, 1549, 314
 original packages, 668, 140, 669, 140
 post commanders, 203, 55, 658, 139
 preservation and repairs, 675, 141
 prevention of loss or damage, 674, 141
 quartermaster supplies, 1086-1094, 214-215, 1167, 232
 receipts in blank prohibited, 670, 140
 recruiting officers, 1218, 246
 relief by surveying officers, 712, 147, 713, 147
 removal of all officers, 660, 139
 returns, 693-703, 144-145, 1167, 232, 1520-1522, 308-309, 1527, 310, 1549, 314
 signal corps sergeants, 695, 144
 signal supplies, 1564, 317
 street-car and ferry tickets, 1127, 222
 subsistence supplies, 1198, 238
 supplies in transit, 721, 149, 1141, 227
 surveying or exploring expeditions, 672, 141
 tent pins, helvies, etc., 1176, 234
 transfer on succession, 17, 14, 630, 134
 transfers, bureaus and departments, 671, 140
 transfers involving accountability, 665, 139, 701, 145
 unserviceable property, 678, 141, 679, 142
 veterinary supplies, 1075, 212, 1076, 212
- Property, military: (C.M.)**
 offenses concerning, 433, 434, 1440
- Property of enemy, treatment of: (L.W.)**
 See Enemy Property, Treatment of (L.W.)
- Property, private: (C.M.)**
 offenses concerning, 439, 1446
 redress for injuring, 481, 1483
- Prosecutor (C.M.). See Accuser (C.M.)**
- Protection: (A.R.)**
 laborers, etc., on military works, 357, 86

Black face numbers refer to paragraph and the light face numbers to the page

- Proving ground, Sandy Hook, N. J.: (A.R.)
annual inspection, 895, 184
- Provisional commands: (A.R.)
flags for opposing forces, 242, 65
journals of march, 446, 102
- Provisional lieutenant, uniform of (G.O.), 21, 975
- Provost marshal general's bureau: (A.R.)
care and custody of records, 774, 159
- Public animals: (A.R.)
assignment to riders or drivers, 1072, 211
branding, 907, 187, 1067, 211
care and treatment, 90, 25, 91, 25
condemned, 680, 142, 907, 187, 1073, 212
descriptive cards, 280, 73, 1070, 211, 1071, 211
descriptive lists, 1069, 211
docking, banging, or clipping, 1068, 211
draft and pack, 1102, 219
exchange or surrender, 1072, 211
forage ration, 1077, 212, 1078, 213
furnished by quartermaster corps, 1000, 196
inspection, 889, 181
inspection of unserviceable, 904, 186, 907, 187, 1073, 212
issue or transfer, 1071, 211
purchased under contract, 1066, 211
recovery of lost or stolen, 689-692, 143-144
return from Philippine Islands not allowed, 1098, 217
sale of horses to mounted officers, 1073, 212, 1095, 215
salt, 1215, 244
shoeing and materials, 1097, 217
sick, injured, or infected, 1073, 212
straw for bedding, 1005, 214
transportation of the army, 1102, 219
use of, by mounted officers, 1081, 213, 1096, 217
vinegar, 1215, 244
See also—
Horses (A.R.)
Mules (A.R.)
- Publication: (A.R.)
private transactions, 5, 11
- Publication of views by officers prohibited (G.O.), 1, 901
- Public health: (A.R.)
enforcement of quarantine, 485, 106
- Public moneys: (A.R.)
balances at close of fiscal year, 625, 133
balances on deposit unchanged, 590, 128
collections, 611-619, 131-132
contracts involving future payments, 515, 116, 582, 127
covering into treasury, 590, 128
custody of, 584-586, 127
deceased officers, 86, 24
disbursing officers ceasing to act, 588, 127, 630, 134, 902, 186
failure to account, 1308, 265
illegal disbursements, 1309, 265
insane officers, 86, 24
insurance, 596, 128
miscellaneous receipts, etc., 611, 131
outstanding checks or drafts, 588, 127, 606, 130
overpayments, 1309, 265
personal possession, 586, 127, 587, 127
receipt for transfer, etc., 1384, 281
received for disbursements, 583, 127, 584, 127, 586, 127, 587, 127, 595, 128
transfer, 589, 128, 595, 128, 597, 129, 598, 129, 1509, 305
transfer to the Treasury, 611, 131
transportation by express, 1142, 227
- Public moneys: (A.R.)—Continued
use and expenditures, 582, 127
See also—
Deposits of Moneys and Collections (A.R.)
Money Accountability (A.R.)
- Public Property: (A.R.)
branding and marking, 257, 69, 295, 75, 676, 141
care and preservation, 193, 48, 203, 55
commanding officers, 751, 156
company commanders, 290, 74, 291, 74
condemnation. See Condemnation of Property (A.R.)
condemned. See Condemned Property (A.R.)
damaged. See Damages to Property (A.R.)
deceased officers, 86, 24
defect or shortage, 668, 140
deficiencies, etc., 1309, 265
destruction, etc. See Destruction of Public Property (A.R.)
deteriorated or deteriorating stores, 717, 148, 904, 186
expended in the military service, 698, 144
expenditures under orders, 696, 144, 697, 144
failure to account, 1308, 265
fuel and oil unconsumed, 1042, 206, 1056, 209
insane officers, 86, 24
inspection, 903-914, 186-188
insurance, 596, 128
intrusted, 657, 138
issues, care required, 673, 141
lost or stolen, 689-692, 143-144, 721, 149, 1141, 227
mail contractors, 209, 56
mess and tableware and furniture, 301, 76
packages by mail, penalty envelope, 837, 173
preservation and repair, 675, 141
private uses, 677, 141
proceeds of sale, 617-619, 132
purchase by officers, 681, 143
recovery of lost or stolen, 689-692, 143-144
regimental headquarters, 257, 69
returns. See Returns of Public Property (A.R.)
sales. See Sales of Public Property (A.R.)
tents for protection, 1183, 236
transfers to another department, 619, 132, 671, 140
unserviceable, 337, 83, 680, 142, 681, 143, 717, 148, 903-908, 186-188
verification of contents of packages, 669, 140
waste products, 679, 142
See also Property Accountability and Responsibility (A.R.)
- Punishment: (C.M.)
commutation, 384, 1405
mandatory and discretionary, 40, 1294
maximum limits, 349, 1386
mitigation of, 380, 1404
prohibited, 344, 345, 1385
See Sentence (C.M.)
War Department, policy regarding, 340-343, 1382-1385
- Punishments: (A.R.)
destroying, etc., military records, 823, 168
increase of sentences of confinement, 967, 194
legality and promptness, 2, 11
limitations, 963, 194, 964, 194, 968, 194

Punishment: (A.R.)—Continued
 pardon, or mitigation of sentence, 944, 194,
 972, 194
 records, 280, 73
 use of army as posse comitatus, 484, 106

Purchases: (A.R.)
 articles of uniform clothing from post ex-
 change, 1174½, 234
 discharge, by enlisted men, 144, 36
 forage, 1082, 213
 fuel and mineral oil by soldiers' families,
 1038, 203
 fuel by officers and families, 1036, 205,
 1037, 205, 1039, 206, 1040, 206
 horses by mounted officers, 1095, 215
 lands for military purposes, 704, 145
 mineral oil, by officers, etc., 1054, 208
 public animals, 1066-1069, 211

See also Purchases of Supplies (A.R.)

Purchases of supplies: (A.R.)
 appropriation from which paid, 624, 133
 company fund, 322, 80, 328, 82
 contractors, 561, 122, 566, 123
 contracts, 515, 116, 516, 116, 520, 117, 521, 117,
 544-550, 120, 555-566, 121-123
 emergency, 551, 121, 1007, 196
 exceptional articles, 551, 121, 1244, 254
 forage masters, 1093, 215
 foreign articles, 517, 116, 518, 116
 forms of agreement, 550, 120
 fresh meats and beef cattle, 1200, 238
 general provisions, 515-526, 116-117
 interest in, by disbursing officers, 591, 128
 liquid coffee, 1208, 242
 manner and methods, 519, 116
 medical supplies, 1486, 300
 mess fund, 322, 80, 330, 82
 military publications and maps, 521, 117
 open market, 551-554, 121
 ordnance and ordnance stores, 1511, 305
 personal service, 519, 116
 persons in military service, 521, 117
 Philippine Islands, 557, 121
 rations, 1220-1222, 247-249
 regimental fund, 322, 80
 subsistence supplies, 1198, 238
 toilet articles, 1218, 246
 vouchers for payment, 633, 134, 636, 135
 wagon masters, 1093, 215

Q

Qualifications for National Guard officers
 (G.O.), 74, 1002

Quarantine regulations: (A.R.)
 enforcement of, by the army, 485, 106
 reports of inspectors, 889, 181

Quarrels: (C.M.)
 See Disorders (C.M.)

Quartermaster and Commissary: (A.R.)
 battalion and squadron, 248, 67, 254, 68

Quartermaster corps: (C.M.)
 second lieutenants, not available for court-
 martial duty, 6, 1284

Quartermaster corps (A.R.), 1000-1385, 196-281

Quartermaster property (G.O.), 39, 880

Quartermaster property, expendable list (G.O.),
 Bulletin 3, 1914, 983

Quartermaster property in hands of men (G.O.),
 21, 943

Quartermasters: (A.R.)
 accountability, 1086-1092, 214-215, 1094, 215,
 1141, 227
 allotments of pay, enlisted men, 1352, 276,
 1354, 276, 1359, 277

Quartermaster: (A.R.)—Continued
 band instruments, 262, 70, 1179, 235
 barracks and quarters, 1010, 200, 1012, 200,
 1019, 202, 1024-1027, 203-204
 battalion, 248, 67, 249, 67, 254, 68, 255, 68
 blank forms, 1253, 256
 bonds, 567, 123, 568, 123, 574-577, 124-125, 580,
 126, 581, 127
 clothing and equipage, 1148, 228, 1149, 228,
 1153, 228, 1154, 229, 1157, 229
 commutation of rations, 1232, 251, 1233, 252,
 1236-1238, 253
 cooking apparatus, 1253, 256
 court-martial duty, temporary, 192, 48
 deceased soldiers' effects, 163, 41, 164, 41
 deduction of indebtedness to post exchange,
 345, 84
 deduction of laundry charges, 341, 84
 deposits of collections, 614, 131
 deposits of enlisted men, 1335, 270
 deserters' effects, 117, 30
 designated to pay discharged men, 155, 38
 detachment returns, 1009, 197
 eligibility to command, 18, 14
 escaped prisoners' effects, 940, 192
 estimates for funds, 1000, 196
 funds by express, 1142, 227
 funds kept in personal possession, 587, 127
 hospital buildings, 1466, 297
 incorrect payment to enlisted men, 1336,
 270
 means of transportation, 1106, 219
 military academy, 1313, 266
 movements of troops, 1110-1114, 219-220
 notification discharged enlisted men, 155, 38
 office rooms, fuel, and stoves, 1044, 206,
 1046, 207, 1047, 207
 orders for transportation, 1110, 219, 1111,
 219
 ordnance and ordnance stores, 1547, 313
 payments, discharged soldiers, 1375-1377,
 280, 1381, 281
 pay-roll calculations, 810, 166
 police supplies, 442, 101, 443, 101
 post, 206, 56, 497, 113, 498, 113, 1010, 200, 1012,
 200, 1018, 202, 1019, 202, 1024-1027, 203-204,
 1075, 212, 1076, 212, 1148, 228, 1149, 228, 1153,
 228, 1156-1158, 229-230, 1206, 242, 1253, 256,
 1466, 297
 post cemeteries, 497, 113, 498, 113
 private buildings and lands, 1018, 202
 promotion, 24, 14
 public animals, 1072, 211
 ration certificates, 1213, 243
 receipts for refundments, etc., 614, 131, 1384,
 281
 regimental, 248-250, 67-68, 253-255, 68, 262,
 70, 1179, 235
 requisitions for transportation, 1108, 219
 sale of subsistence supplies, 1239-1251, 253-
 255
 savings of rations, 1220-1222, 247-249
 senior, payment of troops, 1254, 256
 signal parties' supplies, 1567, 318
 squadron, 248, 67, 254, 68
 stoppages of officers' pay, 1310, 265, 1311, 266
 street-car and ferry tickets, 1127, 222
 target practice, 351, 85
 telegraph accounts, 1189, 237, 1192, 238
 transportation requests, 1116, 220, 1121, 221,
 1125, 222, 1126, 222, 1129-1131, 223, 1133, 223
 veterinary medicines and supplies, 1075,
 212, 1076, 212

Black face numbers refer to paragraph and the light face numbers to the page

Quartermaster sergeants, company: (A.R.)
 appointments, 273, 71, 275, 72
 rank and precedence, 9, 12
 reduction to the ranks, 276, 72
 return to grade of sergeant, 273, 71
 selection and appointment, 273, 71, 275, 72
 temporary appointments, 275, 72
 travel accommodations, 1128, 222
 warrants, 274, 71

Quartermaster sergeants, regimental: (A.R.)
 appointment, etc., 256, 68

Quartermaster supplies (G.O.), 39, 880

Quartermaster supplies: (A.R.)
 applicants for enlistment, 1218, 246
 care and accountability, 1086-1094, 214-215
 emergency purchases, 1007, 196
 extra issues, 1215-1218, 244-246
 general depots, 1002-1004, 196
 militia, 1143, 227
 recruits, 1217, 246
 sales to officers' servants, 1175, 234
 signal parties, 1567, 318
 special requisitions, 1005, 196
 transfers to successors, 1094, 215
 verification of quantities, 1094, 215
 vouchers for payment, 633, 134
 See also Subsistence Supplies and Stores (A.R.)

Quarters: (A.R.)
 allowance, etc., 1024-1034, 203-204, 1044, 206, 1390, 284, 1397, 284
 commutation, 1299-1307, 264-265
 contracts, 515, 116
 hire, 1028, 204, 1029, 204
 leaves of absence, 1033, 204, 1035, 205
 use of hospitals, 1470, 298

Quorum: (C.M.)
 for general or special court-martial, 7, 1285

R

Railroads: (A.R.)
 bond-aided, 732, 152, 1186, 237
 construction and repair, 1000, 196
 hospital trains, 1440, 292
 land-grant, 485, 106, 1279, 261

Range finders, selection of (S.A.F.), 86, 784

Range officer, duties of (S.A.F.), 105, 789

Range practice, with pistol or revolver: (S.A.F.), 147-166, 806-809
 ammunition, allowance of, 150, 807
 expert test, 154, 808
 field firing, 162, 809
 general description, 147, 806
 general remarks, 156, 808
 instruction practice, 151, 807
 order of procedure, 155, 808
 practice season, 148, 806
 preliminary instructions, 157, 808
 record practice, 152, 807
 scoring, 153, 808
 See Dismounted Course, Pistol Practice (S.A.F.)
 See Pistol and Revolver Practice (S.A.F.)
 who will fire, 149, 807

Ranges (S.A.F.), 262-281, 852-854

Ranges (F.S.R.), Appendix 7, 1704

Rank: (A.R.)
 commissioned officers, 9, 12, 11, 13
 definition, 7, 12
 grades, 9, 12
 how held and conferred, 8, 12
 members of courts-martial, 945, 194
 noncommissioned officers, 9, 12
 relative, of army and navy officers, 12, 13

Rank: (A.R.)—Continued
 relative, of different corps of the army, 6, 11, 10, 13
 transfer or exchange of officers, 47, 18, 48, 18

Rank: (C.M.)
 among regulars, volunteers, and others, 12, 1286
 change of, 74, 1302
 immaterial in applying rules of evidence, 200, 1341
 of appointing authority, 19, 1288
 of members of courts-martial, 12, 1286
 officer suspended from, not available for court-martial duty, 9, 1286
 suspension from, 314, 1376
 trial by inferiors in, 12, 1286

Rape (C.M.), 442, 1449

Ration and savings accounts: (A.R.)
 certificates, 1205, 240, 1213, 243
 detachments leaving post, 1213, 243
 duties of commanding officer, 1220, 247
 duties of the quartermaster, 1220-1222, 247-249
 individual, 1209, 243
 money accruing from, 1220, 249
 ration returns, 1205, 240, 1209-1211, 243, 1214, 244, 1220, 247
 sick in hospital, 327, 81

Ration conversion table (R.C.), 615

Ration in the field (F.S.R.), 293-311, 1650-1653

Ration of the army: (A.R.)
 care and use, 297, 76, 298, 75
 civilian employees, 733, 152, 1211, 243, 1213, 243
 commutation. See Commutation of Rations (A.R.)
 components and substitutes, 1205, 240
 computation of cost, 1221, 248
 defined, 1202, 239
 emergency, 1202, 239, 1205, 240
 garrison, 1202, 239, 1205, 240, 1207, 242, 1220, 247, 1221, 248
 haversack, 1202, 239, 1205, 240
 holiday, 1205, 240, 1221, 248
 meal tickets, 1227, 251
 stores purchased from quartermaster, 1220, 247
 temporary supplies, 1220, 247
 to whom furnished, 1202-1204, 239-240, 1224, 250, 1225, 251, 1452, 295, 1453, 295
 travel, 1202, 239, 1205, 240, 1207, 242, 1208, 242, 1220, 247, 1221, 248, 1224, 250, 1225, 251
 See also Subsistence Supplies and Stores (A.R.)

Rear guards (F.S.R.), 55-59, 1587-1588

Reasonable doubt (C.M.), 288, 1369

Receipts: (A.R.)
 clothing, 1157, 229, 1158, 230
 ordnance and ordnance stores, 1533, 310
 quartermaster corps, 1384, 281
 transfer of money, refundments, etc., 1384, 281
 transportation requests, 1117, 221, 1118, 221

Receipts for money and property: (A.R.), 631-652, 134-138
 refundments, stoppages, transfers, etc., 1384, 281

Reconnaissance: (F.S.R.)
 by aero squadron, 12, 1576
 by cavalry, 13, 1576
 by divisional cavalry, 15, 1576
 by infantry, 16, 1576
 by independent cavalry, 14, 1576

Black face numbers refer to paragraph and the light face numbers to the page

- Reconnaissance: (F.S.R.)—Continued**
 during combat, 20, 1578
 preceding combat, 17, 1577
- Reconnaissance: (F.E.)**
 abbreviations, 1064
 azimuth, 4, 1009
 camp site reconnaissance, 62, 1037
 clinometer, description and use of, 13, 1014
 compass and drawing board, 50-53, 1028-1029
 compass, description of, 5-9, 1011-1012
 use of, 21, 1016
 contouring, 66-76, 1039-1043
 conventional signs, 96, 1055, 96a, 1063
 drawing, 91, 1053, 95, 1055
 drawing board, 53, 1029
 elevations, 15, 1015
 enemy's position, reconnaissance of, 64, 1038
 enlargement, 98, 1057
 estimating distance, 33, 1017
 field works, reconnaissance of, 44, 1026
 gradients, 10, 1013
 hachures, 76, 1043
 hydrography, 86-88, 1048-1051
 improvised instruments, 56, 1032
 intersection, 34, 1018
 landscape sketching, 85, 1046
 map making of Cuba, 129-133, 1060-1063
 map reading, 89, 1051, 90, 1053
 mountain reconnaissance, 61, 1037
 moving column, reconnaissance with, 77, 1043
 note book for field, 49, 1028
 pacing, mounted, 28-30, 1017-1018
 pacing, on foot, 25, 1016
 position reconnaissance, 63, 1037
 position sketch, 65, 1038
 protractor, 40-41, 1018-1020
 railroad reconnaissance, 59, 1036
 reduction, 98, 1057
 river reconnaissance, 58, 1035
 road reconnaissance, 57-58, 1032-1035
 road sketch, 45, 1026
 scale of map, 42, 43, 1020, 1021
 sketching case, 54, 1029, 55, 1032
 sketching, compilation of, 78-80, 1046
 slope board, 14, 1015
 slope equivalents, 75, 1042
 topographical reconnaissance, 1, 2, 3, 1009
 traversing with compass and note book, 46-48, 1026-1028
 woods reconnaissance, 60, 1037
- Reconnaissances: (A.R.)**
 engineer officers' duties, 1493, 301, 1500, 302, 1502, 303
 escort commanders' duties, 20, 14
 field notes, sketches, etc., 444-446, 101-102
- Reconnaissances (I.D.), 389-399, 389-390**
- Record of officers: (A.R.)**
 details for detached service, etc., 39, 16
- Records: (A.R.)**
 army corps, 821, 169
 battalion, 245, 66
 brigades, 821, 168
 calls or inquiries for information from military, 774, 159
 care and preservation, 820, 168
 colored ink, 822, 168
 company, 280, 73, 281, 73, 821, 168
 company fund account, 328, 82
 completion, etc., of military, in the adjutant general's office, 774, 159
- Records: (A.R.)—Continued**
 concealment, mutilation, etc., 823, 168
 councils of administration, 318, 80
 courts-martial, 915, 188, 917, 189, 919-921, 189
 deposits by enlisted men, 1361, 277
 destroying or carrying away, etc., 823, 168
 discontinued commands, 821, 168
 disposition of old, 258, 69, 281, 73
 divisions (tactical), 821, 168
 divisions (territorial), 821, 168
 enlistment of discharged soldiers, 860, 176
 information from, how furnished, etc., 824, 169
 medical, 774, 159
 military, 774, 159, 820-824, 168-169
 militia and volunteers after muster out, 774, 159
 national cemeteries, 490, 112
 office chief of coast artillery, 303, 76
 post, 211, 57, 821, 168
 post cemeteries, 495, 113, 497, 113
 punishments, 280, 73
 re-enlistments, 860, 176
 regimental, 251, 68, 258, 69, 821, 168
 regimental fund book, 325, 81
 separate brigades, 821, 80
 service of officers, 39, 16
 volunteer armies, 774, 159
- Records of officers (G.O.), 12, 903**
- Records of trial: (C.M.)**
 carbon copy for accused, 117, 1315
 correction of, 364, 365, 1400
 disposition of, 364, 367, 1400
 general court-martial, 354-357, 1396
 loss of, 368, 1401
 special court-martial, 358-362, 1399
 summary court-martial, 363, 1400
- Recovery of public property (A.R.), 689-692, 143-144**
- Recreation and amusement: (A.R.)**
 buildings, erection by labor of troops, 339, 83
- Recruiting circular (G.O.). See Circular 2, 1916, 978**
- Recruiting depots: (A.R.)**
 classification, 841, 173
 court-martial duty of officers, 192, 48
 detachment of officers, 192, 48
 general recruit depots, 191, 47, 192, 48, 841, 173, 842, 174
 mess stewards and cooks, 170, 43, 329, 82
 police and discipline, recruit depot posts, 841, 173
 recruit companies, 842, 174
 recruit depot posts, 841, 842, 173-174
 reports, 842, 174
 supervision or control, 191, 47
- Recruiting instructions (G.O.), Circular 2, 1916, 978**
- Recruiting officers: (A.R.)**
 appointment, noncommissioned officers, 843-845, 174
 apprehension of deserters, 118, 31, 123, 31
 clothing and equipage, 1152, 228
 details, 840, 173
 disbursements, 587, 127
 efficiency reports, 829, 170
 enlistment period noted on card, 153, 38
 enlistments, etc., hospital corps, 1410, 287
 enlistments and re-enlistments, 847, 174
 general duties and responsibilities, 850, 175, 851, 175, 853-856, 176, 859, 176, 860, 176, 864, 177, 865, 177, 872, 178, 874, 179, 876, 179, 1167, 232, 1484, 300

- Recruiting officers: (A.R.)**—Continued
 medical attendance, etc., 1475, 299
 ordnance and ordnance stores, 1532, 310
- Recruiting parties: (A.R.)**
 noncommissioned officers, 843-845, 174
 re-enlistment of members, 847, 174
 summer clothing, 1167, 232
- Recruiting service: (A.R.)**
 applicants for enlistment. See Applicants for Enlistment (A.R.)
 assignments, enlisted men, 843-845, 174
 classifications and details, 840, 173
 clothing and equipage, 1152, 228, 1167, 232
 commutation of rations, 1226, 251, 1229, 251
 correspondence, 872, 178
 enlistments. See Enlistments and Re-enlistments (A.R.)
 flag, 224, 59
 general recruiting depots, 191, 47
 general recruiting stations, 841, 173, 895, 184
 management, etc., 740, 154, 774, 159
 medical attendance, 1475, 299
 periods of detail, 840, 173
 recruiting depots, 841, 173, 842, 174
 recruiting officers. See Recruiting Officers (A.R.)
 recruits. See Recruits (A.R.)
 returns, 857, 176
 surplus property, 1152, 228
- Recruiting stations: (A.R.)**
 brooms, brushes, and mops, 1181, 235
 court-martial duty of officers, 192, 48
 deserters, 123, 31
 flags, 224, 59
 inspections, 895, 184
 laundry work, 1169, 233, 1218, 246
 medical attendance, etc., 1475, 299
 supervision or control, 191, 47
- Recruits: (A.R.)**
 age limitation, 849, 175
 articles of war to be read, 856, 176
 assignment to organizations, 872, 178
 certificate of disability, 870, 178
 character, 869, 178
 commutation of rations, 1224, 250
 descriptive and assignment cards, 869, 178, 875, 179, 1169, 233, 1217, 246, 1249, 255
 discharges for disability, 841, 173, 1382, 281
 distribution, 841, 173
 hospital corps, 1410, 287
 instruction, etc., 841, 173, 842, 174
 laundry charges, 1169, 233
 officer conducting to organizations, 875, 179
 payments to discharged, 1382, 281
 physical examination, 864, 177, 865, 177, 868-870, 178, 1484, 300
 physical examination reports, 774, 159
 sales to, of subsistence supplies, 1242, 254, 1249, 255
 sent to organizations, 872, 178, 875, 179, 877, 179
 toilet articles, etc., 1217, 246
 travel rations, 1224, 250, 1225, 250
 vaccination, 865, 177, 866, 177, 869, 178, 1484, 300
- Red Cross Convention (F.S.R.),** Appendix 6, 1688
- Reduction of noncommissioned officers (C.M.),** 327, 1378, 349, 1386
- Reduction to the ranks: (A.R.)**
 noncommissioned officers, company, 276-278, 72
 regimental noncommissioned officers, 256, 68
- Reduction to the ranks: (A.R.)**—Continued
 regimental noncommissioned staff, 256, 68
- Re-enlisted pay: (A.R.)**
 rates and payment, 1338, 270, 1339, 271
- Re-enlistments: (A.R.)**
 additional pay, 859, 176, 1338-1340, 270-271
 antedating, 859, 176
 date, 859, 176
 deposits may be renewed, 1365, 278
 disability contracted in line of duty, 863, 177
 disabled soldiers, 863, 177
 disqualifications, 849, 175, 861, 176
 enlistment period noted on card, 153, 38
 furloughs to enlisted men, 107, 27
 general noncommissioned staff, 103, 26
 hospital corps, 1410, 287, 1412, 287
 married men, 852, 176, 1009, 197
 noncommissioned officers, company, 274, 71
 notations on discharge certificates, 148, 37, 153, 38, 860, 176
 other organizations, 862, 177
 post noncommissioned staff, 101, 26
 prohibited classes, 849, 175
 recruiting officers, 860, 176
 soldier under sentence of court-martial, 157, 39
 special authority required, 861, 176, 862, 177
- Re-enlistments in time of war (G.O.),** 34, 998
- Refusal to plead (C.M.).** See Accused (C.M.)
- Regimental bands: (A.R.)**
 appointment of noncommissioned officers, 260, 70
 discipline and efficiency, 253, 68
 equipments, 257, 69, 262, 70
 fund, 262, 70, 324, 80, 325, 81, 327, 81
 lye and sapollo, 1182, 236
 Memorial Day, 440, 100
 musical instruments, etc., 262, 70, 1179, 235
 national and patriotic airs to be played, 264, 70, 437, 100
 procedure when musicians are needed, 263, 70
 saluting, 375, 88, 376, 88
 station, 261, 70
 "The Star Spangled Banner," 264, 70, 378, 88, 437, 100
- Regimental books and records: (A.R.)**
 disposition of old, 258, 69
 duties of adjutant, 251, 68
 enumerated and instructions, 258, 69, 259, 69
 fund book, 325, 81
- Regimental colors and standards: (A.R.)**
 care and use, 232, 62, 233, 62
 dropping during salute, 375, 88
 infantry, 229, 61
 mourning, 434, 100
 saluted, 377, 88
 service, 233, 62
- Regimental commanders: (A.R.)**
 aid to chaplains, 44, 17
 allotments of pay, enlisted men, 1360, 277
 bands and field musicians, 260, 70, 263, 70
 battalion staff officers, 248, 67, 250, 68
 certificates of merit, 184, 46
 company fund, 328, 82
 discharge of enlisted men, 160, 40
 disposition of old records, reports, etc., 258, 69
 efficiency reports, 829, 170
 enlistment or re-enlistment of married men, 852, 176
 furloughs, 106, 27
 general duties and responsibilities, 203, 55, 246, 67

Black face numbers refer to paragraph and the light face numbers to the page.

- Regimental commanders: (A.R.)**—Continued
muster and pay rolls, 810, 166
noncommissioned officers, 94, 26, 95, 26, 256,
68, 271, 71, 275, 72, 276, 72
office rooms, fuel, and stoves, 1044, 206
post noncommissioned staff, 94, 26, 95, 26
recruiting service, 840, 173
regimental fund, 324, 80, 325, 81
regimental staff officers, 248, 67, 250, 68, 251,
68, 253, 68, 255, 68
reports, incapacitated officers, 890, 183
reports, issues, and roll calls, 373, 87
returns, regimental libraries, 332, 83
returns of troops, 811, 167, 812, 167
senior officer on duty, 245, 66
surveying officers, 711, 147
transfer or exchange of enlisted men, 114,
29
veterinarians, 91, 25
- Regimental commissary sergeants: (A.R.)**
See Commissary Sergeants, Regimental
(A.R.)
- Regimental drill (I.D.), 327-346, 380-384**
- Regimental noncommissioned staff: (A.R.)**
appointments, etc., 256, 68
baggage, 1136, 224
brooms, brushes, and mops, 1181, 235
discharge and re-enlistment, 256, 68
discipline and efficiency, 253, 68
equipments, 257, 69
rank and precedence, 9, 12
reduction to the ranks, 256, 68
warrants, 256, 68
- Regimental officers: (A.R.)**
assignments, field officers, 247, 67
- Regimental quartermaster sergeants: (A.R.)**
See Quartermaster Sergeants, Regimental
(A.R.)
- Regimental sergeants major: (A.R.)**
See Sergeants Major (A.R.)
- Regiments: (A.R.)**
administrative unit, 245, 66
appropriate command of a colonel, 14, 13
bands. See Regimental Bands (A.R.)
chaplains, 43-46, 17
colors, names of battles, 244, 65
commanders. See Regimental Commanders
(A.R.)
composition and command, 245, 66
desks, 1139, 226
detached companies, 813, 167
fund, 262, 70, 321, 80, 322, 80, 324, 80, 325, 81
letter and note heads, 512, 115
noncommissioned staff, 253, 68, 256, 68, 257,
69
precedence of, on occasions of ceremony,
6, 11
public property, 257, 69
records, 251, 68, 258, 69, 259, 69, 325, 81
records of discontinued, 821, 168
regulations, 245, 66
returns, 811-813, 167, 815, 167
staff officers, 248-255, 67-68, 807, 166
transfer, etc., enlisted men, 114, 29
transfer or exchange of officers, 48, 18
- Registry of officers: (A.R.)**
arriving at Washington or at division or
department headquarters, 406, 94, 825, 169
- Regular army: (C.M.)**
composition, 4, 1282
officers may try members of other forces,
11, 1286
- Regular army, vacancies due to details to
National Guard (G.O.), 114, 1004**
- Regulars: (A.R.)**
precedence, 6, 11, 10, 13
- Regulations, army: (A.R.), 11**
field maneuvers (F.M.), 603
field service (F.S.R.), 1573
infantry drill (I.D.), 331
machine gun (M.G.), 1905
signal book (Sig.), 585
uniform (U.R.), 1859
- Rejoining station: (A.R.)**
furloughed soldiers, 110, 28
soldiers absent without leave, 110, 28
travel allowances, 1289-1294, 263-264
- Relative rank: (A.R.)**
army and navy officers, 12, 13
grades of rank, 9, 12
officers, same grade, 11, 13
regulars, marine corps, militia, and vol-
unteers, 6, 11, 10, 13
- Release: (A.R.)**
general prisoners, 941, 192
insane soldiers from hospital, 470, 104
officers without charges, 924, 189
- Remount depots: (A.R.)**
purchase of horses by officers, 1095, 215
- Repair of arms, sights, and range finders:
(C.E.), 222-233, 666-668**
- Repair of equipment: (C.E.)**
canteen, old model, 116, 658
general instructions for repair of cloth
equipment, 98-106, 653-657
general instructions for the repair of leather
equipment, 6-12, 640-641
special instructions for components of
infantry equipment, model of 1910, 107-
152, 657-666
- Repairs: (A.R.)**
hand litters, 1430, 290
hospitals, 1466-1469, 297-298
musical instruments, 1179, 235
ordnance stores, 1520, 308, 1534, 311, 1537-
1540, 312-313
shoes, 327, 81
transportation, means of, 557, 121
- Reporter: (C.M.)**
employment and compensation, 112-118,
1313-1315
- Reporters, courts-martial: (A.R.)**
traveling expenses, 738, 154
- Reports: (A.R.)**
allotments of pay, enlisted men, 1348-
1351, 275-276, 1353, 276, 1359, 277
apprehended deserters, 123, 31
arrest of officers, 924, 189
battle, 816, 167
boards and commissioners, 1934, 52
burials, post cemeteries, 498, 113
channels, 785, 162
chaplains, 45, 17
company, 266, 70
company records, 280, 73, 281, 73
deaths and burials, 45, 17, 83, 23, 87, 24,
167, 42
deserters, 118, 31, 120, 31, 124, 32, 126, 32
detachment commanders, 369, 87
disposition of old, 258, 69, 281, 73
efficiency. See Reports, Efficiency (A.R.)
hunting, 65, 21
incapacitated officers, 76, 23
medals or badges, illegal possession, 188,
46
medical examination of applicants for en-
listment, 871, 178

Black face numbers refer to paragraph and the light face numbers to the page

- Reports: (A.R.)—Continued**
 militia encampments, 105, 26, 193, 48, 774, 159
 mixed corps operations, 817, 168
 movements of troops, emergencies, 193, 48, 487, 111
 officers traveling on duty without troops, 68, 22
 officers visiting foreign countries, 62, 21
 outstanding liabilities, 605, 130
 personal. See Reports, Personal (A.R.)
 post commanders, inspection, 203, 55
 post records, 211, 57
 recruits, 842, 174
 regimental records, 258, 69
 roll call, 372, 87
 sanitary, 1367, 282
 sick and wounded, 1471, 298
 small-arms practice, 349, 85
 special, for recommendations affecting the service as a whole, etc., 193½, 52
 surveying officers, 116, 30, 713, 147, 715-725, 148-150
 transfer or exchange of officers, 48, 18
- Reports, efficiency: (A.R.)**
 care enjoined in preparation, 39, 16, 832, 172
 channels through which forwarded, 829, 170, 831, 172
 final disposition, 833, 172
 inspection reports, 830, 172, 831, 172, 889, 181, 890, 183
 officers for retirement or promotion, 26, 14
 reporting officers, 829, 170, 830, 172, 832, 172
- Reports, personal: (A.R.)**
 detached service, 105, 26, 826-828, 169-170
 enlisted men on detached service with militia, 105, 26
 field officers, regimental, 828, 170
 general officers, 826, 169
 inspectors, 880, 180
 leaves of absence, 50, 19, 59, 21, 64, 21
 observations, foreign countries, 62, 21
 officers arriving at Washington, D. C., or at division or department headquarters, 406, 94, 825, 169
- Requests: (A.R.)**
 transportation. See Transportation Requests (A.R.)
- Requisitions, forms for: (L.W.), 1801**
- Requisitions: (A.R.)**
 band instruments, 1151, 228
 blank forms, blank books, etc., 1251, 228, 1553, 228, 1571, 218
 canteen covers, corks, etc., 1534, 311
 clothing, 1152, 228, 1157, 229, 1158, 230
 examination, revision, etc., 749, 155, 750, 155
 illuminating supplies, 1052, 208
 ordnance and ordnance stores, 1517-1519, 308
 preparation, etc., 748, 155
 quartermaster supplies, 1089, 215
 signal supplies, 1564, 317, 1567, 318
 special, 1151, 228, 1152, 228
 stationery, 1062, 211
 toilet articles, etc., 1216, 245, 1217, 246
 transportation of the army, 1108, 219
 veterinary supplies, 1074, 212
 working parties, fieldworks, 1499, 302
- Reserve battalions for recruits (G.O.), 79, 1003**
- Reserve of regular army (G.O.), 30-32, 997**
- Reservist (A.R.). See Army Reserve (A.R.)**
- Res Gestæ (C.M.). See Evidence, Testimonial (C.M.)**
- Resignation of officers: (A.R.)**
 acceptance, etc., of civil office, 82, 23
 checks, outstanding, 603, 130
 correspondence, 79, 23, 80, 23
 leaves of absence on tender, 81, 23
 payments, 1262, 257, 1263, 257
 tender and acceptance, 79, 23
 under charges, 80, 23
- Responsibility for property: (A.R.)**
 See Property Accountability and Responsibility (A.R.)
- Retainers to the camp: (C.M.)**
 subject to military law, 4, 1282
- Retired officers: (C.M.)**
 subject to military law, 4, 1282
 when available for court-martial duty, 9, 1286
 witness fees, 183, 1335
- Retirement of enlisted men (A.R.), 134-138, 34-35**
- Retirement of officers (A.R.), 76-78, 23**
- Retreat: (A.R.)**
 ceremonies, 437, 100
 gun, 210, 56
- Retreat gun (G.M.), 346, 560**
- Retreating force, security for (F.S.R.), 52, 1587**
- Return journeys: (A.R.)**
 orders, 1285, 263
 transportation requests, 1121, 221
 witnesses before military courts, 992, 195
- Returns: (A.R.)**
 captured property, 819, 168
 general prisoners, 937, 191
 killed and wounded in action, 818, 168
 organized militia, 193, 48, 774, 159
 recruiting service, 887, 176
- See also—
 Returns of Public Property (A.R.)
 Returns of Troops (A.R.)
- Returns, false (C.M.), 408, 1411**
- Returns of public property: (A.R.)**
 administrative examination, 702, 145, 703, 145
 articles in charge of guards, 442, 101
 charges of loss, etc., 699, 144
 company property, 694, 144
 contingency purchases, 200, 54
 deceased officers, 86, 24
 destroyed or lost in service, 698, 144
 expended in the military service, 698, 144
 expenditures under orders, 696, 144, 697, 144
 failure to render, 700, 145
 insane officers, 86, 24
 libraries, 332, 83, 333, 83
 made for all public property, 693, 144
 manuscript, prohibited, 1572, 318
 orders directing issues, etc., 696, 144
 ordnance and ordnance stores, 701, 145, 1520-1522, 308-309, 1527, 310, 1543, 313, 1549, 314
 post noncommissioned staff, 695, 144
 preparation and rendition, 701, 145
 quartermaster supplies, 1086-1094, 214-215, 1167, 232, 1176, 234
 subsistence supplies, 701, 145, 1215, 244
 See also Property Accountability and Responsibility (A.R.)
- Returns of troops: (A.R.)**
 annual, of militia, 774, 159
 casualties, 818, 168
 consolidation of general returns of the army, 774, 159
 contract surgeons, 1489, 300

Black face numbers refer to paragraph and the light face numbers to the page

- Returns of troops: (A.R.)—Continued**
 dental corps, 1489, 300
 leaving or joining a station, 812, 167, 814, 167
 manuscript prohibited, 1572, 318
 medical officers, 1489, 300
 notation of officers' absences, 64, 21
 on transports, 812, 167
 preparation, disposition, etc., 748, 155, 811-815, 167, 818, 168, 819, 168, 857, 176
 recruiting, 857, 176
 sailing from or arriving at a port, 812, 167
 special, 812, 167, 814, 167
 strength, 811-815, 167
- Reveille: (A.R.)**
 ceremonies, 437, 100
 gun, 210, 56
 hours for sounding, 370, 87, 373, 87
- Reveille and retreat gun (G.M.), 346, 560**
- Revetments (F.E.). See Field Fortifications (F.E.)**
- Reviewing authority: (A.R.)**
 courts-martial records, 965, 194, 970, 194, 975, 194, 981, 195, 983, 195, 904, 195
 proceedings of medical examining boards, 1388, 283
 reconvening courts-martial, 983, 195
- Reviewing authority: (C.M.) See Appointing Authority (C.M.)**
 forms for action by, on sentence, 1542
- Reviews: (A.R.)**
 musters, 439, 100
 precedence of regiments and corps, 6, 11
 tendered to visitors to posts, 403, 93
- Revision: (C.M.)**
 form for, 1538
 proceedings on, 352, 1395
- Revolver and pistol practice (S.A.F.). See Pistol and Revolver Practice (S.A.F.)**
- Reward for apprehending deserter: (C.M.)**
 when payable, 329, 1378
- Rewards: (A.R.)**
 deserters, 121, 31, 123, 31, 127, 32, 128, 33, 131, 33
 escaped military prisoners, 121, 31
 recovery of lost or stolen animals, 691, 144
- Rifle, description and rules for: (U.S.R.)**
 accessories, 707
 spare parts, 705
 aiming device, 711
 appendages, 706
 assembled parts and their operations, 696
 assembling after dismounting, 704
 ballistics—
 accuracy, 723
 corrections corresponding to one point of the deflection scale and to a change in elevation of 25 yards (table), 733
 dangerous spaces, 731
 drift (table), 732
 horizontal deviation, 732
 longitudinal wind components, 734, 735
 maximum range, 722
 ordinates of trajectory above line of sight, 728-730
 penetration, 723
 point blank danger space, 723
 table of fire, 724-727
 windage necessary to correct for a 10-mile-an-hour wind, drift not considered (table), 733
 bolt mechanism, dismounting and assembling, 701
 component parts, 673
- Rifle, description and rules for (U.S.R.)—Continued**
 dismounting and assembling by soldier, 700
 dismounting, completion of, 703
 injuries which do not render parts unserviceable, 710
 magazine mechanism, dismounting and assembling, 703
 miscellaneous data, 737-738
 nomenclature, 674
 packing, 705
 precautions, 700
 repair chest, contents, 707
 repair of rifle, parts used, 705
 replacing broken parts, 709
 spare parts, 708
 using when certain parts are missing, 710
- Rifle, care of (C.E.). See Care of Arms (C.E.)**
- Rifle, cleaning of (C.E.). See Care of Arms (C.E.)**
- Rifle exercise (P.T.). See Physical Training (P.T.)**
- Rifle inaccurate (C.E.), 234-241, 668-670**
- Rifemen, advice to: (S.A.F.), 124-134, 797-800**
 cleaning the rifle. See Care of Arms (C.E.)
 light, effect of, 129, 799
 long range practice, 126, 798
 mirage, effect of, 130, 799
 moving targets, firing at, 132, 800
 rapid firing, best methods, 131, 799
 rests, firing with, 133, 800
 short range practice, 125, 797
 temperature, effect of, 128, 798
 wind, effect of, 127, 798
- Rifle Model 1898, drill with (I.D.), Appendix B, 467**
- Rifle practice on the range: (S.A.F.)**
 arm to be used, 90, 786
 equipment during, 94, 787
 field glasses, use of, 97, 788
 general description, 87, 784
 gun sling, use of, 91, 787
 known distance practice, 87-118, 784-795
 long distance practice, 115, 794
 marking of targets, 108, 790
 marking rapid fire, 110, 792
 marking slow fire, 109, 791
 noncommissioned officer in charge of pit, 106, 790
 officer in charge of firing, 104, 789
 order of procedure, 98, 788
 practice season, 88, 785
 qualification course-instruction practice, 112, 793
 qualification course-record practice, 113, 794
 range officer, 105, 789
 rapid fire, procedure in, 112, 793
 record practice, 96, 788
 rests, use of, 92, 787
 scoring, 101, 788
 rapid fire, 103, 789
 slow fire, 102, 789
- See Small Arms Firing Manual (S.A.F.)**
 sighting shots, 99, 788
 special course A, 119-123, 796-797
 summary of practice required for different grades, 118, 795
 target details, 107, 790
 target year, 88, 785
 telescopic sights, practice with, 116, 117, 795
 uniform during, 94, 787
 who will fire, 89, 786, 117, 795
 wind clocks, use of, 93, 787

Black face numbers refer to paragraph and the light face numbers to the page

Rifle shooting (S.A.F.). See Small Arms Firing Manual (S.A.F.)

Rifle, submission to inspection (G.O.), 295, 930

Rifle, use in swimming and wall-scaling prohibited (G.O.), 296, 931

Riots: (A.R.)
use of troops, 487-489, 111-112

Road, building of (F.E.), 1-11, 1163-1165

Roads, construction and repair (A.R.), 1000, 196, 1016, 201

Road spaces and dimensions (F.S.R.), Appendix 1, 1676

Robbery (C.M.), 443, 1452

Roll calls and signals: (A.R.)
daily and special, 370-373, 87

Roster of duties: (A.R.)
classification, 357, 86
company, 282, 73
definition of a roster, 355, 86
detachments, 365-369, 86-87
details and duties, 355-364, 86
disposition of old, 282, 73
duties, etc., adjutant, 251, 68
tours, 360-362, 86

Roster of troops: (A.R.)
copies furnished, etc., 805, 165

Route maps: (A.R.)
preparation, 444, 101, 445, 102
preservation and use, 445, 102

Rubber stamps: (A.R.)
use in preparing checks, 600, 129

Rule estimating distance (G.O.). Bulletin 49, 1005

S

Sabbath: (A.R.)
duty and labor, 205, 56
orderly observance enjoined, 205, 56

Saber, manual of (I.D.), 782-791, 443-444

Saddle blankets, care of (G.O.), 323, 935

Saddlers: (A.R.)
appointment, etc., 275, 72, 278, 72
extra-duty detail, 173, 44

Safe conducts: (L.W.), 277-280, 1779-1780
forms for, 1782

Safeguard: (L.W.), 282-283, 1780-1781
forms for, 1782

Safeguard: (C.M.)
forcing, 428, 1435

Sales of public property: (A.R.)
abstract of sales of subsistence supplies, 1250, 255
advertisements, 503, 114
auctioneer's account of sale, 680, 142
cartridges to enlisted men, 354, 85
cash, 1239-1241, 253, 1244, 254, 1245, 254
clothing, for servants, 1175, 234
condemned ordnance and ordnance stores, 1543, 313
condemned or reduced, in price, 681, 143
condemned public animals, 1073, 212
credit, 1242, 254, 1243, 254, 1249, 255
exceptional articles, 1244, 254
forage, by officers, 1083, 213
horses, to mounted officers, 1095, 215
illuminating supplies, 1038, 205, 1054, 208
obtained from quartermaster, 1247, 255
ordnance and ordnance stores, 1520, 308, 1521, 309, 1526, 310
price of subsistence supplies, 1251, 255
quartermaster supplies, 1055, 208, 1174, 234
regulated by post commanders, 1247, 255
rules, 1196, 238

Sales of public property: (A.R.)—Continued
signal corps equipment, 1564, 317
sold as purchased, 1246, 254
subsistence supplies, 885, 180, 1196, 238, 1239-1251, 253-255
surplus, and in urgent cases, 1197, 238
surplus garden products, 344, 84
transfers not regarded, 619, 132
unauthorized, 1198, 238
waste products, 679, 142

Salutes: (A.R.)
cannon, 393-400, 91-92, 440, 100
colors and standards, 375, 88
commanding officers, 390, 89
compliments to visitors, 403, 93
dipping of flag of military post, 405, 94
enlisted men, to officers, 383-392, 89-90
field music, 375-377, 88, 437, 100
foreign ships of war, 399, 92
funeral honors, 396, 92, 417-421, 98-99
Memorial Day, 440, 100
national, 398, 92
national flag, 398, 92
national flag displayed, 397, 92
national or regimental colors, etc., 377, 88
occasions of public nature, 404, 94
occasions outdoors, etc., 302, 72
official duty and official occasions, 381, 89, 382, 89
personal, 375-377, 88, 400-403, 92-93, 412, 97
saluting stations, 399, 92
standards and colors, 375, 88
time of firing, 397, 92
to the Union on July 4, 398, 92
troops saluting, 379, 89, 380, 89
visits and courtesies, 411-413, 96-98

Salutes (I.D.), 758-765, 437-439

Sanitary regulations (G.O.), 45, 966

Sanitary service, zone of the advance (F.S.R.), 329-353, 1655-1600

Sanitation: (A.R.)
reports and inspections, 1387, 282

Saturday inspection: (A.R.)
by company, band, and detachment commanders, 283, 73
guard and sick in hospital excused, 283, 73
police of barracks, 287, 74

Savings of rations: (A.R.)
See Ration and Savings Accounts (A.R.)

Scabbard, of bayonet (U.S.R.), 690

School of battalion (I.D.), 258-326, 369-380

School of company (I.D.), 159-257, 856-369

School of musketry (A.R.). See Army War College (A.R.)

School of soldier (I.D.), 48-100, 340-347

School of squad (I.D.), 101-158, 347-356

Seamen: (A.R.)
admission to hospital, and charges, 1459, 295
hours of labor, 731, 172
rations, 1204, 240

Sea travel: (A.R.)
statement of expenses, 1280, 261
travel not so regarded, 1280, 261

Second Lieutenants: (A.R.)
baggage, 1136, 224
forage, 1080, 213
funeral honors and escort, 422, 99, 426, 99
joining station after appointment, 1098, 217, 1296, 264, 1297, 264
quarters, fuel, and stoves, 1044, 206
rank and precedence, 9, 12

Second Lieutenants, vacancies for (G.O.), 60, 974

Black face numbers refer to paragraph and the light face numbers to the page

- Security: (F.S.R.)**
 advance guards, 40-52, 1583-1587
 flank guards, 53, 1587
 general principles, 37, 1582
 outposts and outguards, 60-63, 1588-1592
 rear guards, 55-59, 1587-1588
 retreating force, 52, 1587
- Self-crimination: (C.M.)**
 compulsory, prohibited, 233-236, 1354-1355
- Sentence: (C.M.)** See Punishments (C.M.)
 date of beginning of, 401, 1408
 forms for, 1541
 for officers, 310, 1375
 for soldiers, 311, 1376
 in excess of legal limit, 386, 1405
 mitigation and commutation, 380-384, 1404-1405
 not effective until approved, 371, 1402
 suspension of, 391-393, 1406
 various kinds, discussed, 312-328, 1376-1378
 voting on, 308, 1375
- Sentences, courts-martial: (A.R.)**
 See Courts-martial Sentences (A.R.)
- Sentences, military commissions: (A.R.)**
 discharge of enlisted men, 139, 35
- Sentinel: (C.M.)**
 offenses committed by, 436, 1443
- Sentinels of the stable guard (G.M.), 328-336, 558-559**
- Separate command: (A.R.)**
 alterations in strength, 814, 167
- Sergeant of the guard, duties of (G.M.), 80-103, 534-536**
- Sergeants: (A.R.)**
 appointment, 271, 71, 275, 72, 1009, 197
 baggage, 1136, 224
 funeral honors and escort, 428, 99
 Indian scouts, 480, 106
 quarters, fuel, and stoves, 1044, 206
 rank and precedence, 9, 12
 recruiting parties, 843-845, 174
 reduction to the ranks, 276, 72, 277, 72, 1009, 197
 reproofing, 270, 71
 roster duties, 358, 86
 selection and instruction, 270, 71
 temporary appointments, 275, 72
 travel accommodations, 1128, 222
 warrants, 274, 71, 1009, 197
 whistles, 1180, 235
- Sergeants, color: (A.R.)**
 See Color Sergeants (A.R.)
- Sergeants, duties of, in battle (I.D.), 104, 347**
- Sergeants, major: (A.R.)**
 battalion, 9, 12, 256, 68, 1044, 206, 1136, 224
 regimental, 9, 12, 256, 68, 1044, 206, 1136, 224
- Servants: (A.R.)**
 clothing, 1175, 234
 medical attendance, etc., 1476, 299
 officers', 1175, 234
- Service calls and signals: (A.R.)**
 daily and special, 370-373, 87
- Service colors and standards: (A.R.)**
 description and use, 233, 62
- Service of defense (F.S.R.).** See Zone of the Advance (F.S.R.)
- Service of military railways (F.S.R.).** See Zone of the Advance (F.S.R.)
- Service of the interior: (F.S.R.)**
 bureau chief, 251, 1640
 camp—
 concentration, 254, 1642
 mobilization, 253, 1642
 department commander, 252, 1641
- Service of the interior: (F.S.R.)—Continued**
 general regulations, 250, 1640
 over-sea departments, 258, 1644
 ports of embarkation, 253-257, 1642-1643
- Service of the theater of operations: (F.S.R.)**
 commander, line of communications, 263, 1645
 general regulations, 259, 1644
 general staff—
 administrative section, 261, 1644
 combat section, 261, 1644
 intelligence section, 261, 1644
 headquarters and staff, 260, 1644
 technical and administrative staff, 262, 1645
- Services: (A.R.)**
 acceptance of voluntary, 515, 116
 computation of time, 651, 137
 distinguished gallantry in action, 182-188, 45-46
 employment of unauthorized, 515, 116
 non-personal, contracts for, 557, 121
 payments for, by contractor, 572, 124
 personal, 519, 116, 633, 134, 650, 137, 651, 137
- Service schools: (A.R.)**
 designated, 449, 102
 regulations for, 191, 47, 192, 48, 449, 102, 512, 115, 896, 185, 1272, 259, 1277, 260
 student officers, 40, 16
- Setting-up exercises (P.T.), 479**
- Sharpshooters: (A.R.)**
 additional pay, 1345, 273
- Shelter: (F.S.R.)**
 camps on the march, 106, 1603, 240, 1637, Appendix 1, 1676
 care of troops, 245, 1638
 during battle, 243, 1638
 during sieges, 244, 1638
 general principles of, 232-235, 1634-1635
 in the theater of operations, 237, 1636
 in the zone of the interior, 236, 1635
- Ships, transport capacity (F.S.R.), Appendix 7, 1704**
- Signal equipment, radius of (F.S.R.), Appendix 7, 1704**
- Sheriffs: (A.R.)**
 apprehension of deserters, 118, 31, 121, 31
- Shoeing and materials: (A.R.)**
 contracts for, 557, 121
 supply and issue, 1097, 217
- Shoemakers: (A.R.)**
 purchase of subsistence stores, 1245, 254
- Shoes, fitting of (G.O.), 91, 912**
- Sick and wounded: (A.R.)**
 attention by army nurses, 1423, 289
 care of, on the march or elsewhere, 1437, 291, 1438, 292
 daily report, 1471, 298
 first-aid treatment, 1419, 288, 1420, 288
 information concerning, from records, 824, 169
 leaves of absence, 57, 20, 1035, 205, 1301, 264
 parlor and sleeping cars, 1128, 222
 transportation, 1105, 219
- Sick call: (A.R.)**
 surgeons, 1471, 298
- Sick in hospital: (A.R.)**
 See Patients in Hospitals (A.R.)
- Sick report book: (A.R.)**
 company, 280, 73, 1471, 298, 1472, 298
- Sick, wounded and dead: (L.W.)**
 captured medical personnel, 139-143, 1739
 convoy of evacuation, 152-154, 1741
 dead, 165-171, 1743
 distinctive emblem, 153-164, 1742-1743

Black face numbers refer to paragraph and the light face numbers to the page

- Sick, wounded and dead: (L.W.)**—Continued
 medical materiel, 144-151, 1739-1741
 personnel, 130-138, 1737-1738
 sanitary establishment, 118-129, 1735-1737
 sick and wounded, 102-117, 1733-1735
- Sieges (L.W.),** 212-229, 1753-1757
- Sieges (F.E.).** See Field Fortifications (F.E.)
- Signal corps supplies: (A.R.)**
 accountability, etc., 1564, 317
 condemnation, 1566, 318
 purchase, preservation, and care, 1556, 315
- Signaling: (Sig.)**
 code for signaling—International Morse, 18-20, 586-588
 field messages, 142-144, 596
 general instructions, 1-13, 585-586
 infantry signal flags, 145-148, 596
 International Morse Code, 18-20, 586-588
 letter code, infantry, 47, 593
 semaphore, 44-46, 591
 stations, location of, 86-110, 593-595
 visual, 21-31, 588-591
 visual signal equipment, 149-155, 598-600
- Signaling: (A.R.)**
 See Military Signaling and Signal Duties (A.R.)
- Signal parties: (A.R.)**
 reports, duties, strength, etc., 1558, 315
 supplies, quartermaster and subsistence, 1567, 318
- Signal property, Table 2 (U.A.),** 1824
- Signals in infantry drill: (I.D.),** 41-46, 337-340
 rules for, 31-35, 336-337
- Signal stations: (A.R.)**
 establishment in the field, 1558, 315
- Signatures: (A.R.)**
 bidders, 532, 118
 by mark, witnessed, 647, 137
 certificate to voucher, 634, 135
 contracts, 559, 122
 disbursing officers, 594, 128
 discharged enlisted men, 155, 38
 official communications, 779, 161
 proposals, 532, 118
 retired enlisted men, 135, 35
 signing checks in blank prohibited, 637, 135
 vouchers and receipts, 642, 136, 643, 136, 646, 137
- Signs used in map making (F.E.).** See Reconnaissance (F.E.)
- Sizes of clothing (G.O.),** 17, 937
- Sleeping bag (I.D.),** 796, 797, 445
- Sleeping cars: (A.R.)**
 See Parlor and Sleeping Cars (A.R.)
- Slide rule, use of (G.O.),** 49, 1005
- Slopes, practicability of (F.S.R.),** Appendix 7, 1704
- Small arms, care of (C.E.).** See Care of Arms (C.E.)
- Small arms firing manual: (S.A.F.)**
 classification, rifle firing, 240-252, 840-843
 definitions in, 753
 estimating distance test, 77-85, 781-783
 general scheme, 1-11, 759-762
 improvised targets, Appendix 1, 871
 pistol practice for National Guard, 35, 869
 ranges, 262-281, 843-854
 records and reports, 254-256, 843-844
 See Combat Practice (S.A.F.)
 See Competitions in Shooting (S.A.F.)
 See Dismounted Course (S.A.F.)
 See Pistol and Revolver Practice (S.A.F.)
- Small arms firing manual: (S.A.F.)**—Continued
 See Range Practice with Pistol or Revolver (S.A.F.)
 See Riflemen, Advice to (S.A.F.)
 See Rifle Practice on the Range (S.A.F.)
 See Target Practice for National Guard (S.A.F.)
 See Target Practice, Preliminary Instructions for (S.A.F.)
 targets, 257-261, 844-846
 telescopic sights, 253, 843
 volunteer recruits, instruction of, Appendix 2, 872
- Small-arms practice: (A.R.)**
 ammunition, 350, 85, 353, 85
 brigade commanders, 194, 52
 company cooks, 329, 82
 department commanders, 193, 48
 expert riflemen, 1345, 273
 flour for paste, 351, 85
 general mess attendants, 329, 82
 inspectors' duties, 197, 54
 marksmen, 1345, 273
 mode of conducting, 349, 85
 ranges, shelters, targets, flags, etc., 351, 85
 reports, 349, 85
 sharpshooters, 1345, 273
- Soap and sapolio: (A.R.)**
 allowance, 1182, 236, 1215, 244
- Soldiers' Home, D. C. (A.R.),** 178-180, 44-45
- Soldiers' Home: (C.M.)**
 inmates subject to military law, 4, 1281
- Soldier, School of the (I.D.),** 48-100, 340-347
- Special court-martial: (C.M.)**
 by whom appointed, 21, 1289
 commanding officer as member, 24, 1289
 form for order publishing proceedings, 1546
 form for record, 1538
 jurisdiction, 41, 1294
 limit of punishment, 42, 1295
 number of members, 7, 1285
 procedure, 350, 1394
 record of trial, 358-362, 1399
- Special courts-martial: (A.R.)**
 See Courts-martial, Special (A.R.)
- Special duty: (A.R.)**
 enlisted men. See Extra and Special Duty (A.R.)
 officers and enlisted men, staff, 742, 154
 personal reports, 826, 169
 supervision or control of officers, 191, 47
- Special inspectors: (A.R.)**
 detail, duties, etc., 897, 185, 903, 186
- Special orders: (A.R.)**
 See Orders (A.R.)
- Specific duty: (A.R.)**
 orders directing travel, 69, 22
- Speeches: (C.M.)**
 using provoking, 440, 1447
- Spy: (C.M.)**
 defined, 432, 1439
- Squads: (A.R.)**
 chiefs of, duties, etc., 287, 74, 288, 74
 division into, of companies, 284, 74
 housewife, 1215, 244
 noncommissioned officer in charge, 284, 74
- Squad, school of the (I.D.),** 101-158, 347-356
- Stable guard, noncommissioned officer of (G.M.),** 321-327, 557-558
- Stable guard, sentinel of (G.M.),** 328-335, 558
- Stable guards (G.M.),** 308-320, 556-557
- Stable guards troop (G.M.),** 310-320, 557

- Stables: (A.R.)**
candles and lanterns, 1052, 208
guard duty roster, 357, 86
policing, 1106, 219
- Stable sergeants: (A.R.)**
appointments, 273, 71, 275, 72
reduction to the ranks, 276, 72
return to grade of sergeant, 273, 71
selection and appointment, 273, 71, 275, 72
temporary appointments, 275, 72
travel accommodations, 1128, 222
warrants, 274, 71
- Staff administration (A.R.), 740-751, 154-156**
- Stamps, official: (A.R.)**
boxes of ordnance stores, 1546, 313
- Standards: (A.R.)**
foreign, 415, 98
national and regimental, 230, 61, 231, 61
See also Colors and Standards (A.R.)
- Standing mute (C.M.). See Accused (C.M.)**
- Star Spangled Banner, The: (A.R.)**
See "The Star Spangled Banner" (A.R.)
- Starvation: (A.R.)**
relief for destitute persons, 1219, 247
- Statement: (C.M.)**
inconsistent with plea, 154, 1325
scope of closing, 290, 1371
- Statement of service (C.M.). See Charge Sheet (C.M.)**
use of, 271, 1363
- Staterooms: (A.R.)**
to whom allowed, 733, 152, 1128, 222, 1280, 261
- States: (A.R.)**
domestic violence, etc., 845, 174
jurisdiction over military lands, 704, 145
- Stationery: (A.R.)**
allowance and issue, 1062-1065, 210-211
- Stations: (A.R.)**
quartermaster supplies, 1086, 214, 1558, 315
See also Changes of Station (A.R.)
- Statute of limitations: (A.R.)**
release of deserters, 125, 32
rewards, etc., deserters, 121, 31
- Statute of limitations: (C.M.)**
See Limitation on Actions (C.M.)
- Stewards: (A.R.)**
general messes, 329, 82
- Stolen property: (A.R.)**
means authorized for recovery, 689-692, 143-144
- Stoppage of pay: (C.M.)**
not function of court-martial, 325, 1378
- Stoppages of pay: (A.R.)**
circular notice, 1310, 265
deserters, 1372-1374, 279-280
enlisted men, 127, 32, 724, 150, 1368, 278, 1370, 278
enlistments or acceptances carelessly made, 851, 175
entry on rolls, and collections, 1370, 278
failure to account, 700, 145, 703, 145
loss or damage to public property, etc., 1370, 278
notice to quartermasters, 1310, 265
officers, 1308-1311, 265-266
receipt when ordered, 1384, 281
- Stopping of pay for misconduct (G.O.), 229, 976**
- Storm flag: (A.R.)**
description and when used, 223, 59
- Storms: (A.R.)**
damage or destruction of property, 709, 146
- Stove pipe openings in tent (G.O.), 251, 929**
- Stratagems (L.W.), 189-198, 1749-1751**
- Straw: (A.R.)**
allowance for bedding, 1084, 213, 1085, 214
- Stream flow (F.S.R.), Appendix 7, 1704**
- Street-car tickets: (A.R.)**
purchase, use, etc., 1127, 222
- Submarine contact mines, automatic (L.W.), 432-443, 1817-1818**
- Subpoena: (C.M.)**
Duces tecum, 166, 1330
fees for serving, 191, 1337
form for civilian witness, 1550
service of, 160, 1328
- Subpoenas: (A.R.)**
witnesses, courts-martial, 160, 40, 161, 40, 996½, 195
- Subposts: (A.R.)**
returns of troops, 811, 167
- Subsistence: (A.R.)**
enlisted men returning from furlough or absence without leave, 110, 28
insane soldiers and escorts, 468, 104
witnesses against deserters, 127, 32
- Subsistence supplies and stores: (A.R.)**
articles kept for sale, 885, 180
care and protection, 1199, 238
civilians in hospital, 1459, 295
contract for, or purchase, 515, 116, 557, 121
destitute persons, 1219, 247
deteriorated or deteriorating, 717, 148, 904, 186
electrical engineers, etc., 1568, 318
enumerated, 1195, 238
exceptional articles, 551, 121, 1244, 254
general prisoners, 1216, 245
proceeds of sale, 617, 132
purchase and distribution, 478, 106, 553, 121, 557, 121, 1198, 238, 1251, 255
rations, 1202-1214, 239-244, 1220-1238, 247-253
reserve rations, 1220, 247, 1221, 248
returns, 701, 145
rules for issue, etc., of stores, 1196, 238
sales, 1197, 238, 1198, 238, 1239-1251, 253-255
signal parties, 1567, 318
stores in bulk, 1195-1198, 238
surplus articles, 1220, 247, 1221, 248
transfer, for use of Indians, 476, 105
transfers, 619, 132, 671, 140, 1198, 238, 1251, 255
vouchers for payment, 633, 134
- Substitution of punishment (C.M.). See Equivalents (C.M.)**
- Summary court-martial: (C.M.)**
by whom appointed, 25, 1289
consist of one officer, 7, 1285
form for record, 1540
jurisdiction, 43, 1295
limit of punishment, 44, 1295
procedure, 351, 1394
record of trial, 363, 1400
when one officer present, 27, 1290
- Summary courts-martial: (A.R.)**
See Courts-martial, Summary (A.R.)
- Sunday: (A.R.)**
duty and labor, 205, 56
musters, 439, 100
observance, 205, 56
salutes, 397, 92
- Superintendent, military academy: (C.M.)**
may appoint general court-martial, 16, 1287
- Supplies, purchase of (A.R.), 515-566, 116-123**
- Supplies, quartermaster (G.O.), 39, 878**

Supply, sanitary, and telegraph service, line of communication (F.S.R.), 368-379, 1662-1664
Supply service, zone of the advance: (F.S.R.), 284-292, 1648-1650

See Zone of the Advance (F.S.R.)

Supports, artillery (I.D.), 579-583, 409-410

Surgical operation, refusing of (G.O.), 53, 905
Surplus kit, packing of (G.O.), 320, 933

Surrender: (C.M.)

abandoning or delivering up command, 425, 1431

subordinates compelling, 426, 1433

Surrender: (A.R.)

deserters, 124, 32, 125, 32

public animals, 1072, 211

Surveying: (A.R.)

expeditions, 672, 141, 1526, 310

maps, 1502, 303

military, 1295, 264, 1493, 301

Surveying officers: (A.R.)

administration of oaths, 714, 148

appointment, 203, 55, 711, 147, 723, 150

colors, standards, and guidons, 239, 64

condemnation of property not authorized, 715, 148

damaged or stolen property, 685-688, 143, 1178, 234

defects or shortages, 668, 140, 669, 140

effects of deserters, 116, 30

evidence considered, 712, 147, 713, 147

general powers and duties, 710, 147, 712, 147, 715, 148, 717, 148, 1073, 212

mess outfits, 1023, 203

musical instruments, 1179, 235

posts, etc., not under department commander, 723, 150

property lost, etc., in transit, 721, 149

quartermaster supplies, 1094, 215

reports, 713, 147, 715-725, 148-150, 1023, 203

unserviceable property, 678, 141

Surveys of property (A.R.), 710-726, 147-151

Suspended sentence: (C.M.)

dishonorable discharge, 393, 1406

may be remitted, 403, 1408

recommendation in case of dishonorable discharge, 321, 1377

to await pleasure of president, 391, 1406

when authorized, 392, 1406

T

Table of occasions, uniform (U.R.). See Uniform (U.R.)

Tables of organization: (O.T.)

aero squadron, 1981

ammunition train—

wagon, 1986

motor, 1988

bands, 1995

brigade—

headquarters, 1971

cavalry, 1974

engineer, 1992

field artillery, 1976

infantry, 1972

division—

headquarters, 1982

infantry, 1983

engineer troops—

mounted battalion, 1979

regiment, 1978

field signal battalion, 1980

military police—

infantry division, 1985

Tables of organization: (O.T.)—Continued
 sanitary train, 1993

supply train—

wagon, 1990

motor, 1991

Tactical exercises and instructions: (A.R.)

battalion commanders, 245, 66

brigade commanders, 194, 52

coast defense commanders, 246, 67

company commanders, 266, 70

department commanders, 193, 48

inspection, 887, 181, 889, 181

post commanders, 203, 55

regimental commanders, 246, 67

Tailors: (A.R.)

company tailor shops, 327, 81

details, 279, 72

employment of civilian, 279, 72

prices and payments, 279, 72

purchase of subsistence stores, 1245, 254

Target practice: (A.R.)

cooks and attendants, general mess, 329, 82

flour for paste, 351, 85, 1215, 244

machine guns, 351-353, 85

method of conducting, 313, 79, 349, 85, 352, 85

small arms, 193, 48, 194, 52, 197, 54, 349-351, 85, 1345, 273

superintendence, etc., 193, 48, 194, 52

telephones and instruments, 1556, 315

Target practice (S.A.F.). See Small Arms Firing Manual (S.A.F.)

Target practice for National Guard: (S.A.F.), 759

coast artillery reserves' practice, 352, 867

gallery practice, 347, 864

general scheme, 345, 864

known distance firing, 348, 865

long distance practice, 353, 867

miscellaneous provisions, 355, 867

practice with telescopic sights, 354, 867

preliminary drills, 346, 864

record practice, 349, 866

Target practice for recruits (S.A.F.), Appendix 2, 872

Target practice, preliminary instructions for: (S.A.F.), 759

deflection and elevation correction drills, 62-70, 778-780

gallery practice, 71-76, 780-781

position and aiming drills, 32, 770

sighting drills, 13-31, 763-770

Targets (S.A.F.), 257-261, 844-851

Tattoo and taps: (A.R.)

hours for sounding, etc., 370, 87

Teamsters, civilian: (A.R.)

employment, payment, etc., 727, 151, 730, 152

hours of labor, 731, 152

transportation and expenses, 732, 152, 734, 153

Telegraphing and telephoning: (A.R.)

accounts, 644, 136, 1186, 237, 1189, 237, 1191-1194, 238

addresses and signatures, 1188, 237

apparatus, 1556, 315, 1566, 318

blank forms, 1190, 238

cable dispatches, 1184, 236

candles for stations, 1215, 244

casualties in action, 818, 168

code, 1185, 236, 1556, 315, 1561, 316

confidential communications, 778, 161, 1186, 237, 1560, 316

copies by mail, 775, 160

damage by fire, storm, etc., 709, 146

- Telegraphing and telephoning: (A.R.)**—Continued
 deaths of officers and enlisted men, 83, 23, 167, 42
 delivery by mail, 1193, 238
 framing of messages, 1188, 237
 insane soldiers, 467, 104
 land-grant railroad lines, 485, 106
 leaves of absence, 1187, 237
 messages sent by private individuals, 1192, 238
 movement of troops, 814, 167
 order of priority of important dispatches, 1561, 316
 precedence of messages, 1561, 316
 special delivery, 1193, 238
 supplies urgently needed, 1151, 228
 surrender or delivery of deserters, 123, 31
 telegrams, "collect," 1186, 237, 1187, 237, 1192, 238
 troops changing station, 193, 48
 unimportant words, 1184, 236, 1188, 237
 use, limitation of, 1184, 236
 wireless installations, 1556, 315
 See also Military Telegraph and Telephone Lines (A.R.)
- Telegraphy: (A.R.)**
 instruction, 1556, 315
 radio, use between army and navy, 409, 96, 1561, 316
- Telescopic sights (G.O.), 297, 931**
Telescopic sights (S.A.F.), 116, 795, 253, 843
- Temporary duty: (A.R.)**
 baggage, 1138, 225
 officers on leave, 1278, 260, 1289-1291, 263
- Temporary posts: (A.R.)**
 styled camps, 202, 55
- Tent pitching, manual of: (I.D.), 792-803, 444-446**
 folding tents, 803, 446
 Model 1906 Equipment, Appendix B, 467
 pitching conical wall, 801, 446
 pitching tents, 799, 445
 shelter tents, 792-795, Appendix B, 467
 striking shelter tents, 798, 445
 striking tents, 802, 446
- Tents: (A.R.)**
 authorized use, 1183, 236
 infected, 1454, 295
 pins dropped from returns, 1176, 234
 use of, in emergencies, 1183, 236
- Term of service: (A.R.)**
 deserters to make good time lost, 130, 33, 131, 33
 discharge on expiration, 143, 36
 expiration, date, payments, etc., 1255, 256
 return to service of deserters, 130, 33
- Test proficiency, rules for (F.F.), 1941**
"The Star Spangled Banner": (A.R.)
 played on lowering flag, 437, 100
 playing as part of medley prohibited, 264, 70
 respect to be observed when played, 378, 88
- Tickets: (A.R.)**
 round trips, 1121, 221
 street-car and ferry, 1127, 222
 transportation requests, 1117, 221
 unused, 1120, 221
- Time by compass (F.S.R.), Appendix 7, 1704**
Time lost by desertion: (A.R.)
 deserters to make good, 130, 33, 131, 33
- Title or address: (A.R.)**
 official letters, 780, 161
- Toilet articles: (A.R.)**
 purchase and issue, 1215-1218, 244-246
- Tompons: (A.R.)**
 use of, in small arms, 292, 74
- Topographers: (A.R.)**
 detail and duties, 444, 101
- Topographical reconnaissance (F.E.). See Reconnaissance (F.E.)**
- Tradesmen: (A.R.)**
 prices for repairing, etc., uniforms, 279, 72, 319, 80
- Training, physical (P.T.), 473**
Training of mobile army (G.O.), 85, 908
- Trains: (F.S.R.), 1573**
 ammunition, 278, 1647, 279, 1648
 combat, 318-328, 1654-1655
 engineer, 278, 1647, 279, 1648, 354, 1660
 field, 276, 1647
 field baggage section, 276, 1647
 field ration section, 276, 1647
 sanitary, 278, 1647, 339-358, 1658-1661
 supply, 278, 1647, 302, 1651
- Transfers: (A.R.)**
 discharged soldiers' claims for pay due, 1383, 281
 noncommissioned officers, 276, 72
 ordnance stores, 671, 140, 701, 145, 1524, 310, 1535, 311, 1536, 312
 pay accounts of officers, 1258, 256
 public animals, 1071, 211
 public money and property, 589, 128, 597, 129, 598, 129, 619, 132, 665, 139, 671, 140, 701, 145, 1509, 305
 submarine mine property, 701, 145
 subsistence stores, 619, 132, 671, 140, 1190, 238, 1251, 255
 troops, 193, 48
 veterinary medicines and supplies, 1076, 212
- Transfers, cost of (G.O.), 37, 903**
- Transfers of enlisted men: (A.R.)**
 date when effective, 115, 30
 descriptive lists, 115, 30, 1163, 232, 1356, 276, 1361, 277, 1451, 294
 gunners, expert riflemen, etc., for convenience of the government, 1343, 272, 1345, 273
 one arm of service to another, 114, 29
 staff corps or detachment, 114, 29
 to hospital corps, 1409, 287, 1411, 287, 1412, 287
 to quartermaster corps, 1009, 197
- Transfers of officers: (A.R.)**
 mileage to new station, 1297, 264
 one arm of service to another, 47, 18
 one regiment to another, 48, 18
- Transportation: (F.S.R.)**
 columns—
 ammunition, 279, 1648
 engineer, 279, 1648
 sanitary, 279, 1648
 supply, 279, 1648
 commander of trains, 280-283, 1648
 rail—
 commercial, 387-402, 1667-1670
 military, 403-410, 1670-1671
 trains, 274-278, 1646-1647
- Transportation, animal: (F.E.)**
 division of, 1, 1252
 halts, 19, 1271
 harness, 12, 1263, 13, 1267
 marches, 19, 1271
 mule—
 accountability for, 23, 1278

Transportation, animal: (F.E.)—Continued

- mule—continued
 - description of, 1254
 - diseases of, 8, 1257
 - feeding of, 4, 1256
 - grooming, 20, 1273
 - medicines for, 8-10, 1257-1259
 - salting, 5, 1256
 - selection of, 3, 1253
 - shoeing, 11, 1262
 - shipping, 21, 1273, 22, 1274
 - treatment for ills, 10, 1259
 - watering, 7, 1257
- pack saddle, 15-18, 1268-1271
- stable duties, 20, 1273
- wagons, 14, 1267

Transportation of the army: (A.R.)

- accepted applicants for enlistment, 1115, 220
- accommodations, 1114, 220, 1128-1134, 222-224
- accounts, 180, 45, 1126, 222, 1127, 222, 1492, 301
- allotment, draft and pack animals, 1102, 219
- ambulances, 1105, 219
- baggage, 1135-1139, 224-226
- bakery utensils, etc., 340, 84
- barrack furniture, 1023, 203
- books, etc., post chapels, 1144, 227
- contracts, 515, 116
- deceased officers and soldiers, 87, 24, 167, 42
- discharged soldiers, 145, 36, 158, 39, 1235, 252
- donations to libraries and museums, 1145, 227
- enlisted men traveling on duty, 1111, 219
- exceptional articles for sale, 1244, 254
- furloughed soldiers, 110, 28, 112, 29, 1111, 219
- gymnasium appliances, 340, 84
- horses for saddle purposes, etc., 1101, 218
- horses of mounted officers, 1098, 217
- insane soldiers and escorts, 468, 104
- inspection at posts, 889, 181
- land-grant railroads, 1279, 261
- library property, etc., 340, 84
- loss or damage to supplies, 721, 149, 1141, 227
- mail contractors, 209, 56
- means of, at posts, 1105, 219, 1106, 219
- means provided by quartermaster corps, 1000, 196, 1001, 196
- movement of troops, 1107, 219, 1109-1114, 219-220, 1281, 262
- mules generally employed, 1101, 218
- orders, 1110, 219, 1111, 219
- ordnance and ordnance stores, 1547, 313, 1548, 314
- post school materials, etc., 340, 84
- publications for hospital libraries, 1463, 297
- pursuit of deserters, 122, 31
- reading room articles, 340, 84
- repairs, contracts for, 557, 121
- requests. See Transportation Requests (A.R.)
- requisitions at posts, 1108, 219
- routes, 1112, 220, 1288, 263
- sea travel, 1280, 261
- soldiers returning from absence without leave, 110, 28
- spring wagons, 1103, 219, 1104, 219
- supplies, 721, 149, 1109, 219, 1140-1142, 226-227
- use by officers, 1108, 219
- wagon and pack, 1101, 218, 1105, 219
- witnesses, 75, 22, 127, 32

Transportation requests: (A.R.)

- accommodations, 1128-1134, 222-224
- alterations and explanations, 1119, 221
- baggage, 1117, 221, 1122-1125, 221-222
- bond-aided railroads, 732, 152
- bridges and turnpikes, 1126, 222
- ferries and ferry tickets, 1126, 222, 1127, 222
- issue, 1116, 220, 1119, 221, 1121, 221, 1125, 222, 1126, 222, 1279, 261
- parlor and sleeping cars, 1128-1134, 222-224
- preparation, 1116, 220, 1119, 221, 1121, 221
- pursuit of deserters, 122, 31
- receipts, 1117, 221
- round or return trips, 1121, 221
- street-car tickets, 1127, 222
- tickets, 1117, 221, 1120, 221, 1121, 221
- unused, 1120, 221

Transport: (A.R.)

- damage or destruction, 709, 146
- enlisted men on furlough, 1234, 252
- hospital boats, etc., 1440, 292
- inspection, 898, 185
- mess sergeants, 1346, 274
- salutes, 399, 92
- subsistence for discharged soldiers, 1235, 252
- travel allowances, 1280, 261
- travel on duty, enlisted men, 1231, 251
- See also Army Transportation Service (A.R.)

Travel allowances: (A.R.)

- actual expenses, 1279, 261, 1280, 261
- approval of journey, 1285, 263
- arsenals, 1295, 264
- authority, 1284, 263, 1285, 263
- baggage, 1122-1125, 221-222
- by sea, 1280, 261
- civilian employees, 733-739, 152-154, 1128, 222
- computation, 1279, 261, 1282, 262
- discharged soldiers, 145, 36, 158, 39, 1235, 252, 1378, 280, 1379, 280
- inspections, 1284, 263
- joining first station, 1296, 264, 1297, 264
- leaves of absence, 1289-1294, 263-264
- lines of travel, 1287, 263
- orders, 71, 22, 1284-1288, 263
- outside continental limits, U. S., 1279, 261, 1280, 261
- parlor and sleeping cars, 1128-1134, 222-224
- payments, 1283, 263
- public works, 1295, 264
- return journeys, 1285, 263
- route of travel, 1282, 262, 1287, 263
- surveys, military, 1295, 264
- tipping fees, 1280, 261
- transportation in kind, 1279, 261, 1281, 262, 1288, 263
- travel with or without troops, 1279-1281, 261-262
- unauthorized, 1297, 264
- urgent duty, 1285, 263
- witnesses, 75, 22, 1298, 264

Travel allowances, for enlisted man (G.O.), 11, 1916, 936**Travel on duty, enlisted men: (A.R.)**

- baggage, 1124, 222, 1125, 222
- commercial vessels, 134, 34
- commutation of rations, 1111, 219, 1226, 251, 1229, 251, 1231, 251, 1232, 251
- delays, 107, 27
- orders, 189, 46
- sleeping cars, 1128, 222

Travel on duty, officers: (A.R.)

- change of station, 68, 22

Travel on duty, officers: (A.R.)—Continued

- delays, 70, 22
- orders, 68-74, 22, 800, 163
- outside continental limits, U. S., 71, 22
- settlement of accounts, 74, 22
- specific duty, 69, 22
- urgent public duty, 73, 22
- witnesses, civil courts, 75, 22

Travel ration: (A.R.)

- composition, issue, etc., 1205, 240
- computation of cost, 1221, 248
- definition, use, etc., 1202, 239
- liquid coffee, 1206, 242
- savings, 1220, 247
- value, 1207, 242
- when furnished, 1224, 250, 1225, 251

Treason and espionage (L.W.), 199-211, 1751-1753**Treasurer regimental fund: (A.R.)**

- duties and responsibilities, 325, 81

Treaties, extracts from (F.S.R.), 1688**Trenches (F.E.). See Field Fortification (F.E.)****Trial: (A.R.)**

- deserters, 125, 32, 126, 32, 129, 33
- soldiers awaiting, when term expires, 157, 39

Trial: (C.M.)

- for officer summarily dismissed, 38, 1293
- when second trial authorized, 149, 1322

Tribunals, military: (C.M.)

- kinds, 3, 1281

Trinkets, etc.: (A.R.)

- deceased officers and soldiers, 85, 24, 163, 41

Troops: (A.R.)

- action against mobs, 489, 112
- employment in labors, 168, 43
- funeral escort, 426, 99, 428, 99
- historical records, 774, 159
- inspections, 193, 48, 194, 52, 887-889, 181, 892, 183
- payment, 191, 47, 1254, 256, 1255, 256
- precedence, 6, 11
- quarters in garrison, 1025, 203, 1027, 204
- returns of strength in campaign, 815, 167
- rosters forwarded to War Department, 805, 165
- saluting, 379, 89, 380, 89
- transportation, 1105, 219

See also—

- Labor of Troops (A.R.)
- Movement of Troops (A.R.)
- Returns of Troops (A.R.)

Troops, batteries, and companies: (A.R.)

- company books and records, 280, 73, 281, 73
- interior economy, 283-295, 73-75
- messaging and cooking, 296-302, 75-76
- officers, noncommissioned officers, etc., 265-279, 70-72

Trumpeters: (A.R.)

- appointment, etc., 275, 72, 278, 72

Tuberculosis, pulmonary: (A.R.)

- responsibility for proper diagnosis, 1446, 293
- treatment, general hospital, Fort Bayard, New Mexico, 1445, 293

Turnpikes: (A.R.)

- passage of troops, teams, etc., 1126, 222

Typewriters: (A.R.)

- use, 600, 129

Typewriting machine, use of (G.O.), 194, 929**Typhoid prophylactic: (A.R.)**

- administration, 104, 26

U**Undertakers: (A.R.)**

- contracts, 87, 24, 167, 42

Uniform: (C.M.)

- kind worn by members of court, 82, 1307

Uniform: (U.R.)

- by whom, when, and how worn, 1868
- for enlisted men (Tables of Occasion)—
 - dress, 1898
 - fatigue, 1900
 - full dress, 1899
 - service, 1896
 - white, 1899
- for officers (Tables of Occasion)—
 - at White House, 1895
 - blue mess jacket, 1893
 - dress, 1889
 - dress, for officers, mounted, 1889
 - full dress, mounted, 1891
 - full dress, for officers, dismounted, 1890
 - service, 1886
 - special evening dress, 1892
 - white, 1894
 - white mess jacket, 1894
- general rules for wearing, 1859

Uniform of the army: (A.R.)

- medals or badges, illegal possession, 189, 46
- officers saluted whether in, or not, 383, 89
- worn by men in camp or garrison, 289, 74

Uniform regulations (U.R.). See Uniform (U.R.)**Uniforms: (A.R.)**

- band, 1167, 232
- fatigue dress, 289, 74
- making, repairing, and altering, 279, 72
- prices for repairs, etc., 319, 80
- purchase of articles by officers, 1174, 234
- purchase of certain articles from post exchange, 1174½, 234
- recruiting parties, 1167, 232
- special regulations, 1569, 318

See also Clothing and Equipage (A.R.)

Uniforms for provisional second lieutenants and reserve officers (G.O.), 21, 975**Union salute: (A.R.)**

- number of guns and when fired, 398, 92

Unit accountability equipment (G.O.), 136, 916**Unit equipment for engineer property (U.A.), 1823****Unit equipment for ordnance property (U.A.), 1825****Unit equipment for signal property (U.A.), 1824****United States rifle (U.S.R.). See Rifle (U.S.R.)****Using influence (G.O.), 11, 901****V****Vacancies: (A.R.)**

- general staff corps, 773, 159
- noncommissioned officers, company, 275, 72
- payments to officers promoted, 1260, 257

Vaccinations: (A.R.)

- enlisted men, 1485, 300
- record of, 280, 73
- recruits, 865, 177, 866, 177, 869, 178, 1484, 300
- virus supplied by surgeon general, 866, 177

Veneral diseases, prevention of (G.O.), 92, 915

Black face numbers refer to paragraph and the light face numbers to the page

Vessels: (A.R.)

- built and chartered by Q. M. Corps, 1000, 196
- damage or loss, 709, 146
- hospital transports, 1440, 292
- hours of labor, officers and crews, 731, 152

Vessels of war: (A.R.)

- boarding visits, 407, 95, 411, 96
- flags at halfstaff, 424, 99
- foreign, 399, 92, 407, 95, 410-413, 96-98, 415, 98
- United States, 399, 92, 407-412, 95-97, 414, 98, 415, 98

Veterinarians: (C.M.)

- not available for court-martial duty, 6, 1284

Veterinarians (A.R.), 90-92, 25-26

Victuals: (C.M.)

- offenses concerning, 437, 1444, 438, 1445

Views, publishing of (G.O.), 1, 901

Visiting foreign countries: (A.R.)

- enlisted men, 109, 27
- officers, 61-63, 21

Visitors: (A.R.)

- lake and seacoast defenses, 347, 85, 348, 85
- military posts, 403, 93

Visits and courtesies: (A.R.)

- headquarters, 403, 93, 406, 94
- military and naval, 240, 64, 407-414, 95-98
- officers under arrest, 926, 190
- rules for rowing of boats, 414, 98

Voir dire: (C.M.)

- See Oaths to Test Competency (C.M.)

Volunteer officers: (A.R.)

- See Officers, Volunteers (A.R.)

Volunteers: (A.R.)

- charge of records of armies, 774, 159
- hospital records, 774, 159
- organizing, equipping, etc., in time of war, 193, 48, 741, 159
- relative rank with regulars, militia, etc., 6, 11, 10, 13

Volunteers: (C.M.)

- may be tried by regulars, 11, 1286
- subject to military law, 4, 1282
- when available for court-martial duty, 9, 1286

Volunteers, instruction in target practice (S.A.F.), Appendix 2, 872

Vote: (C.M.)

- exception in case of death penalty, 295, 1372
- general or special court-martial duty, 90, 1308
- majority only required, 295, 1372
- on finding, 294, 1372
- on sentence, 308, 1375
- refusal to, 90, 1308
- tie, 90, 1308

Vouchers: (A.R.)

- commutation of quarters, 1307, 365
- mileage, 1288, 263
- ration and savings accounts, 1222, 249
- transportation of applicants for artificial limbs, 1492, 301
- transportation of funds, 1142, 227
- travel allowances, 1288, 263
- See also Money Vouchers (A.R.)

Vouchers, forms for: (C.M.)

- civilian witness, 1561
- reimbursement government employee, 1564
- reporter, 1568

W

Wagoners: (A.R.)

- appointment, etc., 275, 72, 278, 72
- extra-duty details, 173, 44

Wagons: (A.R.)

- purchase and repair, 1105, 196
- quartermaster corps, 1000, 196

Warfare, rules for: (L.W.), 1713

Warrant of attachment: (C.M.)

- form for, 1553
- when issued, 168, 1330

Warrants: (A.R.)

- battalion and regimental noncommissioned staff, 256, 68
- company noncommissioned officers, 274, 71
- dates determine precedence, 9, 12

War service: (A.R.)

- See Field Service and Duties (A.R.)

War strength, round numbers (F.S.R.), Appendix 1, 1676

Watch as compass (F.S.R.), Appendix 7, 1704
Water consumption (F.S.R.), Appendix 7, 1704

Weights principal of rifle (U.S.R.), 737

Whistles: (A.R.)

- issue, 1180, 235

Wicks: (A.R.)

- requisition for, and issue, 1052, 208
- sales to officers, etc., 1054, 208

Wine: (A.R.)

- sale in exchanges prohibited, 346, 84

Without honor discharge: (A.R.)

- preparation of certificate, 150, 38

Witnesses: (C.M.) See Evidence (C.M.)

- civilian, 164, 1329
- competency, 209, 1344
- credibility, 256-262, 1361-1362
- examination of, 246-255, 1359-1361
- experts, 192, 1337, 218, 1345
- fees, mileage, and expenses of, 183-193, 1335-1337
- in confinement, 167, 1330
- military, 163, 1329
- process to obtain, 159, 1328
- refusal to appear or testify, 170, 1331
- subpoenas, 160, 1328

Witnesses: (A.R.)

- allotments of pay, enlisted men, 1349, 275
- certificates of merit, 185, 46
- medals of honor, 182, 45
- payments to soldiers, 1318, 267, 1319, 267, 1325, 268, 1326, 268, 1332, 269, 1333, 269

Witnesses, civil courts: (A.R.)

- enlisted men, 75, 26, 996 $\frac{1}{2}$, 195
- officers, 75, 26, 996 $\frac{1}{2}$, 195
- pay and allowances, 996 $\frac{1}{2}$, 195, 1298, 264

Witnesses, courts-martial: (A.R.)

- against deserters, 124, 32, 127, 32
- civilian, 952, 194, 989-993, 195
- enlisted men, 996 $\frac{1}{2}$, 195
- officers, 996 $\frac{1}{2}$, 195

- pay and allowances, 989-993, 195
- payment of traveling expenses, 738, 154

Witness for prosecution: (C.M.)

- member of court as, 129, 1317, 131, 1318

Working parties: (A.R.)

- armed, military works, 357, 86

Wounded (L.W.). See Sick, Wounded and Dead (L.W.)

Wounded officers and men: (A.R.)

- See Sick and Wounded (A.R.)

Writ of habeas corpus: (A.R.)

- See Habeas Corpus (A.R.)

Y

Y. M. C. A., privileges of (G.O.), 80, 908

Z

Zone of the advance: (F.S.R.)

- ammunition service—
 - a function of the field artillery, 317, 1653
 - commander, ammunition train, 314, 1653
 - distributing station, 318, 1654
 - refilling point, 318, 1654
 - rendezvous point, 318, 1654
 - supply by column, 320, 1654
- engineer train, 354-356, 1660
- general regulations, 264-269, 1645-1646
- sanitary service—
 - ambulance companies, 335, 1657
 - dressing stations, 334, 1657
 - evacuating points, 337, 1657
 - field hospital companies, 336, 1657
 - general functions, 329, 1655
 - in camp, 340, 1658
 - in combat, 344, 1658
 - in retreat, 351, 1660
 - on the march, 341, 1658
 - Red Cross Association, 352, 1660
 - regimental aid station, 333, 1656
 - sanitation, 331, 1656
 - station for slightly wounded, 338, 1658
- supply service—
 - disposition of rations, 301, 1651

Zone of the advance: (F.S.R.)—Continued

- supply service—continued
 - operation, 303, 1652
 - point—
 - distributing, 286, 1649
 - refilling, 285, 1648
 - rendezvous, 287, 1649
 - ration, 293, 1650
 - requisitions, 290, 1650
 - transportation. See Transportation (F.S.R.)
- Zone of the line of communications: (F.S.R.)
 - channels of correspondence, 305, 1666
 - general regulations, 357-361, 1661
 - service of—
 - defense, districts and commanders, 362-365, 1661-1662
 - military railways—
 - director of railways, 380, 1664
 - military controlling staff, 381, 1665
 - railway staff officers, 381, 1665
 - staff of civilian assistants, 382, 1666
 - supply, sanitary, and telegraph service—
 - advance section, 376, 1664
 - advance groups, 376, 1664
 - assistant chief of staff, 376, 1664
 - base section, 373, 1664
 - assistant chief of staff, 373, 1664
 - base groups, 373, 1664
 - intermediate section, 368, 1662
 - maximum and minimum supply and requisitions, 368, 1662